

HUNTING HARVEST STATISTICS

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2011 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, 2011 to ensure that each license holder had an equal chance of being in the survey sample. The sample consisted of 6,500 (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 two 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

License sales declined a bit from the previous year as did pheasant stamp sales but duck stamp sales showed some increase. Estimated number of hunters showed some increase for ducks, Canada geese, crows, spruce grouse and gray squirrels but some decline for pheasants, fox squirrels, and cottontail rabbits (Table 3). Success rates increased for hunters pursuing ducks and snowshoe hares (Table 5). Total estimated harvests (Table 6) increased for ducks, Canada geese, other geese, rails and gallinules, crows, spruce grouse and snowshoe hare. Estimated harvests declined for coots, woodcock, pheasant, mourning dove, ruffed grouse, sharp-tailed grouse, gray partridge, gray squirrel, fox squirrel, cottontail rabbit, jack rabbit, raccoon, red fox, gray fox, and coyote. 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 years.

Table 1. Small game hunter response to mail surveys, 1982 - 83 through 2011 - 12.

Year	Number mailed	Number not delivered	Delivered questionnaires completed and returned	
			Number	Percent
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
2011 - 12 ^a	6,500	129	3,748	58.6

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

Table 2. Use of small game hunter licenses, 2002-03 through 2011-2012.

		Returns from mail survey	Projections from license sales
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
2011-12	Hunted	2,761 (73.7%)	214,137
	Did not hunt	<u>987 (26.3%)</u>	<u>76,549</u>
		3,748 (100.0%)	290,686

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

2011 Small Game Hunter Report

1. Did you hunt small game, listed below, in Minnesota this year (March 2011 - Feb 2012)? 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 2011-2012 small game hunting season (**March 2011-February 2012**). 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

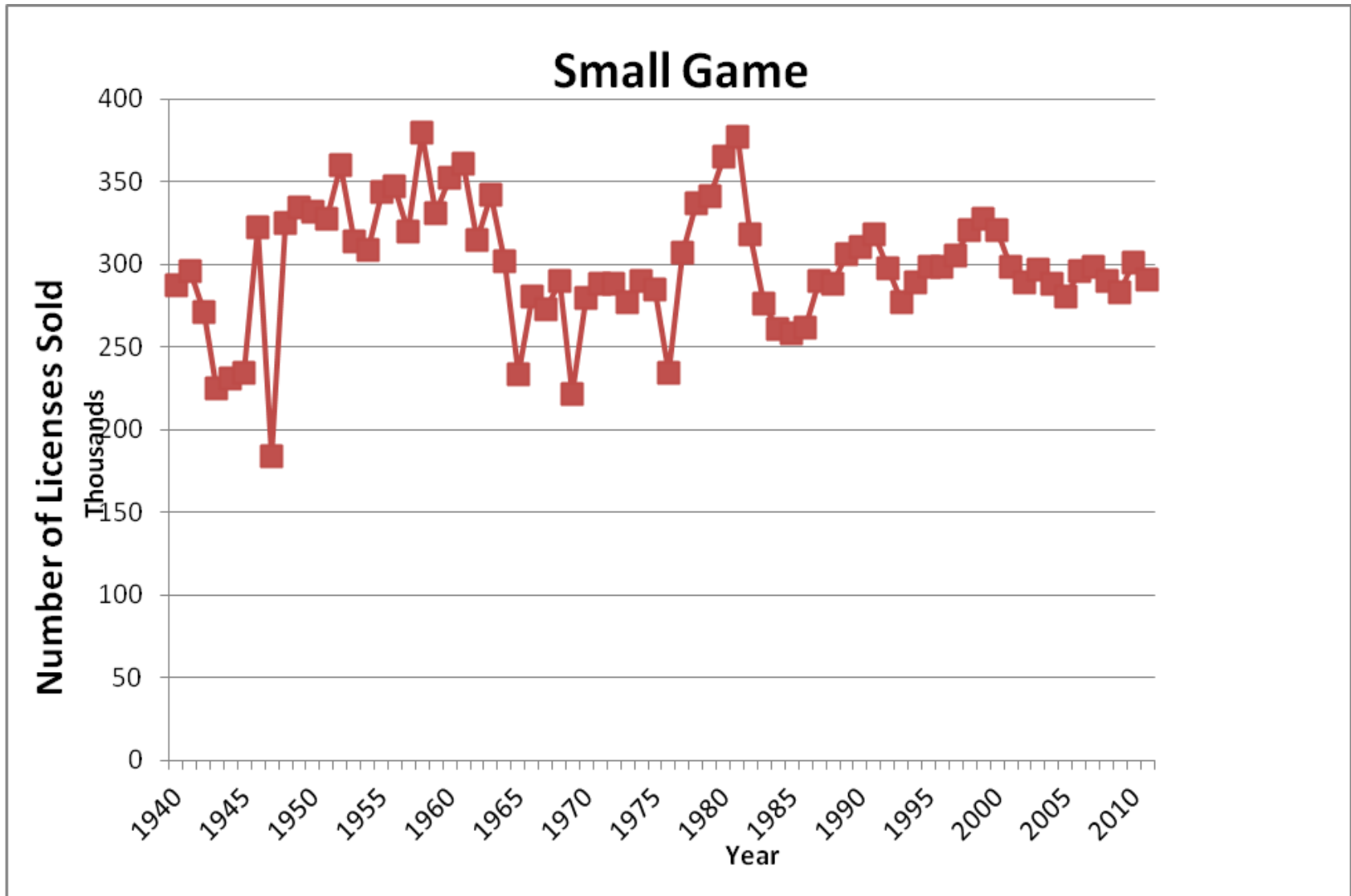


Figure 2. Number of Minnesota small game licenses sold, 1940–2011.

Table 3. Estimated number of hunters for various species, 1999-00 through 2011-12.

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
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	83,450
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	61,190
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	3,020
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	4,580
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	1,240
Rails / gallinules	491	336	406	673	150	228	0	547	482	408	372	224	230
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	11,170
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	10,080
Mourning dove [†]						15,524	11,107	12,886	13,172	11,599	10,495	10,641	10,000
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	77,640
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	93,840
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	10,860
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	6,590
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	2,480
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	26,680
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	13,810
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	13,730
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	2,640
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	3,650
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	8,920
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	6,130
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	1,400
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	19,240
Badger	786	672	406	748	451	533	783	859	482	490	372	596	390

* 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 2011-12.

	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	2011-12
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	8.8
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	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	2.2
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	3.2
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	1.2
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	1.7
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	7.4
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	2.6
Mourning dove ^γ						6.2	7	6.7	7.7	11.4	10.5	9.4	7.8
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	2.6
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	4.3
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	1.8
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	1.8
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	1.7
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	4.9
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	3.7
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	2.8
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	2.1
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	2.7
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	6.0
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	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	0.8
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	1.8
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	0.8

* 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 (%), 2002-03 through 2011-12.

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Ducks	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)	10.3 (84.6)
Canada geese	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)	6.3 (77.3)
Other geese	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)	4.3 (51.3)
American coot	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)	4.3 (74.6)
Common snipe	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)	1.6 (75.0)
Rails / gallinules	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)	5.0 (33.3)
Crow	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)	8.6 (86.1)
American woodcock	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)	3.6 (71.5)
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)	10.0 (77.5)
Ring-necked pheasant	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)	4.3 (61.8)
Ruffed grouse	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)	5.8 (73.6)
Spruce grouse	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)	2.9 (62.9)
Sharp-tailed grouse	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)	3.0 (60.0)
Gray partridge	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)	3.1 (53.1)
Gray squirrel	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)	6.3 (77.6)
Fox squirrel	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)	4.9 (75.8)
Eastern cottontail	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)	4.1 (69.5)
White-tailed jackrabbit	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)	3.3 (61.8)
Snowshoe hare	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)	3.7 (72.3)
Raccoon (Sept -Feb)	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)	6.7 (89.6)
Raccoon [‡] (March -Aug)	5.9 (91.7)	5.6 (85.2)	6.7 (90.9)	3.1 (86.8)						
Red fox (Sept -Feb)	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)	2.4 (48.1)
Red fox [‡] (March -Aug)	3.6 (46.7)	1.1 (51.7)	1.4 (44.4)	1.6 (55.6)						
Gray fox	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)	2.5 (33.3)
Coyote	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)	3.9 (44.8)
Badger	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)	1.3 (60.0)

[‡] 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, 2000-01 through 2011-12.

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Small game license sales ^a	320,862	298,055	288,729	296,939	287,725	280,156	295,898	298,467	290,064	282,983	300,624	290,686
State duck stamp sales	121,709	118,590	119,677	118,757	114,003	102,143	101,792	100,134	95,675	89,942	88,069	89,681
Pheasant stamp sales	114,440	97,665	102,097	121,456	114,653	117,301	129,546	129,315	123,270	110,456	104,286	86,868
Estimated harvest ^b												
Ducks	969,081	989,723	1,024,662	914,398	727,206	676,741	730,559	708,491	658,186	576,571	619,604	730,370
Canada geese	301,481	308,341	256,937	289,689	284,714	281,829	324,498	243,705	288,411	229,068	257,532	296,040
Other geese	14,761	7,867	11,125	12,755	8,150	9,025	6,658	7,723	13,895	6,255	3,945	6,750
American coot	10,437	17,554	20,114	10,993	20,345	15,938	24,909	16,061	23,871	14,820	26,345	14,740
Common snipe	2,801	1,783	3,432	2,558	2,130	5,336	4,221	3,933	2,210	1,487	1,936	1,470
Rails / gallinules	1,233	244	1,723	75	75	0	1,329	2,569	163	298	75	390
Crow	96,347	84,412	71,753	82,285	71,943	92,742	69,188	54,319	51,742	56,301	57,298	82,990
American woodcock	45,341	26,662	28,230	30,438	41,479	27,919	39,907	27,866	29,210	35,384	29,766	25,980
Mourning dove ^d					96,559	77,749	85,950	101,161	132,577	109,988	100,234	77,790
Ring-necked pheasant	375,169	266,786	357,833	511,462	419,712	585,299	587,580	655,443	522,071	400,242	359,396	204,440
Ruffed grouse	619,612	331,916	249,386	350,674	194,687	224,309	417,153	293,544	318,338	357,998	465,576	401,280
Spruce grouse	23,151	9,480	11,943	18,327	9,204	10,079	26,568	17,705	16,997	19,159	14,957	19,470
Sharp-tailed grouse	15,888	9,795	8,516	11,835	10,417	6,387	11,939	13,790	13,695	9,545	16,819	12,020
Gray partridge	16,782	10,174	10,921	22,250	12,572	16,289	11,545	11,000	9,660	8,019	9,154	4,110
Gray squirrel	140,253	145,916	133,589	174,848	132,659	122,078	140,788	133,194	121,534	109,717	138,925	129,600
Fox squirrel	65,103	62,958	67,100	84,529	62,410	62,187	66,068	47,736	51,079	54,013	61,686	51,580
Eastern cottontail	78,328	62,426	51,967	93,054	86,508	90,062	77,872	78,588	79,927	57,702	53,874	38,780
White-tailed jack rabbit	6,803	8,453	4,046	7,161	6,940	5,493	4,149	9,482	6,446	2,608	7,221	5,430
Snowshoe hare	26,904	21,717	10,909	11,969	7,895	10,406	16,801	5,789	11,343	5,352	6,772	9,700
Raccoon (Sept -Feb)	3,785	59,279	60,049	49,878	56,970	29,191	62,891	46,739	72,026	66,667	77,689	53,910
Raccoon ^c (Mar -Aug)	35,733	18,362	19,524	21,752	20,456	7,331						
Red fox (Sept -Feb)	19,460	6,842	11,438	13,000	6,072	10,166	7,872	6,188	4,408	10,238	8,781	7,140
Red fox ^c (Mar -Aug)	1,676	4,077	3,746	1,287	836	1,141						
Gray fox	900	571	521	602	1,758	927	3,593	559	2,443	1,857	2,382	1,160
Coyote	28,908	12,032	14,223	19,961	18,230	38,612	20,769	34,377	45,689	46,234	44,051	33,820
Badger	558	244	1,272	302	533	924	1,091	159	490	744	596	310

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.

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Nonresident licenses issued^a	7001	5,843	5,852	6,291	6,385	5,897	7,356	7,858	7,114	6,934	6,695	6,312
Questionnaires:												
Number mailed	98	124	130	123	182	210	185	185	226	196	163	169
Number not delivered	6	9	9	17	13	10	11	11	15	10	6	11
Number (percent) returned	56 (61)	77 (67)	75 (66)	68 (64)	114 (67)	134 (67)	115 (62)	101 (58)	89 (42)	105 (54)	107 (66)	91 (54)
Estimated nonresidents and (percent) of all nonresidents hunting:												
Ducks	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)	2,430 (38.5)
Canada goose	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)	1,620 (25.6)
Ruffed grouse	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)	1,460 (23.1)
Ring-necked pheasant	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)	1,780 (28.2)
Raccoon	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)	0 (0)
Estimated nonresident take:												
Ducks	18,253	42,225	17,556	17,855	19,269	12,149	12,173	22,718	15,463	11,755	17,055	13,840
Canada goose	5,001	13,400	5,852	5,736	6,214	3,946	3,580	3,501	5,762	3,698	6,334	4,050
Ruffed grouse	24,003	6,622	9,207	9,437	7,924	6,429	11,522	7,236	6,938	8,651	12,600	8,980
Ring-necked pheasant	4,001	3,740	7,647	9,344	11,174	13,656	16,079	17,661	10,642	6,274	8,076	4,860
Raccoon ^b	3,375	0	0	0	0	887	0	3,268	0	0	593	0

^a Excludes duplicate licenses and nonresident shooting preserve licenses.

^b In 2001, 2002, 2003, 2004, 2006, 2008, 2009 and 2011 no non-residents reported hunting/harvesting raccoons.

Raccoon take per hunter			
Year	Resident	Non-resident	Number of Non-resident raccoon licenses
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
2011	6.7	0	34

The following information has been excerpted from: U.S. Fish and Wildlife Service. Migratory bird hunting activity and harvest during the 2010 and 2011 hunting seasons: preliminary estimates. U.S. Department of the Interior, Washington, D.C. U.S.A. The entire report is available on-line at <http://www.fws.gov/migratorybirds/reports/reports.html>

Table 1. Species composition of the Minnesota waterfowl harvest, 2010 and 2011. (from: Raftovich, R.V., K.A. Wilkins, S.S. Williams, and H.L. Spriggs. 2012. Migratory Bird Hunting activity and harvest during the 2010 and 2011 hunting seasons: Preliminary estimates. U.S. Fish and Wildlife Service, Laurel, Maryland. USA July 2012. 63 pp).**Note:** All hunter activity and harvest estimates are preliminary, pending final counts of the number of migratory bird hunters in each state and complete audits of all survey response data.

Species	Minnesota Harvest					Mississippi Flyway Harvest		
	2010	% of Harvest	2011	% of Harvest	Percent change in Harvest 10-11	2010	2011	Percent change Harvest 10-11
Mallard	138,167	26.37	180,515	29.07	+ 23	2,228,872	2,240,248	+ 1
Domestic mallard	0	0	0	0	0	1,482	3,398	+ 56
American black duck	1,421	0.27	491	0.08	- 189	27,073	21,992	- 23
Black x mallard	284	0.05	491	0.08	+ 42	4,522	5,068	+ 11
Gadwall	25,871	4.94	8,339	1.34	- 210	1,098,694	1,474,405	+ 25
American wigeon	9,382	1.79	5,396	0.87	- 74	129,962	136,779	+ 5
Green-winged teal	36,674	7.00	36,790	5.92	0	1,052,784	1,001,902	- 5
Blue-winged /cinnamon teal	36,958	7.05	89,767	14.45	+ 59	633,448	704,647	+ 10
Northern shoveler	19,332	3.69	15,697	2.53	- 23	475,080	375,918	- 26
Northern pintail	11,087	2.12	7,848	1.26	- 41	196,185	212,499	+ 8
Wood duck	77,897	14.87	150,593	24.25	+ 48	919,239	928,178	+ 1
Redhead	18,479	3.53	18,640	3.00	+ 1	109,003	155,227	+ 30
Canvasback	13,362	2.55	9,811	1.58	- 96	72,703	68,358	- 6
Greater scaup	1,421	0.27	1,962	0.32	+ 28	23,692	33,680	+ 30
Lesser scaup	14,783	2.82	5,396	0.87	- 174	157,275	114,903	- 37
Ring-necked duck	88,984	16.98	63,278	10.19	- 41	268,411	260,061	- 3
Goldeneye	7,051	0.92	9,320	1.50	+ 48	33,578	39,306	+ 15
Bufflehead	12,607	3.26	7,358	1.18	- 132	79,652	78,145	- 2
Ruddy duck	1,421	0.27	1,962	0.32	+ 28	8,196	21,717	+ 62
Scoters	284	0.05	0	0	- 100	3,136	6,014	+ 48
Hooded merganser	6,254	1.19	6,377	1.03	+ 2	45,988	53,766	+ 14
Other mergansers	0	0.00	981	0.16	+ 100	5,256	13,368	+ 61
Total Duck Harvest (retrieved kill)	524,000 ±13%		621,000 ±11%		+ 16	7,647,000 ±6%	8,000,100 ±6%	+ 4

^a Sum of all species does not equal total because of rounding error.

Table 2. Top 10 states in number of **adult duck hunters**, 2011, and number of hunter-days and retrieved duck kill, in (from: Raftovich, R.V., K.A. Wilkins, S.S. Williams, and H.L. Spriggs. 2012. Migratory Bird Hunting activity and harvest during the 2010 and 2011 hunting seasons: Preliminary estimates. U.S. Fish and Wildlife Service, Laurel, Maryland. USA July 2012. 63 pp).**Note:** All hunter activity and harvest estimates are preliminary, pending final counts of the number of migratory bird hunters in each state and complete audits of all survey response data.

State	Number of active duck hunters	Duck hunter days afield	Total duck harvest	Seasonal duck harvest per hunter
Louisiana	97,500 ± 5%	857,100 ± 9%	2,818,800 ± 10%	28.9 ± 12%
Minnesota	76,800 ± 9%	401,100 ± 11%	621,000 ± 11%	8.1 ± 15%
Texas	74,700 ± 21%	480,100 ± 45%	1,390,400 ± 46%	18.6 ± 50%
Arkansas	58,800 ± 9%	476,000 ± 13%	1,358,400 ± 13%	23.1 ± 16%
Wisconsin	58,300 ± 11%	424,700 ± 15%	445,700 ± 12%	7.6 ± 16%
California	49,100 ± 10%	468,500 ± 13%	1,489,100 ± 16%	30.3 ± 19%
Illinois	34,100 ± 10%	311,000 ± 13%	507,000 ± 17%	14.9 ± 20%
North Dakota	32,000 ± 6%	162,600 ± 10%	460,600 ± 8%	14.4 ± 10%
Michigan	31,500 ± 11%	191,000 ± 12%	287,500 ± 16%	9.1 ± 19%
Missouri	29,600 ± 12%	230,300 ± 20%	493,200 ± 26%	16.7 ± 29%
Mississippi Flyway		3,637,200 ± 5%	8,000,100 ± 6%	
United States		7,073,700 ± 4%	15,931,200 ± 6%	

Table 3. Top 10 states in number of **adult goose hunters**, 2011, and number of hunter-days and retrieved goose kill, in (from: Raftovich, R.V., K.A. Wilkins, S.S. Williams, and H.L. Spriggs. 2012. Migratory Bird Hunting activity and harvest during the 2010 and 2011 hunting seasons: Preliminary estimates. U.S. Fish and Wildlife Service, Laurel, Maryland. USA July 2012. 63 pp).**Note:** All hunter activity and harvest estimates are preliminary, pending final counts of the number of migratory bird hunters in each state and complete audits of all survey response data.

State	Number of active goose hunters	Goose hunter days afield	Total goose harvest	Seasonal goose harvest per hunter
Minnesota	54,700 ± 11%	309,600 ± 15%	248,300 ± 22%	4.5 ± 25%
Texas	42,300 ± 23%	192,800 ± 56%	236,200 ± 41%	5.6 ± 47%
Wisconsin	40,800 ± 12%	271,000 ± 16%	93,500 ± 19%	2.3 ± 22%
California	33,900 ± 11%	219,100 ± 13%	166,700 ± 19%	4.9 ± 22%
Michigan	28,400 ± 12%	166,900 ± 15%	125,400 ± 18%	4.4 ± 21%
Ohio	28,400 ± 20%	204,200 ± 23%	111,600 ± 30%	3.9 ± 36%
Pennsylvania	27,900 ± 15%	130,500 ± 19%	96,800 ± 25%	3.5 ± 29%
Illinois	21,200 ± 14%	171,700 ± 16%	114,900 ± 28%	5.4 ± 31%
Maryland	25,000 ± 10%	131,200 ± 13%	117,600 ± 16%	4.7 ± 19%
North Dakota	24,500 ± 7%	109,300 ± 9%	147,800 ± 13%	6.0 ± 15%
Arkansas	18,400 ± 16%	97,000 ± 26%	89,000 ± 31%	4.8 ± 34%
Mississippi Flyway		1,667,300 ± 7%	1,082,500 ± 9%	
United States^b		3,573,800 ± 5%	2,879,900 ± 5%	

^b Goose hunter statistics do not include brant hunter statistics for coastal states with brant seasons: Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Rhode Island, Virginia, California, Oregon, Washington, and Alaska.

HUNTER ACTIVITY AND GOOSE HARVEST DURING THE SEPTEMBER 2011 CANADA GOOSE HUNT IN MINNESOTA

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The September Canada goose season in Minnesota was 3 - 22 September 2011 (20 days). Beginning in 2007 and continuing through 2009, a 7-day (16 - 22 Sep) experimental season was added in the Northwest Goose Zone (Fig. 1). The U.S. Fish and Wildlife Service had approved the 7-day season extension in other goose zones in Minnesota after a 3-year experimental season from 1999-2001 (Maxson et al. 2003). In 2010 and 2011, this season extension was operational statewide.

During the September season the daily bag limit was 5 Canada geese per day statewide. Shooting hours were 1/2 hour before sunrise to sunset. Taking of Canada geese was prohibited on or within 100 yards of all surface waters in the Northwest Goose Zone, in the Carlos Avery Wildlife Management Area and in the Swan Lake Area. Within the Twin Cities Metro Zone, and goose refuges open to goose hunting, hunting was not permitted from public road right-of-ways. Goose hunters were required to obtain a \$4.00 permit to participate in the September season. This report documents results of the 2011 September goose hunter mail questionnaire survey (Appendix A).

METHODS

Permittees were randomly selected to receive a post-season hunter survey. Questionnaires were sent to 3,100 permit holders following the season. Questionnaires were individually numbered, and up to 3 questionnaires were mailed to individuals who had not responded. Completed questionnaires were double key-punched to reduce data-entry errors.

The questionnaire asked hunters the number of days hunted, and, number of geese shot and retrieved, number of geese knocked down and not retrieved, and the county they hunted in the most. Hunters were asked to indicate the number of days during the September season that they hunted over water, and not over water, and the number of geese they shot under each scenario. Finally, the questionnaire asked hunters a series of questions to gauge their satisfaction with the September Canada goose hunting season.

We used the R programming language (ver. 2.9.2; R Development Core Team [RDCT] 2009) to summarize responses to the survey.

RESULTS AND DISCUSSION

The DNR License Bureau reported that 34,271 Special Canada Goose Season permits were sold prior to 23 September, 2011. Response rate to the survey was 55%. Among those respondents, 76% indicated that they hunted during the September season. Active hunters were afield an

average of 3.9 days and retrieved 4.8 geese. Overall, the success rate for active hunters was 73% (Table 1).

The survey estimates that 26,000 active hunters shot and retrieved 123,700 Canada geese during the 2011 September season (Table 2). Prior to the implementation of the Harvest Information Program, the U.S. Fish and Wildlife Service adjusted their mail survey statistics by a memory and prestige response bias factor of 0.848 for geese bagged in the Mississippi Flyway (Voelzer et al. 1982:56). Multiplying September Canada goose harvest by the adjustment factor would indicate a 2011 retrieved harvest of 104,900 geese.

We asked hunters how many days they hunted overwater and how many days they hunted away from water. A total of 37% of hunters statewide hunted over water, and 26% of all days spent hunting during the September season were overwater. The survey indicates that 20 % (SE = 0.79) of the geese harvested in the early season (25,200 total geese) were harvested by hunters overwater. We asked hunters if they favored eliminating overwater hunting statewide during the September season. Twenty-one percent of active hunters favored, 60% were opposed, and 19% had no preference for eliminating overwater hunting.

We asked hunters about whether or not they had harvested a limit of 5 geese, or had harvested zero geese, during the September goose season. Nineteen percent of September goose hunters reported bagging a limit of geese ≥ 1 time during the September season. Seventy percent of hunters reported a zero harvest on at least one day during the September season.

Fifty-two percent of all geese in the September season were harvested in the first week of the season, followed by 32% in the second week, and 16% harvested the third. When asked about their preference for season dates for the September season: 51% of active hunters wanted to maximize the number of days, 24% wanted a split between the end of the early goose season and start of the regular waterfowl season, and 25% had no preference. Sixty-eight percent of the hunters that hunted during the September goose season also hunted on the regular waterfowl opener.

Landowners and managers in the west central portion of Minnesota are still reporting numerous goose depredation issues. If these issues continue, there may be justification for a new September goose zone (Fig. 2) to attempt to address these issues. To determine how many September goose hunters hunt in the area where the new zone would be located, we asked hunters which county they hunted in the most during the September Canada goose season (Appendix B). Seventeen percent of September goose hunters (4,300) hunted most within counties at least partially within the new zone, and those hunters harvested 15% (18,300) of the geese harvested during the 2011 September Canada goose season, although it is unknown how many of those geese were actually harvested within the new zone.

We asked hunters how satisfied they were (1=very low ,..., 7=very high) relative to overall hunting experience, number of geese bagged, number of geese seen, and regulations. Mean satisfaction was: overall experience 5.6, geese bagged 4.4, number of geese seen 5.0, and regulations 5.4.

LITERATURE CITED

- Maxson, S. J., J. S. Lawrence, and M. H. Dexter. 2003. Final report on Minnesota's 1999-2002 experimental September Canada goose season extension. Minnesota Dept. of Natural Resources Unpubl. Report. 18 pp.
- R Development Core Team. 2009. R: a language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. <<http://www.R-project.org>>. Accessed 18 January 2011.
- Voelzer, J. F., E. Q. Lauxen, S. L. Rhoades, and K. D. Norman, editors. 1982. Waterfowl status report 1979. U.S.D.I. Fish Wildl. Ser. Spec. Sci. Rep. - Wildl. No. 246. 96pp.

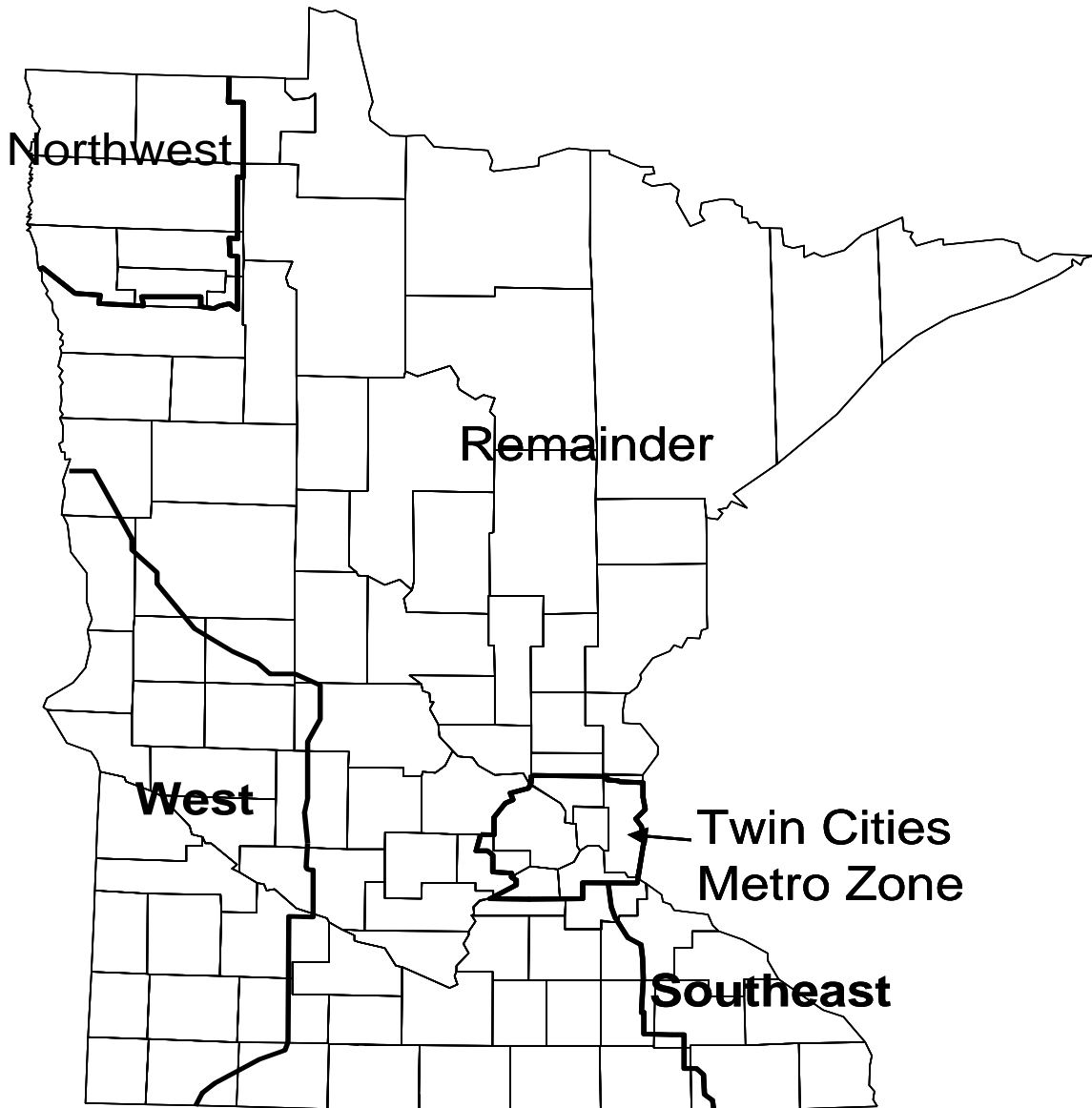


Figure 1. Traditional September season Goose Zones in Minnesota. The West, Twin Cities Metro and Southeast zones are now included in the Remainder zone during the September season.

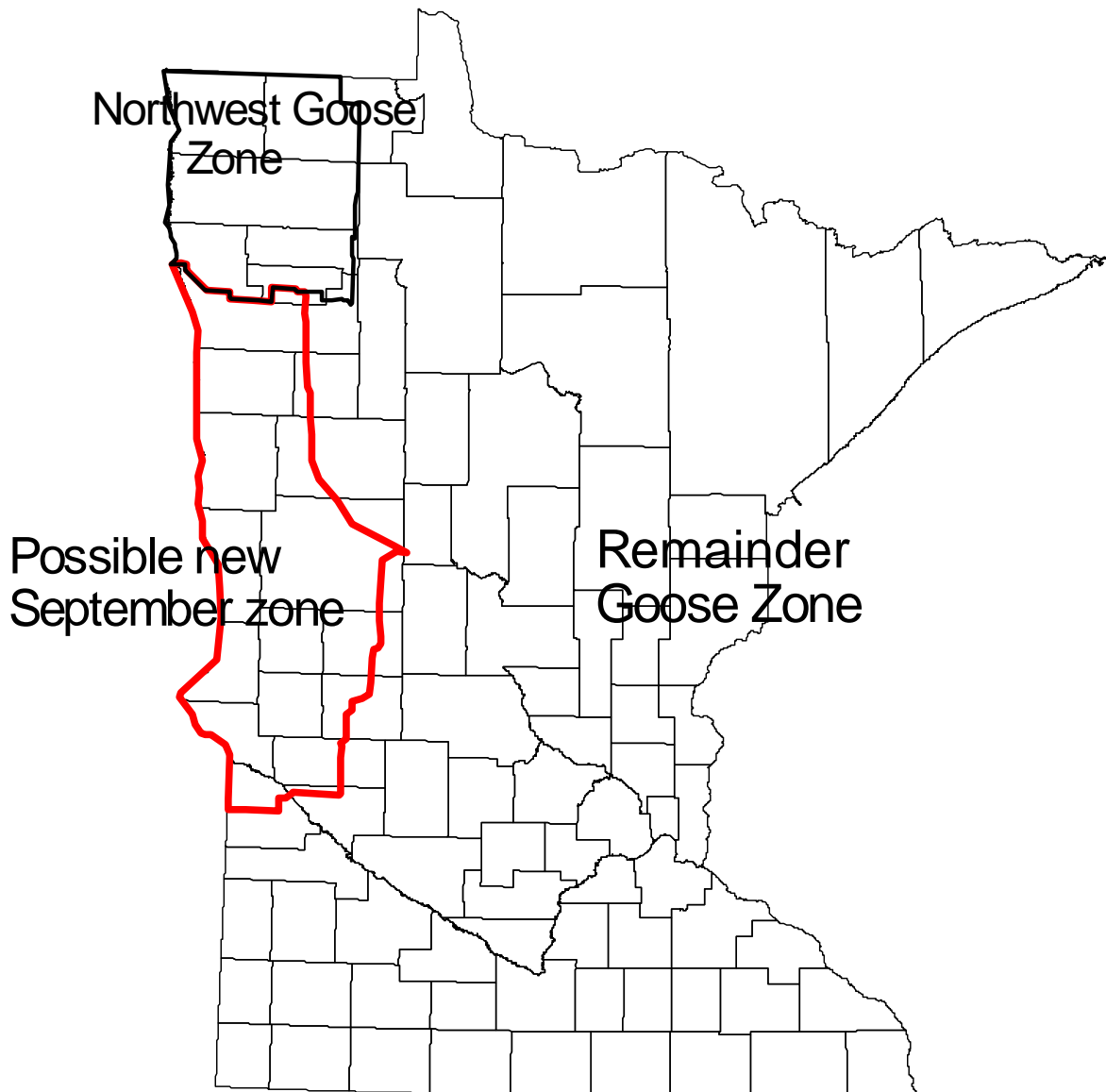


Figure 2. Location of a possible new September Canada goose zone in comparison to the current Northwest goose zone, and the Remainder of State Goose zone.

Table 1. Permit sales, hunter activity, and harvest^a during the September Canada Goose season (3 – 22 September) in Minnesota, 2011.

Parameter	Total
Total permits sold	34,271
Questionnaires delivered	3,100
Useable questionnaires returned	1,674
% responding	55.1
Active hunters	1,270
% active hunters	76.0
% hunters that were successful	73
Days hunted per active hunter	3.9
Geese shot and retrieved per active hunter	4.8
Unretrieved harvest per active hunter	0.5
% unretrieved harvest	0.092
EXPANDED:	
Active hunters	26,000
Hunter days	102,500
Retrieved harvest	123,700
Est. unretrieved harvest	12,900
Total harvest	140,500

^aHarvest estimates not adjusted for memory/exaggeration bias.

Table 2. Retrieved harvest estimates by zone during the September Canada Goose season in Minnesota, 2000 – 2009. Total retrieved harvest estimates during the September Canada Goose season in Minnesota, 2010-2011.

Year	Northwest	West	Southeast	Twin Cities Metro	Remainder	Total Geese Harvested	Number of Hunters	Geese/Day/Hunter	Total Geese/Hunter
2000	2,750	18,909	1,183	15,594	51,685	90,121	33,202	0.63	2.71
2001	2,047	27,663	538	8,164	62,608	101,021	28,265	0.82	3.57
2002	1,568	22,075	848	8,504	50,769	83,764	26,089	0.68	3.20
2003	2,805	17,779	2,357	9,890	48,157	80,988	30,415	0.74	2.66
2004	4,326	16,843	1,197	11,090	56,480	89,936	29,657	0.80	3.03
2005	4,888	15,304	1,717	11,139	61,218	94,266	27,865	0.89	3.38
2006	6,826	17,987	1,461	11,844	53,321	91,439	28,405	0.86	3.22
2007	7,948	14,952	1,469	11,702	58,243	94,314	25,379	0.91	3.72
2008	5,530	16,168	2,580	13,656	62,827	100,748	27,392	0.98	3.73
2009	4,442	10,294	2,023	12,794	48,609	78,151	25,189	0.85	3.10
2010						107,907	26,848	0.98	4.00
2011						123,700	26,000	1.21	4.80

Appendix A. Questions asked on the 2011 September Special Canada Goose Season Hunter Survey.

1. Did you hunt during the September 3-22, 2011 September Canada goose season? (Check One)

- YES
 NO → If NO, PLEASE SKIP TO → **QUESTION 6.**

2. Please indicate the number of days hunted, total harvest of geese, and the County you hunted most during the 2011 September Canada goose season.

- _____ Number of days you hunted
 _____ Total geese personally shot and retrieved
 _____ Total geese personally knocked down but not retrieved
 _____ County hunted most

3. Did you personally hunt geese overwater (for example with decoys floating in or along the shore of a wetland or pass shooting next to a wetland) during the September 2011 Canada goose season?

- NO → IF NO PLEASE SKIP TO → **QUESTION 4**
 YES

If Yes:

- How many days did you personally hunt overwater? _____ DAYS
 How many geese did you personally shoot while hunting overwater? _____ GEESE

4. During the 2011 September Canada goose season, about how many days that you hunted geese....

- ..did you shoot your daily bag limit of geese (5)? _____ DAYS
 ..did you shoot 0 geese? _____ DAYS

5. During the 2011 September Canada goose season, how many geese did you personally harvest during each of the following periods:

- First week (Saturday, Sept. 3 – Friday, Sept. 9)? _____
 Second week (Saturday, Sept. 10 – Friday, Sept. 16)? _____
 Last week (Saturday, Sept. 17 – Thursday, Sept. 22)? _____

6. In 2012, the Regular waterfowl season may open on Saturday, September 22. Please place an **X** next to the option for the September goose season that you would favor. Option 1 would maximize days during the September goose season. Option 2 would allow a one week delay between the September goose season and Regular waterfowl seasons.

- _____ **Option 1:** Saturday, September 1 to Friday, September 21
 _____ **Option 2:** Saturday, September 1 to Sunday, September 16
 _____ **Option 3:** No Preference

7. Do you favor eliminating over-water hunting statewide during the September Canada goose season? (CHECK ONLY ONE BELOW).

- YES
 NO
 NO PREFERENCE

8. During the 2011 September Canada goose season, how satisfied or dissatisfied were you with the following? (*Please circle one response for each. If you did not hunt geese please circle "9" in the far right column.*)

	Very dissatisfied	Moderately dissatisfied	Slightly Dissatisfied	Neither	Slightly Satisfied	Moderately satisfied	Very satisfied	Did not hunt
hunting experience	1	2	3	4	5	6	7	9
hunting geese bagged	1	2	3	4	5	6	7	9
hunting regulations	1	2	3	4	5	6	7	9
number of geese seen	1	2	3	4	5	6	7	9

9. Did you hunt waterfowl on opening weekend of the regular waterfowl season in Minnesota this year (Sept. 24-25)?

Yes No (Please check one.)

If you have general comments you may write them here (continue on back if necessary). If you have questions and desire a specific response, please contact your local DNR Wildlife Office or the DNR Information Center (Minnesota DNR, 500 Lafayette Road, St. Paul, MN 55155-4020, 1-888-646-6367). Thank you.

Comments:

Appendix B. Number and percent of September Canada goose hunters in the survey in each county in Minnesota, 2011. Counties in bold are at least partially within a proposed new early season Canada goose zone.

County	Hunters		County	Hunters		County	Hunters	
	N	%		N	%		N	%
AITKIN	17	0.014	LOW	13	0.011	TODD	14	0.012
ANOKA	22	0.019	LE SUEUR	15	0.013	TRAVERSE	4	0.003
BECKER	23	0.020	LINCOLN	6	0.005	WABASHA	6	0.005
BELTRAMI	12	0.010	LYON	7	0.006	WADENA	8	0.007
BENTON	13	0.011	MAHNOMEN	11	0.009	WASECA	9	0.008
BIG STONE	17	0.014	MARSHALL	14	0.012	WASHINGTON	21	0.018
BLUE EARTH	17	0.014	MARTIN	12	0.010	WATONWAN	4	0.003
BROWN	11	0.009	McLEOD	33	0.028	WILKIN	3	0.003
CARLTON	5	0.004	MEEKER	28	0.024	WINONA	6	0.005
CARVER	28	0.024	MILLE LACS	10	0.008	WRIGHT	54	0.046
CASS	17	0.014	MORRISON	14	0.012	YELLOW MEDICINE	7	0.006
CHIPPEWA	7	0.006	MOWER	3	0.003			
CHISAGO	12	0.010	MURRAY	8	0.007			
CLAY	16	0.014	NICOLLET	12	0.010			
CLEARWATER	6	0.005	NOBLES	7	0.006			
COOK	0	0.000	NORMAN	2	0.002			
COTTONWOOD	12	0.010	OLMSTEAD	5	0.004			
CROW WING	17	0.014	OTTERTAIL	51	0.043			
DAKOTA	20	0.017	PENNINGTON	2	0.002			
DODGE	1	0.001	PINE	17	0.014			
DOUGLAS	47	0.040	PIPESTONE	3	0.003			
FARIBAULT	13	0.011	POLK	16	0.014			
FILLMORE	2	0.002	POPE	23	0.020			
FREEBORN	18	0.015	RAMSEY	2	0.002			
GOODHUE	5	0.004	RED LAKE	0	0.000			
GRANT	8	0.007	REDWOOD	3	0.003			
HENNEPIN	23	0.020	RENVILLE	6	0.005			
HOUSTON	1	0.001	RICE	20	0.017			
HUBBARD	7	0.006	ROCK	2	0.002			
ISANTI	18	0.015	ROSEAU	14	0.012			
ITASCA	19	0.016	SCOTT	37	0.031			
JACKSON	18	0.015	SHERBURNE	27	0.023			
KANABEC	11	0.009	SIBLEY	9	0.008			
KANDIYOHI	25	0.021	ST. LOUIS	27	0.023			
KITTSOON	5	0.004	STEARNS	53	0.045			
KOOCHICHING	5	0.004	STEELE	8	0.007			
LAC QUI PARLE	10	0.008	STEVENS	5	0.004			
LAKE	0	0.000	SWIFT	14	0.012			

2012 LIGHT GOOSE CONSERVATION ORDER HARVEST IN MINNESOTA

David Rave, Wetland Wildlife and Populations Research Group
Margaret Dexter, Wildlife Populations and Research Unit

INTRODUCTION

This report documents results of the 2012 Light Goose Conservation Order hunter mail questionnaire survey.

METHODS

Minnesota held a light goose Conservation Order harvest from 1 March - 30 April 2012. Participants were required to obtain a \$3.50 permit. No other license, stamp or permit was required. Shooting hours were 1/2 hour before sunrise to 1/2 hour after sunset. There were no daily or possession limits. Use of electronic calls and unplugged shotguns was allowed.

All permit holders were sent a questionnaire after the season. Survey questions are listed in Figure 1. Second and third mailings were sent to non-respondents after one month had elapsed.

RESULTS AND DISCUSSION

A total of 1,048 permits was issued and 675 responses (65 %) to the questionnaire were obtained (Table 1). In calculating harvest estimates, we assumed that the 373 non-respondents participated in the conservation action and took light geese in the same manner as respondents (i.e., tallies were expanded by 1.55). Light geese were present in Minnesota for more days, and were hunted by more hunters during spring 2012 than in spring 2011, resulting in higher harvest in 2012 than in 2011. Harvest was again concentrated in the southwest portion of the state with some also being taken in west-central Minnesota. Six hundred people attempted to take light geese during the 61-day conservation order period. Active participants pursued light geese for 2,270 days and 2,620 light geese were shot and retrieved. This was an average retrieved take of 4.4 geese per active participant. Another 210 light geese were estimated wounded and not retrieved.

Unplugged shotguns were used by 260 (43.3%) individuals to take 1,510 (57.6%) geese, of which 460 (17.6%) were taken with the 4th, 5th, or 6th shell. Electronic calls were used by 130 (21.7%) participants to take 930 (35.5%) light geese. During the 1/2 hour after sunset period, 240 (9.2%) geese were harvested by 250 (41.7%) active hunters.

The method used for hunting white geese was 38.1% over decoys, 33.9% pass shooting, and 28.0% sneaking geese. Most hunters used steel shot (93.5%) versus other non-toxic shot (6.5%) to hunt light geese, and shot size varied among hunters with 57.9% using BB or larger shot, 38.0% using shot size 1 or 2, and 4.1% using shot size smaller than 2.

ACKNOWLEDGMENTS

J. Giudice, MNDNR Biometrics Unit analyzed all data for this report.

Figure 1. Light Goose Conservation Order hunter mail questionnaire, 2012.

MINNESOTA 2012 LIGHT GOOSE HARVEST SURVEY

For the Period of March 1 - April 30, 2012 ONLY

You are being asked to provide information to help us evaluate the harvest of light geese (snow, blue, and Ross' geese) in Minnesota during March 1 - April 30, 2012. Your cooperation is important. Please return this survey card even if you did not hunt light geese. Please answer the following questions to the best of your ability. **Answer only for your Minnesota 2012 hunting experience.**
THANK YOU! Ed Boggess, Director, Division of Fish and Wildlife, MN DNR.

1. Did you hunt light geese in Minnesota during March 1 - April 30, 2012? Yes / No
If NO, please disregard all remaining questions and return this survey card.
2. How many days did you hunt light geese in Minnesota during March 1 - April 30, 2012? _____
3. In what county did you hunt light geese most often during March 1 - April 30, 2012? _____
4. How many light geese did you personally shoot and retrieve in Minnesota? _____
5. How many light geese did you personally shoot, but were UNABLE to retrieve? _____
6. Did you hunt light geese in Minnesota with a gun(s) that was holding more than 3 shells? Yes / No
7. If yes, how many light geese did you shoot with a gun holding more than 3 shells? _____
8. How many light geese did you shoot and retrieve with the 4th, 5th, or 6th shell? _____
9. Did you hunt light geese in Minnesota with the aid of an electronic caller? Yes / No
10. If yes, how many light geese did you shoot and retrieve with the aid of an electronic caller? _____
11. Did you hunt light geese in Minnesota during the 1/2 hour after sunset period? Yes / No
12. If yes, how many light geese did you shoot and retrieve during the 1/2 hour after sunset period? _____
13. What method of hunting did you use most often? Check one
 hunt over decoys pass shoot Sneak
14. What type of shotgun shells did you use most often?
 Steel shot Other (Hevi-shot, bismuth, tungsten-matrix, etc.)
15. What size shot did you use most often? BBs or larger 1s or 2s Smaller than 2s

Table 1. Summary of Light Goose Conservation Order harvest in Minnesota, 2001 - 2012

Statistic	Year										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total permits sold	1,997	1,438	1,424	1,383	1,363	1,292	1,406	1,670	952	994	1,048
Useable returns	1,375	1,071	1,095	998	955	921	910	1,057	671	659	675
Response rate (%)	69.0	74.0	77.0	72.0	70.0	71.0	65.0	63.0	72.3	67.1	65.3
Active hunters (%)	60.5	38.5	48.5	44.7	37.3	39.8	54.9	66.0	40.8	45.7	56.9
Estimated total hunters	1,209	553	690	618	516	514	773	1,103	389	455	600
Estimated hunter days	5,517	2,600	3,372	2,643	2,665	2,302	3,404	4,647	1,475	1,830	2,270
Mean days/hunter	4.6	4.7	4.9	4.3	5.2	4.5	4.4	4.2	3.8	4.0	3.8
Estimated harvest (shot & retrieved)	3,516	2,005	2,735	1,395	1,360	1,786	2,409	4,366	559	1,554	2,620
Mean harvest/hunter	2.9	3.6	4.0	2.3	2.6	3.5	3.1	4.0	1.4	3.4	4.4
Estimated crippling losses	637	253	315	150	163	172	302	640	70	145	210
Percent using unplugged guns	46.4	50.6	48.2	44.0	42.3	43.6	46.7	46.8	44.9	44.2	43.0
Est. number hunters using unplugged guns	560	280	333	272	215	224	361	516	175	201	260
Est. number geese shot with unplugged guns	2,137	996	1,385	777	689	1,032	1,275	2,413	348	742	1,510
Est. harvest with shell 4-5-6	615	401	491	269	287	277	339	822	131	311	460
Percent using electronic calls	11.8	15.7	19.3	17.8	14.4	17.1	19.1	23.5	25.9	21.3	22.2
Est. number hunters using e-calls	142	87	133	110	73	88	148	260	101	97	130
Est. harvest while using e-calls	512	474	326	268	280	329	566	1,171	192	531	460
Percent hunting 1/2-hr after sunset	45.5	41.2	38.4	42.7	43.9	38.3	42.3	43.1	39.7	39.7	42.4
Est. number hunting after 1/2-hr sunset	550	228	265	264	223	197	326	475	154	180	250
Est. harvest 1/2-hr after sunset	841	267	311	242	246	209	511	713	87	238	240

2011 FALL WILD TURKEY HARVEST REPORT

Kurt Haroldson, Farmland Wildlife Populations and Research Group

Minnesota's fall turkey hunting season is managed with a quota system similar to the spring turkey hunting season. Permits are allocated across 67 permit areas (PAs; Figure 1). In 2011, the fall season was 30 days in length (October 1-30) and allowed permit holders to take one wild turkey of either sex.

Four types of permits were available to hunters: (1) general lottery permits in which applicants or parties of up to 4 hunters applied for a specific PA, (2) landowner permits in which up to 20% of permits for each PA were reserved for landowners or tenants who lived on 40 acres or more of land within the PA, (3) surplus permits which were offered in under-subscribed PAs, and (4) youth permits which were offered over the counter to all youth age 17 and younger on October 1, 2011. General lottery and landowner permits were made available based on a system of preference, which was determined by the number of years applicants submitted a valid, but unsuccessful application since last receiving a permit. Surplus permits could be purchased on a first-come, first-served basis. Youth permits were available without quota or preference for the first time in 2011.

Fall turkey hunting opportunity has increased significantly since 2007 with the addition of 5,940 available permits (132% increase), 35 new permit areas, and the extension of the season from two 5-day time periods to one 30-day time period. In 2011, 5,382 permits were issued (a 19% decrease from 2010), and hunters registered 953 turkeys, a 30% decrease from the 2010 season (Table 1; Figure 2). Hunter success averaged 18%, below the 5-year average (23%), and success varied among PAs from 0% in PAs 447, 457, and 458 to 42% in PA 183 (Table 2). The majority of permits issued were general lottery (47%), followed by surplus permits (39%), youth (13%), and landowner (2%; Table 3). Compared to 2009, the proportion of general lottery permits issued has declined dramatically (from 94% to 47%) while the number of surplus permits issued increased by a similar amount (from 1% to 39%), indicating that some hunters are opting to purchase a surplus permit rather than apply for a permit through the general lottery system.

Overall weather conditions for the 2011 fall wild turkey season were favorable across much of the turkey range, although the first week was unseasonably warm. Much of October received little or no precipitation (Minnesota Climatology Working Group 2011), and regional mean temperatures for October were generally 4 to 6° F above average (Minnesota Climatology Working Group 2011). Despite generally favorable weather conditions, hunter participation declined 19% from 2010, and harvest was 30% below that from 2010. Both the spring turkey harvest and the fall turkey harvest were lower than expected, which might reflect a smaller wild turkey population following the severe winter of 2010-11, during which hen survival was likely reduced. Further, the cold, wet spring of 2011, which likely reduced nest and poult survival, would also reduce fall turkey numbers. Reduced hunter participation may be a response to the expected smaller turkey population and a smaller proportion of hunters making their fall turkey hunting plans in July by applying for a permit through the lottery system. Participation in fall turkey hunting has declined nearly 30% over the past 5 years in Wisconsin, so it is also possible that some hunters try out the sport but lack sufficient interest to continue participation.

LITERATURE CITED

Minnesota Climatology Working Group. 2011. Climate journal. <http://climate.umn.edu/>
Accessed 22 November 2011.

Table 1. Permits available and issued, applicants, registered harvest, and hunter success rates for fall wild turkey seasons 1990 – 2011, Minnesota.

Year	Permits available	Applicants	Permits issued	Registered harvest	Hunter success (%) ^a
1990	1,000	4,522	951	326	34
1991	2,200	2,990	2,020	552	27
1992	2,200	2,782	2,028	588	29
1993	2,400	3,186	2,094	605	29
1994	2,500	3,124	2,106	601	29
1995	2,500	3,685	2,125	648	30
1996	2,500	4,453	2,289	685	30
1997	2,580	4,574	2,378	698	29
1998	2,710	4,526	2,483	828	33
1999	2,890	5,354	2,644	865	33
2000	3,090	5,263	2,484	735	30
2001	2,870	4,501	2,262	629	28
2002	3,790	5,180	2,945	594	20
2003	3,870	5,264	2,977	889	30
2004	4,380	5,878	3,277	758	23
2005	4,410	4,542	2,978	681	23
2006	4,290	4,167	2,802	618	22
2007	4,490	4,464	2,837	695	24
2008	7,560	5,834	4,981	1,187	24
2009	9,330	7,738	5,019	1,163	23
2010	10,430	6,869	6,607	1,353	20
2011	10,430	3,538	5,382	953	18

^a Success rates not adjusted for non-participation.

Table 2. Permits available and issued, registered harvest, and current and historic success by permit area for the 2011 fall wild turkey season, Minnesota.

Permit area	Permits		2011		Historic mean ^b	
	Available	Issued	Registered harvest	Success (%) ^a	Success (%)	<i>n</i>
156	20	21	7	33	21	3
157	100	89	18	20	22	4
159	20	18	1	6	7	3
183	10	12	5	42	19	3
213	200	136	30	22	18	4
214	200	103	22	21	25	4
215	300	145	25	17	23	4
218	200	168	25	15	22	3
219	100	97	16	16	17	3
221	200	79	10	13	20	4
222	200	52	11	21	21	4
223	200	147	28	19	17	4
225	200	98	12	12	14	3
227	300	180	28	16	21	5
229	50	41	5	12	17	4
235	20	18	2	11	9	3
236	300	192	32	17	23	9
239	300	195	38	19	25	4
240	200	95	24	25	28	4
241	20	20	2	10	22	3
243	20	26	8	31	30	3
244	40	39	11	28	35	3
248	100	47	10	21	24	4
249	100	86	10	12	19	4
262	40	8	1	13	28	4
338	200	158	28	18	24	9
339	200	134	14	10	18	9
341	500	304	70	23	25	9
342	350	145	21	14	22	9
343	300	216	42	19	26	9
344	200	82	6	7	19	9
345	200	58	6	10	16	9
346	300	113	16	14	22	9
347	200	122	25	20	23	9

Table 2. Continued.

Permit area	Permits		2011		Historic mean ^b	
	Available	Issued	Registered harvest	Success (%) ^a	Success (%)	<i>n</i>
348	250	130	16	12	23	9
349	450	105	21	20	22	9
412	40	37	5	14	25	4
416	20	20	5	25	22	3
417	30	29	8	28	30	3
420	40	12	3	25	30	6
422	50	46	5	11	31	6
425	40	32	10	31	26	6
427	20	19	3	16	20	3
428	30	29	6	21	26	4
431	20	18	5	28	33	6
433	20	24	4	17	18	6
440	20	21	2	10	28	4
442	250	177	29	16	25	9
443	100	65	9	14	17	9
446	20	10	1	10	20	6
447	20	7	0	0	14	6
448	30	12	3	25	22	9
449	30	16	3	19	27	8
450	20	3	1	33	15	6
451	20	7	2	29	19	3
454	20	21	3	14	25	3
457	20	13	0	0	3	3
458	20	3	0	0	0	3
459	20	12	2	17	7	4
461	250	198	41	21	28	9
462	240	129	28	22	24	9
463	30	31	7	23	22	4
464	80	47	12	26	24	9
465	80	38	8	21	22	9
466	160	106	19	18	26	9
467	100	109	22	20	21	9
601	2000	412	61	15	19	9
Total	10430	5382	953	18	-	-

^a Success rates not adjusted for non-participation.

^b Mean success rates (%) over all fall turkey seasons (*n*) between 2003 – 2011 or since a permit area opened for fall turkey hunting.

Table 3. Permits available and issued by type, registered harvest, and success by permit area for the 2011 fall wild turkey season, Minnesota.

Permit area	Permits available	Permits issued by type					Registered harvest	Success (%) ^a
		General lottery	Landowner	Surplus	Youth	Total		
156	20	16	1	0	4	21	7	33
157	100	49	1	31	8	89	18	20
159	20	14	0	3	1	18	1	6
183	10	10	0	0	2	12	5	42
213	200	52	4	60	20	136	30	22
214	200	37	1	52	13	103	22	21
215	300	47	2	72	24	145	25	17
218	200	76	3	60	29	168	25	15
219	100	58	2	22	15	97	16	16
221	200	24	2	43	10	79	10	13
222	200	12	1	32	7	52	11	21
223	200	64	0	64	19	147	28	19
225	200	36	2	43	17	98	12	12
227	300	66	2	88	24	180	28	16
229	50	12	0	23	6	41	5	12
235	20	12	0	4	2	18	2	11
236	300	89	1	75	27	192	32	17
239	300	79	0	94	22	195	38	19
240	200	42	0	38	15	95	24	25
241	20	6	0	10	4	20	2	10
243	20	15	1	0	10	26	8	31
244	40	30	3	0	6	39	11	28
248	100	13	2	28	4	47	10	21
249	100	41	1	35	9	86	10	12
262	40	4	0	3	1	8	1	13
338	200	65	4	76	13	158	28	18
339	200	37	1	66	30	134	14	10
341	500	130	4	130	40	304	70	23
342	350	81	4	47	13	145	21	14
343	300	126	4	65	21	216	42	19
344	200	44	0	35	3	82	6	7
345	200	23	2	27	6	58	6	10
346	300	61	4	36	12	113	16	14
347	200	59	1	43	19	122	25	20

Table 3. Continued.

Permit area	Permits available	Permits issued by type					Registered harvest	Success (%) ^a
		General lottery	Landowner	Surplus	Youth	Total		
348	250	69	1	50	10	130	16	12
349	450	53	1	40	11	105	21	20
412	40	14	3	14	6	37	5	14
416	20	9	0	6	5	20	5	25
417	30	24	3	0	2	29	8	28
420	40	3	1	6	2	12	3	25
422	50	30	0	8	8	46	5	11
425	40	28	2	0	2	32	10	31
427	20	10	0	7	2	19	3	16
428	30	21	3	1	4	29	6	21
431	20	5	0	9	4	18	5	28
433	20	12	0	8	4	24	4	17
440	20	18	0	0	3	21	2	10
442	250	120	6	40	11	177	29	16
443	100	35	0	18	12	65	9	14
446	20	5	0	5	0	10	1	10
447	20	3	0	4	0	7	0	0
448	30	8	0	2	2	12	3	25
449	30	11	0	5	0	16	3	19
450	20	1	0	2	0	3	1	33
451	20	4	0	2	1	7	2	29
454	20	9	0	11	1	21	3	14
457	20	9	0	3	1	13	0	0
458	20	0	0	3	0	3	0	0
459	20	7	0	2	3	12	2	17
461	250	99	4	71	24	198	41	21
462	240	76	5	40	8	129	28	22
463	30	24	1	1	5	31	7	23
464	80	15	0	21	11	47	12	26
465	80	20	0	12	6	38	8	21
466	160	41	1	53	11	106	19	18
467	100	50	0	39	20	109	22	20
601	2,000	147	0	195	70	412	61	15
Total	10,430	2,510	84	2,083	705	5,382	953	18

^a Success rates not adjusted for non-participation

2011 Permit Areas (PAs) Open to Fall Turkey Hunting

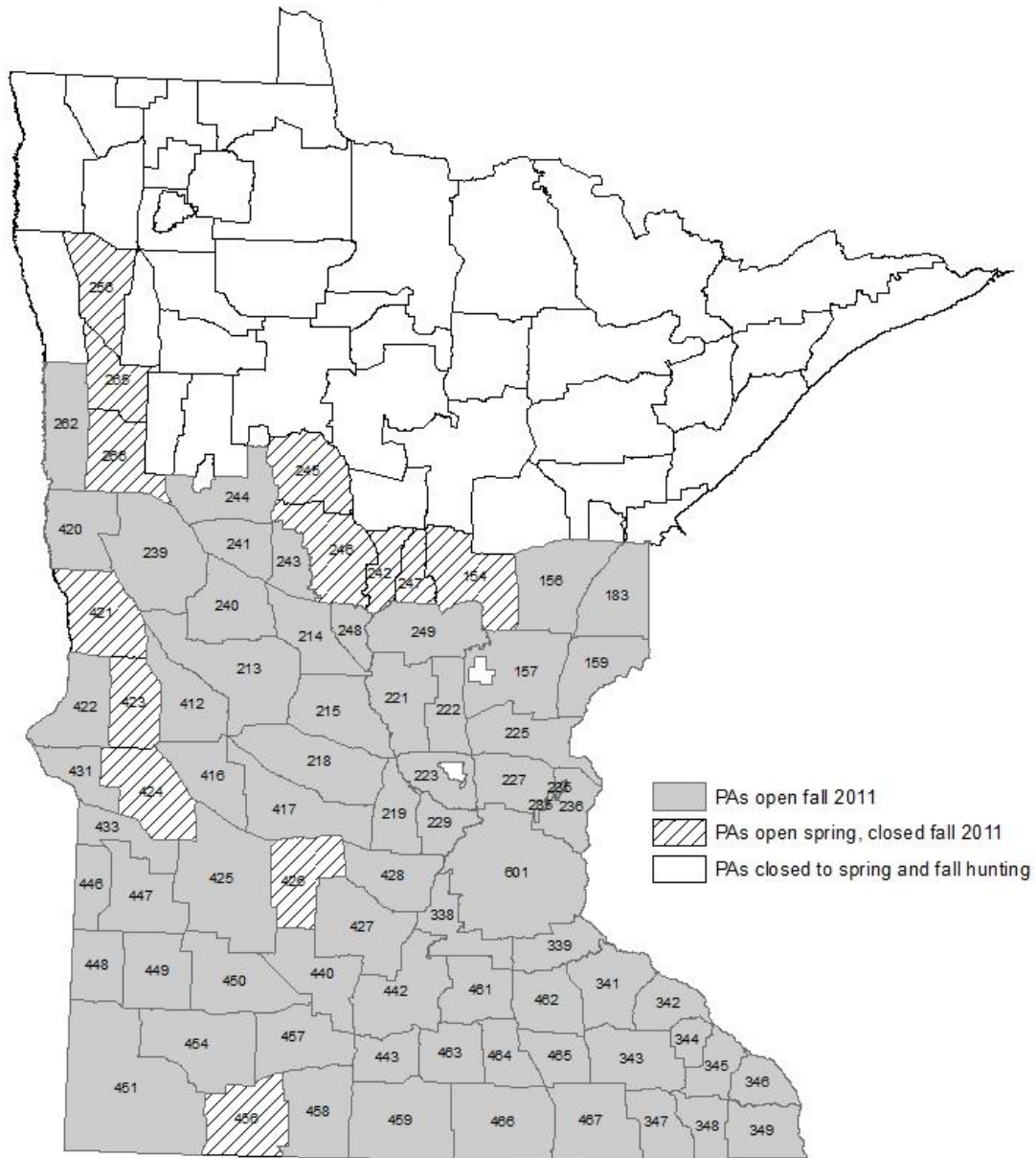


Figure 1. Permit areas (PAs) open for the 2011 fall wild turkey hunting season, Minnesota.

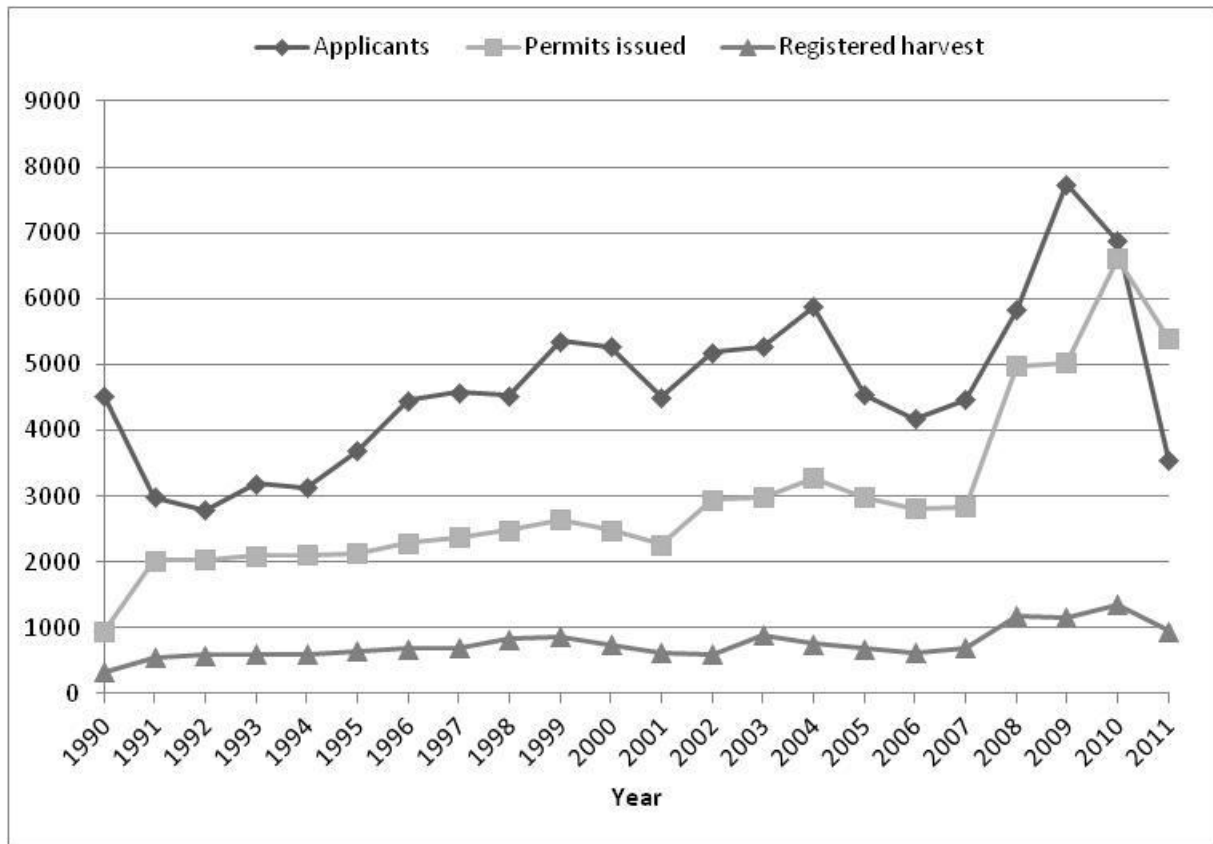


Figure 2. Applicants, permits issued, and registered harvest for fall wild turkey seasons 1990 – 2011, Minnesota.

SPRING 2012 WILD TURKEY HARVEST REPORT

Eric Walberg and Marrett Grund, Farmland Wildlife Populations and Research Group

In Minnesota, the spring wild turkey hunting season is designed to regulate harvest and distribute hunting pressure by allocating permits across 12 permit areas (PAs, Figure 1) and 8 time periods using a quota system. Although youth hunters could purchase a permit over-the-counter, adult hunters interested in pursuing wild turkeys were required to apply for a permit through a lottery system. Preference for this lottery system was determined by the number of years a valid but unsuccessful application has been submitted since last receiving a permit. Hunters could apply individually or in a group of up to 4 hunters. Successful applicants were notified through U.S. mail, and unsuccessful applicants were awarded a preference point. The goal of this system was to provide quality turkey hunting opportunities by minimizing hunter interference rates, conservatively harvesting turkeys in permit areas where the turkey range was expanding, yet allowing a substantial harvest in the remainder of the state.

There were two notable regulation changes for the 2012 spring hunting season: the last 4 time periods (E, F, G and H) had an unlimited number of permits available and the number of PAs was reduced from 81 to 12 PAs by pooling smaller PAs into larger ones. Permits for time periods E through H and all surplus licenses remaining after the drawing were offered over-the-counter in mid-March on a first-come, first-served basis.

Seven types of hunting licenses were available to resident turkey hunters: (1) general lottery permit in which an applicant or a group of up to 4 hunters applied for a specific PA and time period; (2) landowner permit in which up to 20% of permits for each PA and time period were reserved for landowners or tenants who lived on 40 acres or more of land within the PA; (3) youth permit for residents age 17 or less on opening day of the turkey hunting season; (4) archery permit which could be purchased for the last 4 time periods; (5) youth archery; (6) surplus permits; and (7) military permit. Five types of hunting licenses were available to nonresident turkey hunters: (1) general lottery permit; (2) youth permit; (3) archery permit; (4) youth archery permit; and (5) surplus permit.

During 2012, 42,817 permits were issued (Table 1, Figure 2), including 17,944 general lottery permits, 1,346 landowner permits, 8,664 youth permits, 3,911 archery permits, and 10,952 surplus permits. There were 187 permits issued for the Camp Ripley disabled veterans hunt. Hunters registered 11,325 turkeys, an increase of 13% from 2011 (Table 1, Figure 2). Hunter success averaged 29% (Table 1), which was comparable to the 5-year average of 30%. Hunter success by PA ranged from 15% (PA 511) to 45% (PA 509; Table 2). Hunter success varied by license type from 13% (archery) to 32% (general lottery and landowner), 24% (youth), and 23% (surplus). The number of general lottery licenses (including landowner) issued averaged 4,818 permits in time periods A – D, whereas the number of surplus licenses issued averaged 209 permits over the same time periods (Table 3). The average number of surplus licenses issued in the last four time periods increased to an average of 2,530 surplus permits because there were an unlimited number of surplus permits available and no general lottery permit quota was offered. The number of youth permits issued averaged 1,872 permits in time periods A – D and the average number of permits issued in the last four time periods declined to

285 youth permits (Table 3), which indicates youth hunters took advantage of hunting turkeys earlier in the spring. The 8,940 permits issued to resident and non-resident youth hunters (general lottery, surplus, and archery) in 2012 was a 3% increase over the 8,693 youth permits issued in 2011. Approximately 18% (2,380) of harvested turkeys were registered using the phone registration system, 30% (4,002) through the internet, and 52% (4,943) at a registration station.

Numeric changes in annual turkey harvests can be influenced by turkey population size, hunter effort, and weather. As of 2010, Minnesota's wild turkey population appeared to be stable or growing modestly throughout most of the range, with more rapid growth in the northern PAs (Giudice et al. 2011). The effect of the mild winter of 2011-12 on turkey abundance is unknown, but survival rates may have been above average due to above average temperatures and below average precipitation (Minnesota Climatology Working Group 2012). Weather conditions in April and May were relatively warm and wet across much of Minnesota, with above average temperatures and above average precipitation (Minnesota Climatology Working Group 2012). Precipitation during the 2012 spring turkey harvest was similar to the last two spring turkey harvests for the month of April, but more precipitation occurred in May (Minnesota Climatology Working Group 2012). Although hunting opportunities increased in 2012 due to a larger portion of Minnesota being open for turkey harvest and an unlimited number of permits available for time periods E through H, hunter effort was reduced, with over 4,600 fewer permits issued in 2012 than in 2011. Fewer permits issued from 2011 to 2012 may have been caused, at least in part, by time periods E and F switching to unlimited permit availability and the poor weather that occurred during the month of May. The increase in success rate that occurred from 2011 to 2012 was likely a function of above average temperature during the 2012 spring turkey hunting season, which likely increased hunter effort for those hunters who participated. Improved weather conditions increased the spring 2012 turkey harvest in Wisconsin, Iowa, and South Dakota from 2011 as well. Consequently, the increased harvest in 2012 was likely the result of warmer weather and possibly increased turkey abundance due to increased winter survival rates compared to 2011.

LITERATURE CITED

- Giudice, J., M. Tranel, and K. Haroldson. 2011. Fall Wild Turkey Population Survey, 2010. Minnesota Department of Natural Resources, St. Paul, MN, Agency Report.
- Minnesota Climatology Working Group. 2012. Climate journal. <http://climate.umn.edu/> Accessed 20 June 2012.

Table 1. Permits available, permits issued, and registered harvest from 1978 – 2012 for all spring wild turkey hunting seasons in Minnesota.

Year	Permits			Registered harvest	Success (%) ^a
	Available	Issued	Issued (%)		
1978	420	411	97.9	94	22.9
1979	840	827	98.5	116	14.0
1980	1,200	1,191	99.3	98	8.2
1981	1,500	1,437	95.8	113	7.9
1982	2,000	1,992	99.6	106	5.3
1983	2,100	2,079	99.0	116	5.6
1984	3,000	2,837	94.6	178	6.3
1985	2,750	2,449	89.1	323	13.2
1986	2,500	2,251	90.0	333	14.8
1987	2,700	2,520	93.3	520	20.6
1988	3,000	2,994	99.8	674	22.5
1989	4,000	3,821	95.5	930	24.3
1990	6,600	6,126	92.8	1,709	27.9
1991	9,170	8,607	93.9	1,724	20.0
1992	9,310	9,051	97.2	1,691	18.7
1993	9,625	9,265	96.3	2,082	22.5
1994	9,940	9,479	95.4	1,975	20.8
1995	9,975	9,550	95.7	2,339	24.5
1996	12,131	10,983	90.5	2,841	25.9
1997	12,530	11,610	92.7	3,302	28.4
1998	14,035	13,229	94.3	4,361	33.0
1999	18,360	16,387	89.3	5,132	31.3
2000	20,160	18,661	92.6	6,154	33.0
2001	22,936	21,404	93.3	6,383	29.8
2002	24,136	22,607	93.7	6,516	28.8
2003	25,016	22,770	91.0	7,666	33.7
2004	27,600	25,261	91.5	8,434	33.4
2005	31,748	27,638	87.1	7,800	28.2
2006	32,624	27,876	85.4	8,241	29.6
2007 ^b	33,976	28,320	83.4	9,412	33.2
2008 ^b	37,992	31,942	84.1	10,994	34.4
2009 ^b	42,328	36,193	85.5	12,210	33.7
2010 ^b	55,982	46,548 ^c	83.0	13,467	29.0
2011 ^b	Unlimited	43,521 ^c	N/A	10,055	23.1
2012 ^b	Unlimited	38,906 ^c	N/A	11,325	29.1

^a Success rates not adjusted for non-participation

^b Youth hunt data included

^c Permits issued to archery hunters were not included in this Table. There were 2,462 permits issued to archers in 2011 and 3,911 permits issued to archers in 2012.

Table 2. Permits issued, registered harvest, and hunter success during the 2012 Minnesota spring wild turkey season.

Permit Area	Permits Issued ^a	Harvest ^b	Success (%) ^c
501	9,943	2741	28
502	857	181	21
503	4,645	1499	32
504	958	291	30
505	3,627	1019	28
506	1,438	401	28
507	9,522	2883	30
508	4,021	1156	29
509	244	111	45
510	3,262	957	29
511	154	23	15
512	48	17	35

^a Permits issued for the Camp Ripley disabled veterans hunt (187) and archery permits (3,911) were not included in this Table.

^b There were 45 turkeys registered from the Camp Ripley disabled veterans hunt and were not included in this Table.

^c Success rates were not adjusted for non-participation.

Table 3. Permits available and issued by license type (resident and non-resident) and time period for the spring 2012 wild turkey season, Minnesota.

Time period ^a	Permits available	Permits issued			
		General lottery	Landowner	Surplus	Youth ^c
A	5,705	4,410	675	17	3,705
B	5,705	4,587	293	93	460
C	5,705	4,656	273	93	2,184
D	5,705	4,272	105	631	1,137
E	Unlimited	9	0	5,202	376
F	Unlimited	4	0	1,296	146
G	Unlimited	2	0	2,632	399
H	Unlimited	4	0	988	220
Total ^b	Unlimited	17,944	1,346	10,952	8,664

^a A = April 18-22, B = April 23-27, C = April 28–May 2, D = May 3-7, E = May 8-12, F = May 13-17, G = May 18-24, H = May 25-31

^b Total includes 187 issued for the Camp Ripley disabled veterans hunt (4 general lottery and 183 surplus), but excludes archery permit sales.

^c Total excludes 276 youth archery licenses.

2012 Spring Wild Turkey Permit Areas

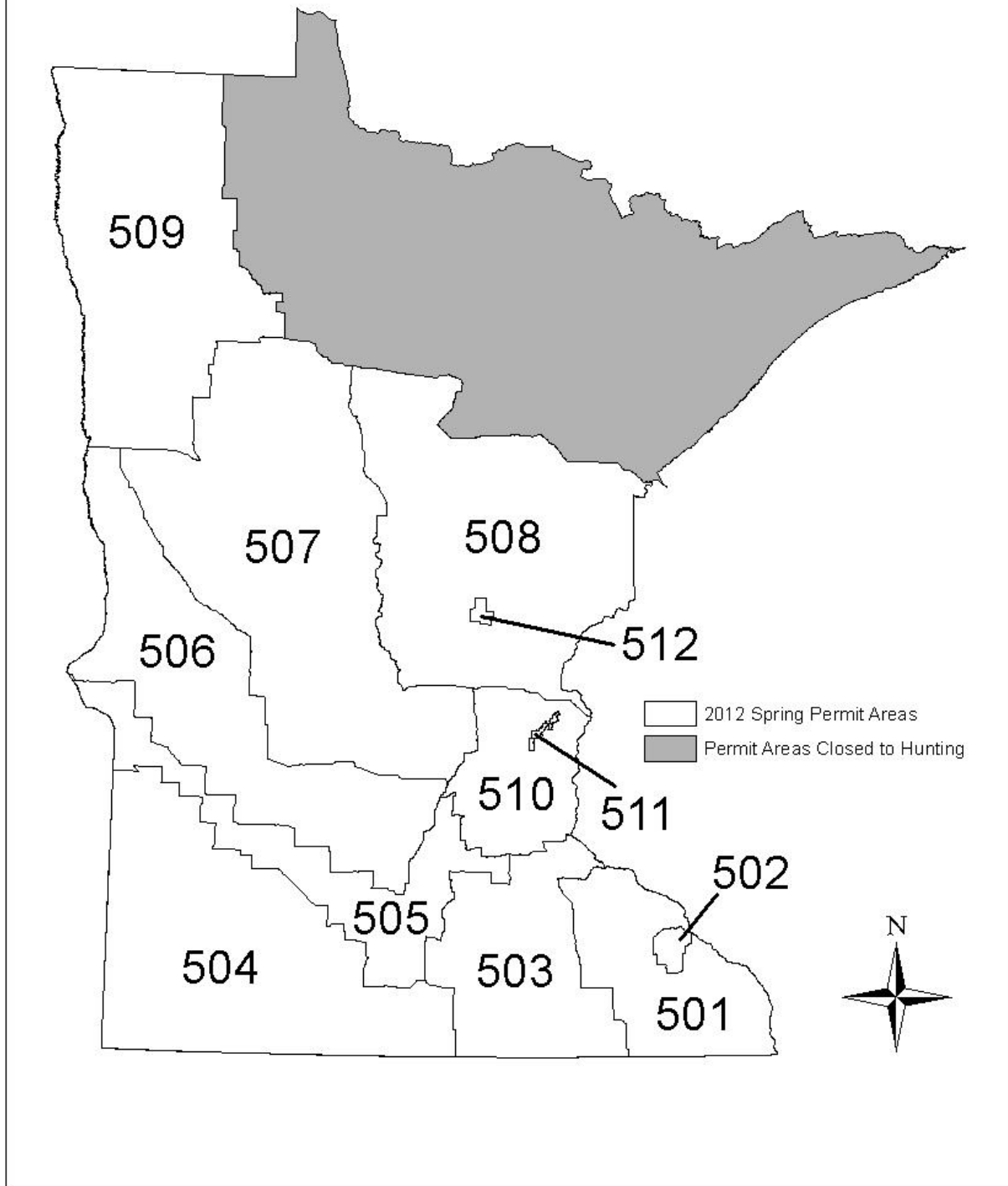


Figure 1. Permit areas open for hunting during the 2012 spring turkey hunting season, Minnesota.

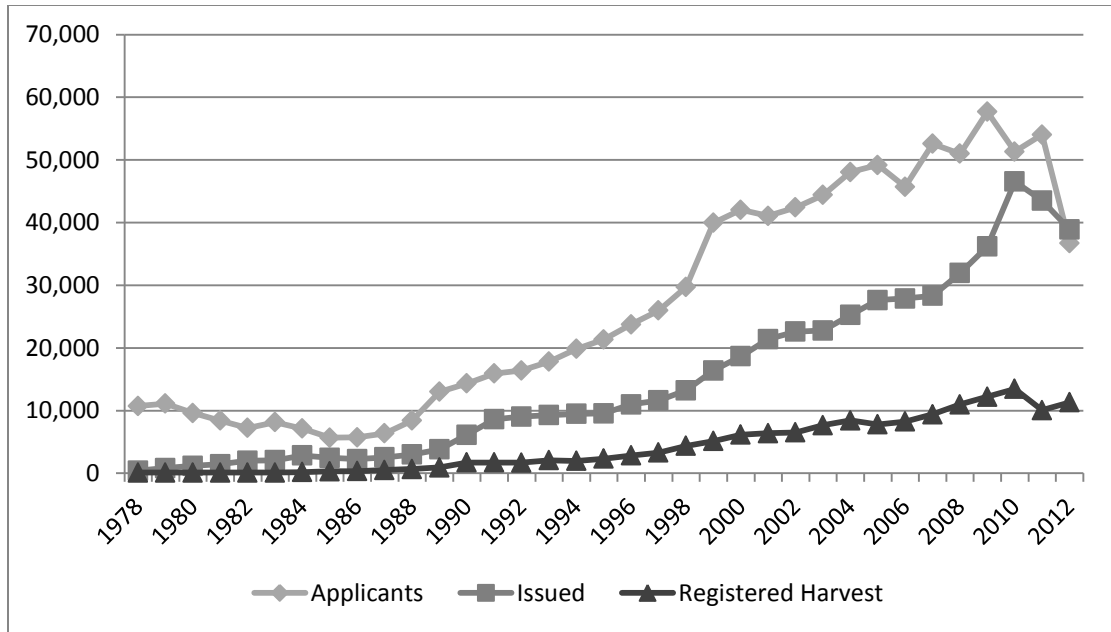


Figure 2. Applicants, permits issued, and registered harvest for the spring wild turkey seasons 1978-2012, Minnesota. Number of permits issued does not include archery permits in 2010-2012.

PRAIRIE-CHICKEN HARVEST IN MINNESOTA DURING 2011

Michael A. Larson, Forest Wildlife Populations and Research Group

INTRODUCTION

Hunting seasons for greater prairie-chickens (*Tympanuchus cupido pinnatus*) in Minnesota were closed from 1943 through 2002. During October 2003 a limited-entry, 5-day hunting season for prairie-chickens was held within 7 contiguous permit areas in western Minnesota. Opportunities to purchase a hunting permit were awarded through a lottery system, and each licensed hunter could harvest a maximum of 2 prairie-chickens. The same format for prairie-chicken hunting seasons has been implemented annually since 2003. The only changes that have occurred were adding 4 new permit areas in 2006 (Figure 1), increasing the quota of hunters in some permit areas, and selling surplus licenses after the lottery beginning in 2011.

Only residents of the state are eligible to hunt prairie-chickens in Minnesota. Residents who are an owner or tenant of ≥ 40 acres of grassland within a permit area may apply to the lottery as a “landowner.” Twenty percent of the available permits in a permit area are awarded in a lottery consisting of only landowner applicants. Any permits not awarded in the landowner lottery are then included with the other 80% of available permits to be awarded in a subsequent lottery for regular applicants. Any landowners who are unsuccessful in the landowner lottery are also included in the subsequent lottery. The permits within each permit area are awarded first to people who have applied the greatest number of years since last winning a permit.

Lottery winners must purchase a prairie-chicken hunting permit (i.e., license) before they hunt prairie-chickens. Permit areas 804A–811A (i.e., those south of U.S. Highway 2) are in an area of the state that is closed to the hunting of sharp-tailed grouse (*Tympanuchus phasianellus*). Licensed prairie-chicken hunters in those permit areas, however, are allowed to take a regular bag limit of sharp-tailed grouse while hunting prairie-chickens.

The objective of the hunter survey described below is to document results of prairie-chicken hunting seasons.

METHODS

The Electronic Licensing System (ELS) automatically recorded all lottery applications, lottery results, and purchases of permits. Prairie-chicken hunters are not required to register their harvested birds in the ELS, so during the week before the hunting season I sent a postcard survey by mail to all people who were successful in the lottery. Approximately 3 weeks later I sent the postcard survey a second time to people who had not responded to the first mailing. The survey consisted of the following 5 questions: did you hunt, how many days did you hunt, how many prairie-chickens did you bag, how many sharp-tailed grouse did you bag while hunting for prairie-chickens, and how satisfied were you with the hunt?

To summarize hunting results for this report I used only responses from lottery winners who purchased a hunting permit. I checked to ensure that responses from people who replied to

the first mailing were similar to responses from people who replied to the second mailing. Then, to estimate the numbers of hunters and birds harvested, I assumed that nonrespondents would have had the same average response as all those who responded to either mailing of the survey.

I recalculated estimates of the total number of hunters, total number of prairie-chickens harvested, and hunter success rates for all previous years (i.e., 2003–2010). I did this because (1) during 2008–2010 the estimates of harvest and success rate were incorrectly based upon the number of purchasers who did not respond to the survey, not the slightly smaller number of nonrespondents who likely went hunting, as they are now; (2) during 2003–2006 the estimates were taken directly from ELS registration data (i.e., not corrected for hunters who did not register their harvested birds, which was mandatory at that time) rather than being based upon data from the hunter survey; and (3) additional survey responses may have been received since completion of the hunting season report for a given year.

RESULTS & DISCUSSION

One hundred eighty-six prairie-chicken hunting permits were available during 2011. There were 169 lottery winners (Table 1), and 7 of them were landowners. There were fewer applicants than there were permits available in 5 of the 11 permit areas. One hundred thirty-four lottery winners purchased permits, and 10 others purchased surplus permits. Six lottery winners reported hunting but did not purchase a permit, so for the purposes of this summary I considered there to be 150 permit purchasers in 2011. One hundred thirty-two permit purchasers (88%) responded to the first mailing of the survey, and 3 (2%) responded to the second mailing, so the response rate of purchasers was 90% (i.e., 135 of 150).

Twelve purchasers who responded to the survey reported that they did not hunt (9%), and 123 respondents reported hunting, so there were an estimated 138 hunters (i.e., purchasers who went afield; Table 2). Hunters hunted an average of 2.2 days during the 5-day season (22–26 October 2011). Hunters reported harvesting 92 prairie-chickens, and the estimated total harvest was 103 prairie-chickens (Table 2). I estimated that 62 hunters bagged at least 1 prairie-chicken (45%, Table 2). The average rating for hunter satisfaction on a 1–5 scale was 3.4 (median = 4), and 73% of the 123 respondents to this question reported a satisfaction level of 3 or greater.

As anticipated, the corrected estimates of the total number of prairie-chickens harvested and hunter success rates for 2008–2010 were slightly less than previously reported (Table 3). This was despite a slightly higher estimate of the total number of hunters in 2009–2010 due to receiving additional survey responses since the original report. New estimates of the total number of prairie-chickens harvested and hunter success rates for 2003–2006 (Table 3) were greater than previously reported because the ELS registration data from which the previous values were taken were incomplete; the hunter survey data did not change. There was no change in the estimated number of hunters for 2003–2008.

The prairie-chicken harvest and hunter success rate during 2011 were greater than during 2010 but slightly less than during 2007–2009 (Table 3). This is consistent with relatively poor weather during the hunting season of 2010 and a declining trend in spring survey counts since 2007. As I reported last year, there was a moderate degree of correlation between the total

number of males observed in survey blocks during spring and total harvest during the fall (Kendall's $\tau = 0.6$, $n = 5$ years [2006–2010]). The correlation coefficient (τ) is on a 0–1 scale and is not closer to 1 because (1) survey counts are not a perfect reflection of spring bird densities, (2) reproductive success (i.e., the number of juvenile birds in the fall population per adult in the spring population) varies from year to year, and (3) factors other than bird density contribute to annual variation in hunter success (e.g., weather conditions during the hunting season).

Prairie-chicken hunters reported bagging 15 sharp-tailed grouse while hunting prairie-chickens during 2011. The reported sharp-tailed grouse were harvested from permit areas 803A, 805A, and 806A (Figure 1).

ACKNOWLEDGEMENTS

I appreciate the help of Laura Gilbert in preparing and mailing the survey and in data entry, and comments from Mark Lenarz and Wes Bailey helped me improve the clarity of the report. This survey was funded in part under the Federal Aid in Wildlife Restoration Act, Minnesota project W-69-S-12.

Table 1. Results of the lottery for prairie-chicken hunting permits in Minnesota during 2011.

Permit area	Permits available	No. of applicants	Lottery winners		Permit purchasers ^a		Surplus purchasers ^c
			No. ^b	Proportion	No.	Proportion	
801A	10	1	1	1.00	1	1.00	1
802A	10	13	11	0.85	9	0.82	0
803A	10	6	6	1.00	5	0.83	3
804A	17	15	15	1.00	11	0.73	2
805A	20	54	20	0.37	15	0.75	0
806A	17	23	17	0.74	11	0.65	0
807A	25	39	25	0.64	24	0.96	0
808A	20	17	17	1.00	13	0.76	3
809A	20	37	20	0.54	15	0.75	0
810A	27	50	28	0.56	23	0.82	0
811A	10	9	9	1.00	7	0.78	1
All	186	264	169	0.64	134	0.79	10

^a Number and proportion of lottery winners who purchased a permit.

^b More permits than were available may be awarded in a permit area when the last applicant selected in the lottery applied as a member of a hunting party.

^c Number of people who purchased a surplus permit after the lottery because there were fewer applicants than there were permits available.

Table 2. Hunter harvest of prairie-chickens in Minnesota during 2011.

Permit area	No. of hunters ^a		Birds harvested		Birds per harvester ^b	Success rate ^c
	Self-reported	Estimated	Self-reported	Estimated		
801A	1	1	0	0	NA	0.00
802A	7	8	5	6	2.0	0.38
803A	8	8	7	7	1.8	0.50
804A	11	13	1	1	1.0	0.08
805A	17	17	10	10	1.4	0.41
806A	9	11	9	11	1.6	0.64
807A	18	23	15	19	1.6	0.52
808A	12	13	21	23	1.9	0.92
809A	9	11	6	7	1.4	0.45
810A	23	24	8	8	2.0	0.17
811A	8	9	10	11	1.6	0.78
All	123	138	92	103	1.7	0.45

^a Number of permit purchasers who actually went hunting.

^b Estimated number of prairie-chickens harvested per successful hunter.

^c Proportion of estimated hunters who harvested ≥ 1 prairie-chicken.

Table 3. Annual summary of prairie-chicken hunting results in Minnesota during 2003–2011.

Year	Permits available	Applicants	Hunters ^a	Birds harvested	Success rate ^b	Hunter satisfaction ^c
2003	100	853	92	130	0.75	4.4
2004	101	759	87	58	0.45	3.6
2005	110	500	86	94	0.63	4.0
2006	182	512	149	109	0.49	3.6
2007 ^d	187	519		122	0.53	
2008	186	535	137	133	0.58	3.9
2009	186	512	143	118	0.52	3.4
2010	186	421	136	78 ^e	0.32	3.0
2011	186	264	138	103	0.45	3.4

^a Estimated number of people who went hunting, not the number of permit purchasers.

^b Proportion of hunters who harvested ≥ 1 prairie-chicken.

^c Average on a 1–5 scale.

^d No hunter survey was conducted for the 2007 season; results are from the Electronic Licensing System only, which had 150 permit purchasers.

^e One hunter reported harvesting 10 prairie-chickens, which may be questionable.

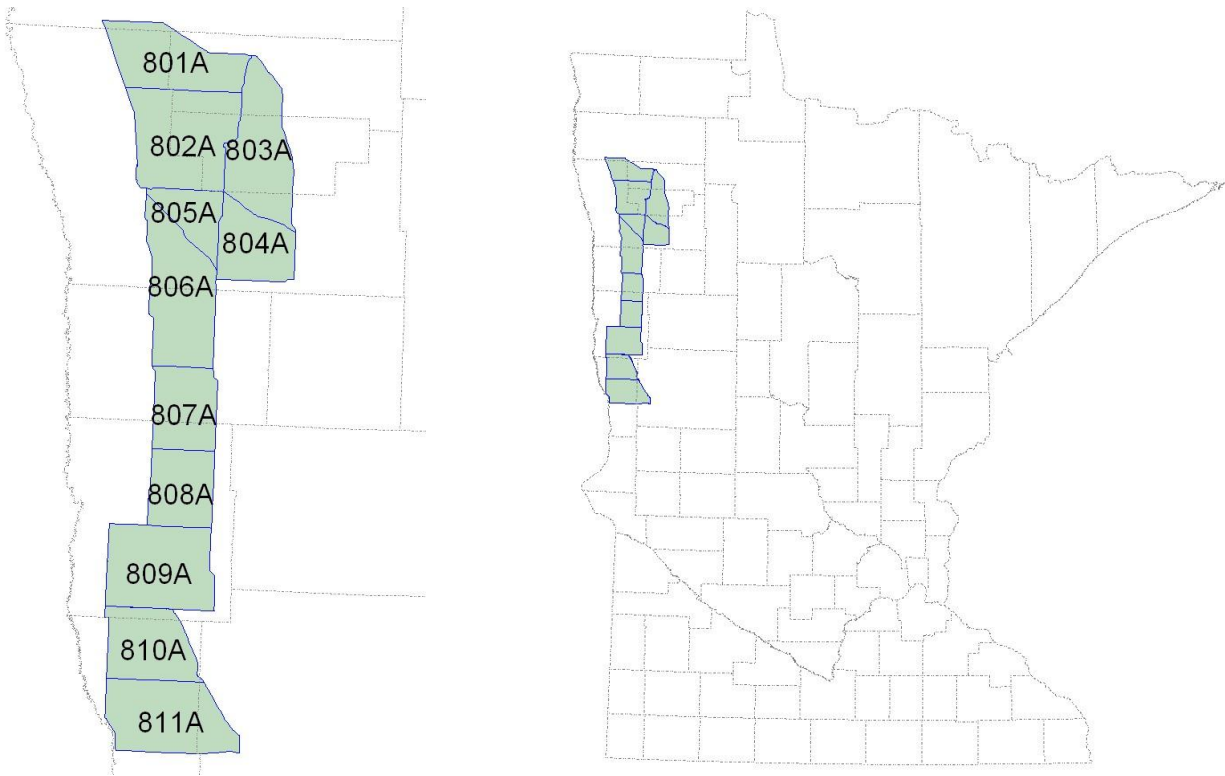


Figure 1. Map of permit areas for prairie-chicken hunting in Minnesota (top) and their location relative to counties within the state (bottom).

2011 MINNESOTA BEAR HARVEST REPORT

David Garshelis and Karen Noyce, Forest Wildlife Populations and Research Group

INTRODUCTION

The Minnesota bear range is divided into 11 bear management units (BMUs; Fig. 1). Each has a separate quota on hunting licenses. Outside the primary bear range, where bear depredation to crops is a primary concern, license sales are unlimited (no-quota area). Hunters in this area can harvest two bears, and beginning in 2005 hunters could purchase both a quota and no-quota license. In all areas the season runs from September 1 through mid-October. About 80% of hunters use bait. This report summarizes status and trends in harvests and population size and structure.

METHODS

Successful hunters must register their bears at designated registration stations. Stations are not staffed by DNR personnel. Harvest data are a simple tally of these registrations, which for the most part are done electronically. Hunters also are required to submit a tooth from harvested bears (compliance \approx 70%), which is used to estimate age, and thus harvest age structure. We used harvest age structure accumulated since 1980 to reconstruct minimum population size (Downing population reconstruction) and thereby assess population trend.

RESULTS

Permit applications for bear licenses in 2011 increased to the highest level in 9 years (Table 1). This may have been in response to the diminished number of permits available. The estimated number of hunters in the field (9,100) was equal to that of 1994, and not much different than 2010 (9,200). However, the total harvest (2,131) was lower because success rate (23%) was low. Success rate is generally higher with reduced numbers of hunters (Fig. 2), but declines with abundant natural foods. Harvest sex ratios of $>60\%$ male (the case this year) tend to be indicative of abundant natural foods.

Normally, $>25\%$ of quota area licenses are not purchased, and this is factored into the allocation of permits. However, a new procedure was established this year to ensure that all licenses that were not purchased by permittees would be available for purchase by unsuccessful lottery applicants. Accordingly, permits were reduced in all areas by about 25% so the number of hunters would remain about the same (Table 2). Prior to this reduction, permits were reduced in only one area (BMU 24).

Only BMU 22 (BWCAW) was undersubscribed (Table 3). However, all quota areas had unpurchased licenses, which went on sale Aug 4. All (1,373) were purchased within a few minutes. As permit allocations were significantly reduced in all BMUs over the past 5 years, the percentage of applicants drawn in the lottery diminished (Table 4). In 2011, $>50\%$ of 1st-year applicants were selected in only 2 BMUs (13, 22). Three BMUs (26, 44, 45) required a drawing among 2nd-year applicants (55–77% were selected).

Harvests were equivalent to the previous 5-year average in 3 BMUs (11, 12, 22) and lower than average in all other BMUs (Table 5). Especially low harvests occurred in the southern BMUs: 44 & 45 (lowest since these were established in 1994), 51 (lowest since 1991), and 52 (lowest since 2002).

Hunting success was much higher in the northern parts of the bear range than in the southern parts of the range (Table 6). Success rates $<20\%$ occurred in BMUs 41, 44, 45 & 51, whereas success $\geq 30\%$ occurred in BMUs 12, 24, 25 & 31. BMU 24 had the highest hunter success since 1992. Conversely, BMUs 44 and 51 had the lowest success since 2002. Hunting success varies geographically and year-to-year with abundance of natural foods, hunter density, and bear density.

During years of normal fall food abundance, about 70% of the harvest occurs during the 1st week of the bear season, and ~83% occurs by the end of the 2nd week (Table 7). These percentages tend to be lower during years with more abundant fall foods. In 2011, 65% and 78% of the harvest occurred after weeks 1 and 2, respectively.

A combination of two key factors, fall food abundance and number of hunters, accounts for 84% of the yearly variation in the bear harvest since 1984 and 95% of the variation in harvest since 2000 (Fig. 3). These regression models predicted a slightly higher harvest in 2011 than actually occurred.

Statewide, ages of harvested females declined dramatically during the 1980s–90s, as evidenced by a declining median age (Fig. 4) and increasing proportion of the harvest composed of 1–2 year-olds (Fig. 5). However, the trend during the past decade has been equivocal: median age of harvested females has remained at about 3.0 years old (3.1 in 2011) and the proportion of the female harvest composed of 1–2 year olds has remained near 44% (44% in 2011). Male harvest ages have been younger (~60% were 1–2 years old) and less variable. Female harvest ages have been youngest and least variable in the southern BMUs (44, 45, 51, 52).

Ages of harvested bears accumulated over 32 years were used to reconstruct minimum statewide population sizes through time (i.e., the size of the population that eventually died due to hunting). This was scaled upwards (to include bears that died of other causes), using tetracycline mark–recapture estimates as a guide (Fig. 6). Whereas both the tetracycline and reconstructed populations showed an increase during the 1990s, followed by a decline during the 2000s, the shapes of the 2 trajectories differed. Therefore, it was impossible to match the curve from the reconstruction to all 4 tet-based estimates, so several curves were scaled to differing degrees to intersect different sets of tet-estimates. Both the tetracycline and age-reconstructed estimates showed a population decline of ~30% from 2001 to 2008. Recent data (2009) shows a possible population increase (due to reduced harvests), but this is uncertain. Reconstructed populations rely on several years of age data, so population estimates for 2010 and 2011 are not yet available.

DISCUSSION

Harvests of bears remained consistently high during 2003–2007 (Table 1), masking an apparent decline in the population. These high harvests (>3000 bears) were due to consistently high hunting success. A reduction in permits, and thus number of hunters, reduced the harvest during the next few years, and likely enabled the population to grow.

The population is being managed at a level that provides good hunting opportunities but also socially tolerable nuisance activity. There is no target population number, but rather a range that meets these criteria. In fact, the target population is likely to fluctuate. With a smaller population size during the 1980s, nuisance activity was often intolerable (during poor food years, at least). Since 2002, nuisance complaints have been consistently low, reflecting consistently good natural food supplies as well as a change in behavior of people (better at removing attractants, such as garbage and birdseed, and also less apt to complain about bears). Thus, it is possible that the population could grow to a higher level (e.g., 25,000) and still be publicly acceptable.

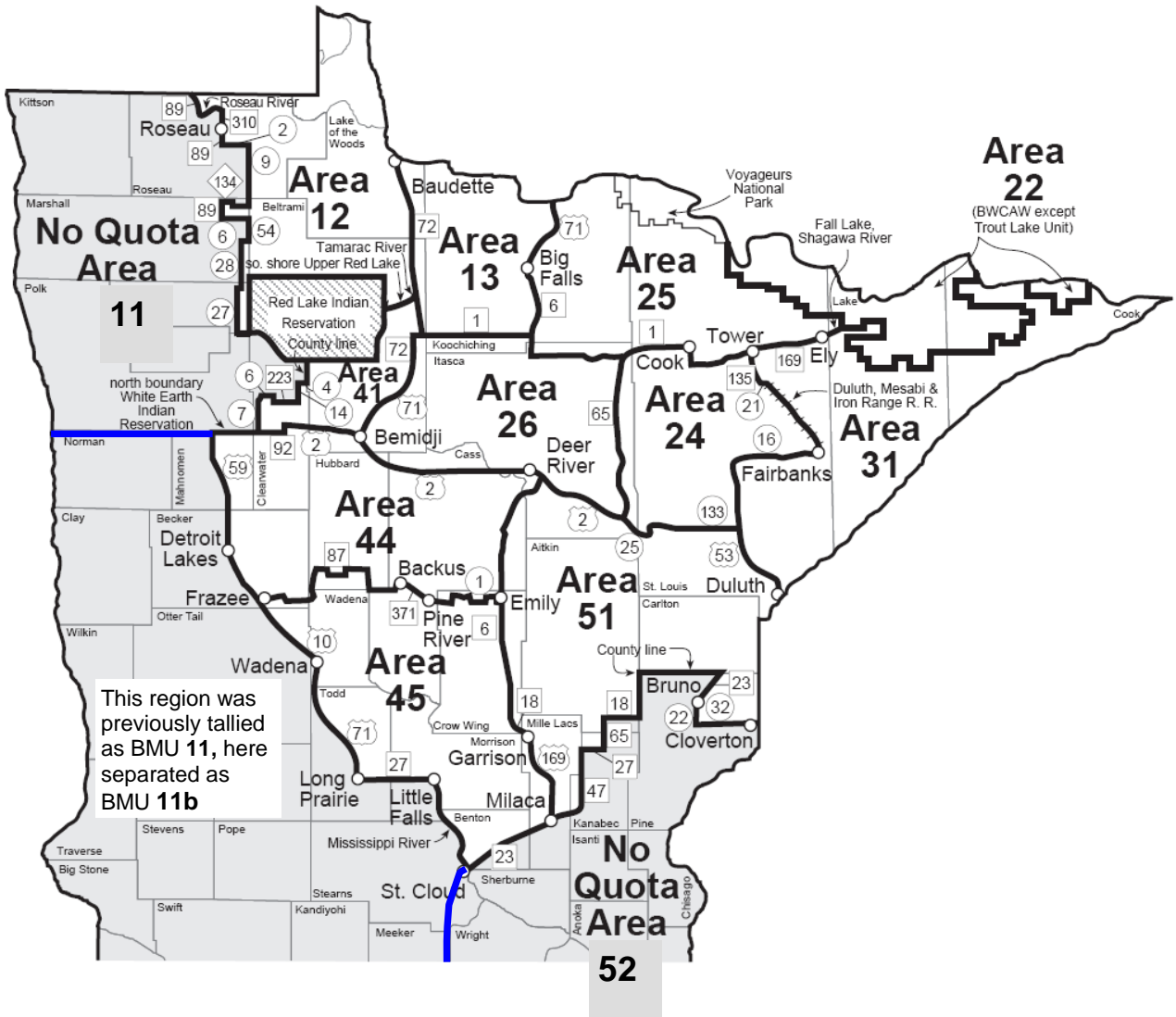


Figure 1. Bear management units (BMUs) within quota (white) and no-quota (gray) zones. Hunters in the quota zone are restricted to a single BMU, whereas no-quota hunters can hunt anywhere within that zone.

Table 1. Bear permits, licenses, hunters, harvests, and success rates, 1991–2011.

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Permit applications	25890	26428	27365	30127	29922	30405	27353	30245	29384	29275	26824	21886	16431	16466	16153	15725	16345	17362 ^a	17571 ^a	18647 ^a	19184 ^a
Permits available	7140	7920	8630	9400	11950	12030	11370	18210	20840	20710	20710	20610	20110	16450	15950	14850	13200	11850	10000	9500	7050 ^b
Licenses purchased (total)	7757	8485	9224	9826	12448	12414	11440	16737	18355	19304	16510	14639	14409	13669	13199	13164	11936	10404	9892	9689	9555
Quota area ^c	6257	6845	7528	8125	10304	10592	9655	14941	16563	17021	13632	12350	9833	10063	9340	9169	8905	7842	7342	7086	5684
Quota surplus/military ^c											235	209	2554	1356	1591	1561	526	233	77 ^c	83 ^c	1385
No-quota area ^c	1500	1640	1696	1701	2144	1822	1785	1796	1792	2283	2643	2080	2022	2238	2268	2434	2505	2329	2473	2520	2486
% Licenses bought																					
Of permits available ^d	87.6	86.4	87.2	86.4	86.2	88.0	84.9	82.0	79.5	82.2	67.0	60.9	61.6	69.4	68.5	72.3	71.4	67.7	73.4	74.6	100
Of permits issued ^d								84.4	87.2	83.9	69.8	66.3	65.7	68.3	67.1	68.9	70.0	67.2	73.8	74.5	80.7
Estimated no. hunters ^e	7200	7900	8600	9100	11600	11500	10300	14500	15900	16800	15500	13800	13600	12900	12500	12500	11300	9900	9400	9200	9100
Harvest	2143	3175	3003	2329	4956	1874	3212	4110	3620	3898	4936	1915	3598	3391	3340	3290	3172	2135	2801	2699	2131
Harvest sex ratio (%M) ^f	59	50	56	62	47	62	55	55	53	58	56	61	58	57	59	58	57	62	59	59	61
Success rate (%)																					
Total harvest/hunters ^g	30	40	35	26	43	16	31	28	23	23	29	14	26	26	26	26	28	21	30	29	23
Quota harvest/licenses	30	41	34	26	42	15	29	25	20	20	28	14	25	26	25	25	28	21	30	30	24

^a Includes area 99, a designation to increase preference but not to obtain a license (2008 = 528, 2009 = 835; 2010 = 1194; 2011 = 1626).

^b Permits reduced because of a new procedure in 2011 that ensures that all available licenses are purchased (see Table 2).

^c Quota area established in 1982. No-quota area established in 1987. Surplus licenses from undersubscribed quota areas sold beginning in 2000; originally open only to unsuccessful permit applicants, but beginning in 2003, open to all. In 2011, surplus licenses offered for all lottery licenses not purchased by July 31. Free licenses for 10 and 11 year-olds were available beginning 2009 (2009 = 45; 2010 = 86; 2011 = 72 [including surplus youth]). Youth licenses included here with surplus and military licenses. Total licenses = quota + quota surplus + no-quota + military (no permit needed) + youth.

^d Quota licenses bought (including surplus)/permits available, or licenses bought (prior to surplus)/permits issued (permits issued more relevant for years when some areas were undersubscribed; see Table 3). Beginning in 2008, some permits were issued for area 99; these are no-hunt permits, just to increase preference, and are not included in this calculation. In 2011, all unpurchased licenses were put up for sale, and all were bought.

^e Number of licensed hunters x percent of license-holders hunting. Percent hunting is based on data from bear hunter surveys conducted during 1981–91, 1998 (86.8%), 2001(93.9%) and 2009 (95.3%). The estimated no. of hunters in 2011 may be under-estimated because a large no. of people bought surplus licenses 1 month before the season, so they were more apt to hunt.

^f Sex ratio as reported by hunters; hunters classify about 10% of female bears as males, so the actual harvest has a lower %M than shown here. In good food years, the harvest is more male-biased.

^g Success rates in 2001–2011 were calculated as number of successful hunters/total hunters, rather than bears killed/total hunters, because hunters could take 2 bears. In 2011, 52 hunters took >1 bear (49 took 2 bears on NQ license, 2 hunters took 1 bear on NQ + 1 on quota license, 2 took 2 bears on NQ and 1 on quota license): thus, the 2131 bears were taken by 2078 different hunters, so success = 2078/9100 = 23%.

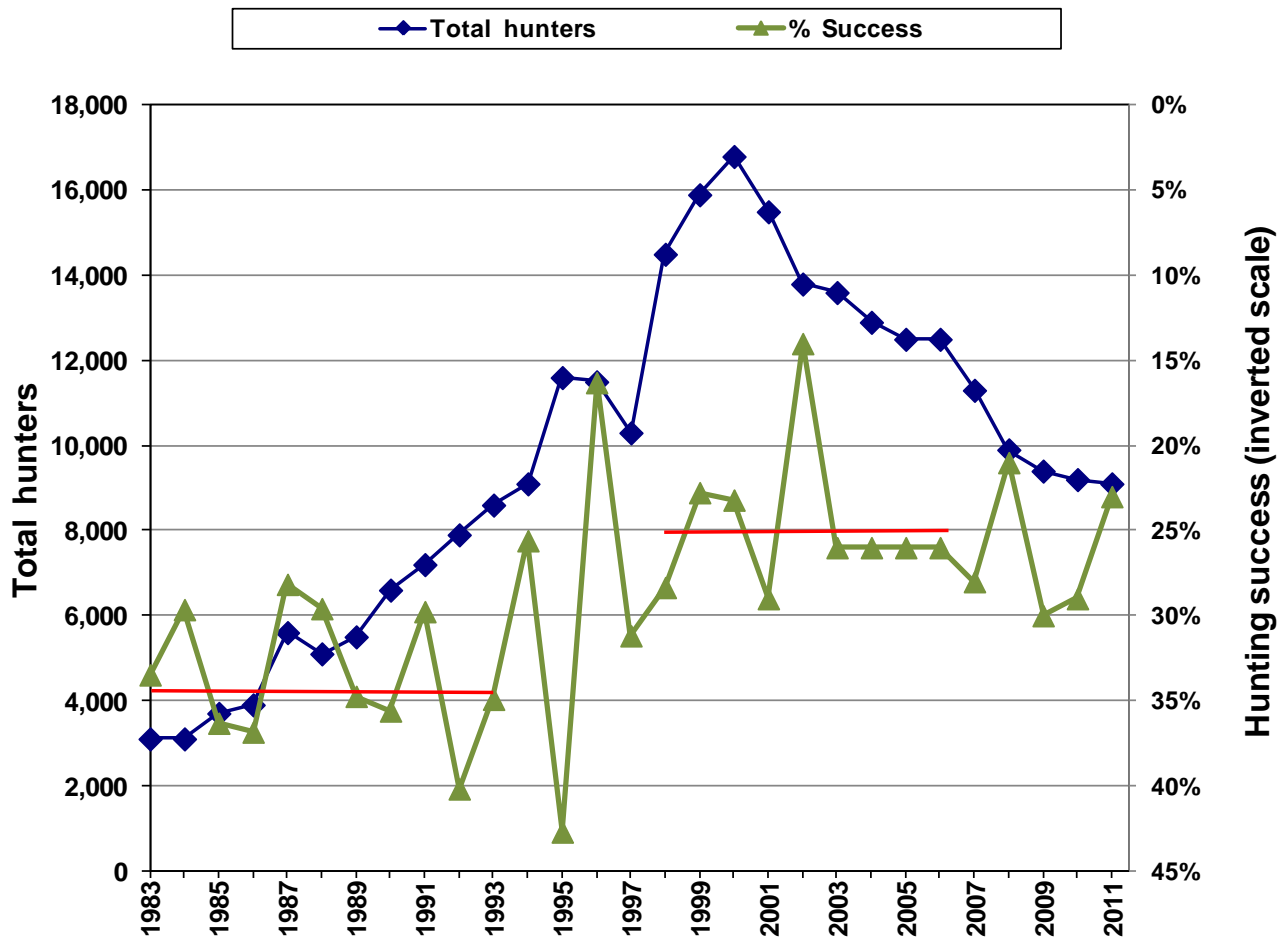


Figure 2. Relationship between hunter numbers and hunting success (note inverted scale), 1983–2011. Red horizontal lines show mean hunting success for periods with <9000 hunters vs >12,000 hunters. Large variation in hunting success is also attributable to food conditions.

Table 2. Number of bear hunting quota area permits available, 2007–2011 (aligned with permit applications in Table 3 below; highlighted values show drop from previous year).

BMU	2011		2010	2009	2008	2007
	After reduct. ^a	Before reduct.				
12	350	450	450	450	450	500
13	450	600	600	600	650	700
22	100	125	100	150	150	150
24	350	500	550	650	750	900
25	900	1200	1200	1250	1550	1700
26	650	900	900	1000	1150	1250
31	1000	1300	1300	1300	1700	1900
41	300	400	400	400	400	400
44	850	1100	1100	1100	1350	1500
45	250	400	400	600	1000	1200
51	1850	2500	2500	2500	2700	3000
Total	7050	9475	9500	10000	11850	13200

^a Prior to 2011, <75% of permittees purchased a license (Table 1). This was factored into the allocation of permits. In 2011, under a new procedure, all licenses not purchased by permittees were sold (Table 3). In order not to increase the number of hunters, 2011 permit allocations were reduced by the mean percentage of licenses that were purchased in each BMU in 2009–2010. The table shows the permit allocation before and after this reduction.

Table 3. Number of bear hunting permit applicants and surplus licenses bought, 2007–2011^a. Shaded values indicate undersubscribed areas.

BMU	2011 ^b			2010		2009		2008			2007		
	Apps	Bought license	Surplus bought	Apps	Surplus	Apps	Surplus	Apps	Surplus	bought	Apps	Surplus	bought
12	834	267	84	903	5 ^c	876		857			811		
13	751	366	84	753		700		709			745		
22	90	71	31	114		91	0 ^d	85	50	77%	87		51 81%
24	918	294	56	971		843		825			742		159 100%
25	1763	712	190	1811	5 ^c	1694		1793	4 ^c		1799		
26	1894	512	139	1959		1874		1999	2 ^c		2028		
31	2505	826	174	2414		2423		2388	3 ^c		2383		
41	688	253	47	718		685		656			577		
44	3010	697	154	2923		2787		2821			2669		
45	1019	208	42	937		941		873	128	100%	936		266 100%
51	4086	1478	372	3950	1 ^c	3822		3828			3568		
Total	17558^e	5684	1373	17453^e		16736^e		16834^e	178	92%	16345	476	98%

^a Surplus licenses available beginning in 2001. This was discontinued in 2009 and replaced by 2nd choice lottery applicants.

^b In 2011, all licenses not purchased by permittees were sold as “surplus”. Surplus = Permits available (Table 2) minus Bought license (±2 to account for groups applying together).

^c Courtesy licenses issued by Commissioner, not actual surplus.

^d No 2nd choice applicants bought a license for BMU 22, so it remained undersubscribed.

^e Beginning in 2008, applicants could apply for area 99 in order to increase future preference, but not buy a license; these are not included in this total.

Table 4. Percentage of lottery applicants with preference level 1 (1st-year applicant) that were drawn for a bear permit, 2007–2011. All preference level 2 applicants were drawn, except where 0 preference level 1 applicants were drawn, in which case the success of preference level 2 applicants is shown parenthetically.

BMU	2011	2010	2009	2008	2007
12	2	23	29	37	46
13	51	77	84	92	94
22	100	88	100	100	100
24	14	49	75	91	100
25	35	60	72	86	94
26	0 (77)	15	32	43	53
31	11	35	43	68	79
41	6	31	37	47	59
44	0 (55)	0 (90)	3	26	38
45	0 (67)	24	61	100	100
51	25	52	58	67	84

Table 5. Minnesota bear harvest tally^a for 2011 by Bear Management Unit (BMU) and sex compared to harvests during 2006–2010 and record high harvests.

BMU	2011					2010	2009	2008	2007	2006	5 year mean	Record high harvest (yr)
	M (%M)	F	U	Total								
Quota												
12	84 (79) ^c	22	0	106	95	140	101	124	70	106	263 (01)	
13	75 (63)	44	0	119	155	149	129	163	151	149	258 (95)	
22	9 (82)	2	0	11	9	7	7	15	15	11	41 (89)	
24	64 (52)	58	0	122	124	151	100	134	194	141	288 (95)	
25	185 (58)	132	0	317	307	344	298	369	421	348	584 (01)	
26	105 (63)	62	0	167	232	228	137	315	314	245	513 (95)	
31	219 (61)	139	0	358	363	384	248	398	482	375	697 (01)	
41	29 (54)	25	0	54	71	104	77	104	40	79	201 (01)	
44	65 (50)	65	0	130 ^d	248	255	196	333	192	245	643 (95)	
45	23 (72) ^c	9	0	32 ^d	58	42	72	113	118	81	178 (01)	
51	171 (59)	117	0	288 ^e	501	416	344	557	721	508	895 (01)	
Total	1029 (60)	675	0	1704 ^f	2163	2220	1709	2625	2718	2287	4288 (01)	
No Quota ^b												
11	134 (61)	85	0	219	178	315	172	324	114	221	351 ^h (05)	
11b	1	2	0	3	11	9	3	4	6			
52	131 (64)	74	0	205 ^g	347	257	251	219	400	295	400 (06)	
Total	266 (63)	161	0	427	536	581	426	547	520	522	678 (95)	
State	1295 (61)	836	0	2131	2699	2801	2135	3172	3290 ^h	2819	4956 (95)	

^a Hunters receive tooth envelopes at registration stations, but the sex recorded on tooth envelopes sometimes differs from the registered sex (2011: 1450 [97%] unchanged; 12 M_(reg)→F_(tooth); 38 F→M). Sex shown on table is the registered sex because only ~70% of tooth envelopes are submitted (2011: 1535 of 2131 = 72%). Also, some tooth envelopes had no corresponding registration data. These were added to the harvest tally:

Year	Quota area	No-quota area
2006	63	15
2007	27	9
2008	23	4
2009	19	14
2010	20	8
2011	11	2

^b Some hunters with no-quota licenses hunted in the quota area, and their kills were assigned to the BMU where they apparently hunted ($n = 28$ in 2006, 27 in 2007, 14 in 2008, 3 in 2009, 14 in 2010, 14 in 2011). Some quota area hunters also apparently hunted in the wrong BMU, based on the block where they said they killed a bear, but these were recorded in the BMU where they were assigned, not the BMU of the indicated harvest block, presuming most were misreported kill locations.

^c Record high sex ratio (%M).

^d Lowest harvest since BMU was established in 1994.

^e Lowest harvest since 1991.

^f Lowest harvest since 1996.

^g Lowest harvest since 2002.

^h The estimated registered harvest, including those in which registration data were lost and no tooth envelope was received. Value does not match column total because BMU data were uncorrected for lost registration data.

Table 6. Bear hunting success (%) by BMU, measured as the registered harvest (excluding second bear) divided by the number of licenses sold^a, 2006–2011.

BMU	Mean success 2006-2010	2011		2010		2009		2008		2007		2006	
		% Success	% 2 bears ^b	% Success	% 2 bears ^b	% Success	% 2 bears ^b	% Success	% 2 bears ^b	% Success	% 2 bears ^b	% Success	% 2 bears ^b
		Quota	27										
12	31	30	30	39	32	36	19						
13	30	26	34 ^c	32	28	31	24						
22	13	11	14	16 ^c	8	14	14						
24	25	35 ^e	29	31 ^d	20	20	25						
25	32	35	34	36	28 ^f	31	30						
26	30	26	34	31	17 ^f	36	30						
31	31	36	36	38 ^c	21 ^f	28	33						
41	27	18	25	34	27	35	13						
44	25	15 ^f	28	30	21	30	16						
45	14	13	21 ^d	11 ^f	11 ^f	14	14						
51	25	16 ^f	27	23	19	27	28						
No Quota	20												
Statewide	25												

^a Harvest/licenses instead of harvest/hunters because BMU-year-specific estimates for the proportion of license-holders that hunted are unreliable. Statewide estimates of harvest/hunters are presented in Table 1.

^b Percent of successful hunters that shot 2 bears; 2nd bear is not included in the calculation of hunting success. The taking of 2 bears was legal only in the no-quota area since 2002.

^c Highest success since 1997 (until this year).

^d Highest success since 1995 (until this year).

^e Highest success since 1992.

^f Lowest success since 2002 (until this year).

^g Of the no-quota hunters in 2011, 30 took 2 bears in BMU 11 and 20 took 2 bears in BMU 52.

^h Success rates in different parts of the no-quota area (Fig. 1) are not distinguishable from harvest records because the number of people that hunted in each BMU is unknown. However, a hunter survey conducted following the 2009 hunting season indicated the following success rates: BMU 11 – 42%; BMU 11b – 17%; BMU 52 – 19%. These values are not directly comparable to values tabulated here due to a non-response bias in the survey (non-successful hunters are less likely to respond; respondents indicated overall success rate of 31% vs 22% calculated from harvest/licenses); nevertheless, they reflect differences in success rates among these BMUs that year (notably a year when harvest was high in BMU 11).

Table 7. Cumulative bear harvest (% of total harvest) by date, 1990–2011.

Year	Day of week for opener	Aug 22/23 – Aug 31	Sep 1 – Sep 7	Sep 1 – Sep 14	Sep 1 – Sep 30
1990	Sat		69	82	96
1991	Sun		64	76	93
1992	Tue		72	86	96
1993	Wed		67	80	94
1994	Thu		67	78	92
1995	Fri		72	87	97
1996	Sun		56 ^a	70	87
1997	Mon		76	88	97
1998	Tue		76	87	96
1999	Wed		69	81	95
2000	Wed	57	72	82	96
2001	Wed	67	82	88	98
2002	Sun		57 ^a	69	90
2003	Mon		72	84	96
2004	Wed		68	82	95
2005	Thu		72	81	94
2006	Fri		69	83	96
2007	Sat		69	82	96
2008	Mon		58 ^a	71	92
2009	Tue		74	86	96
2010	Wed		69	84	96
2011	Thu		65	78	93

^a The low proportion of total harvest taken during the opening week (<60%) reflects a high abundance of natural foods

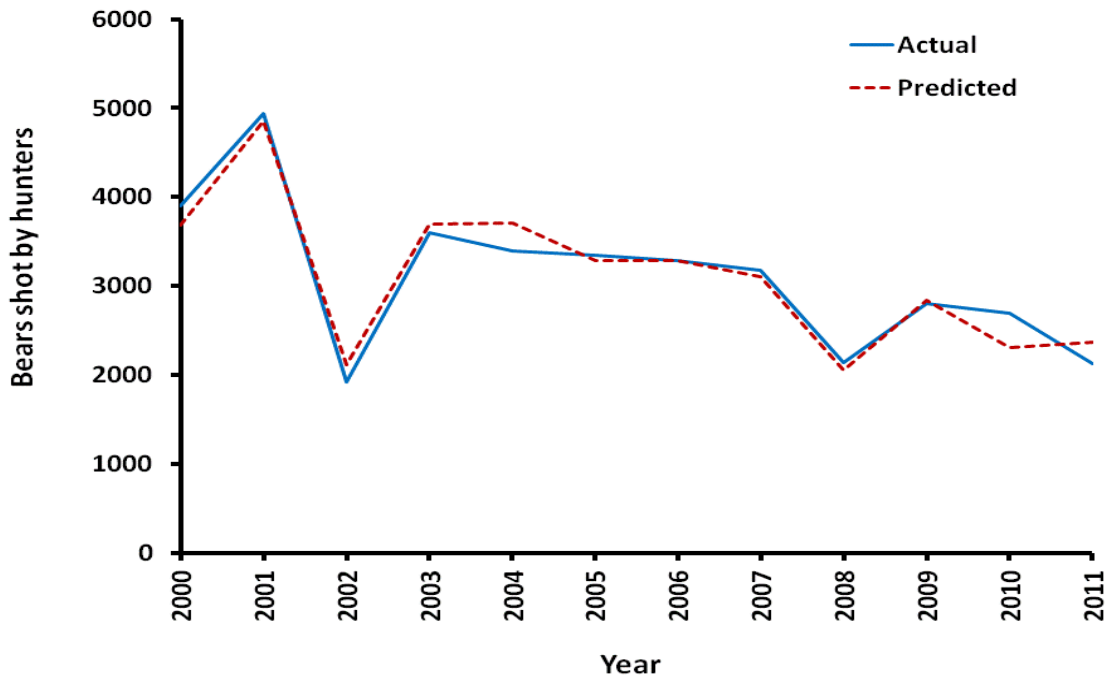
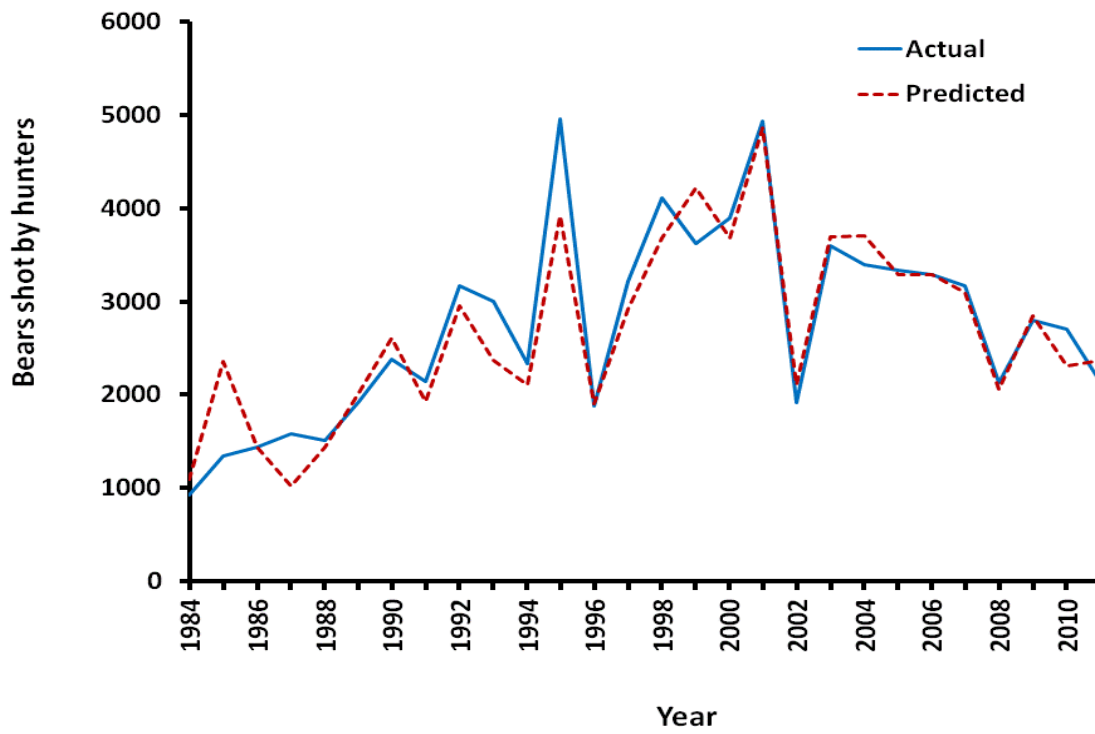


Figure 3. Number of bears harvested vs. number predicted based on fall food abundance and the number of hunters: (top graph) 1984–2011 ($R^2=0.84$); (bottom graph) 2000–2011 ($R^2=0.95$).

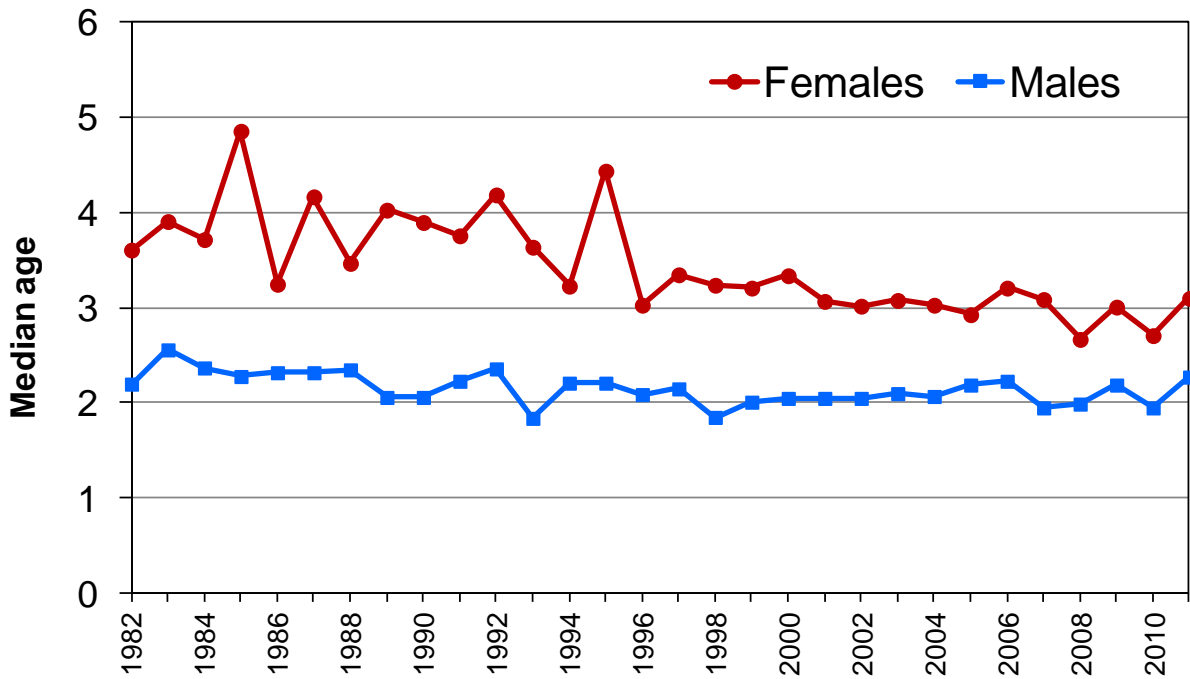


Figure 4. Statewide harvest structure: median ages (yrs) by sex, 1982–2011.

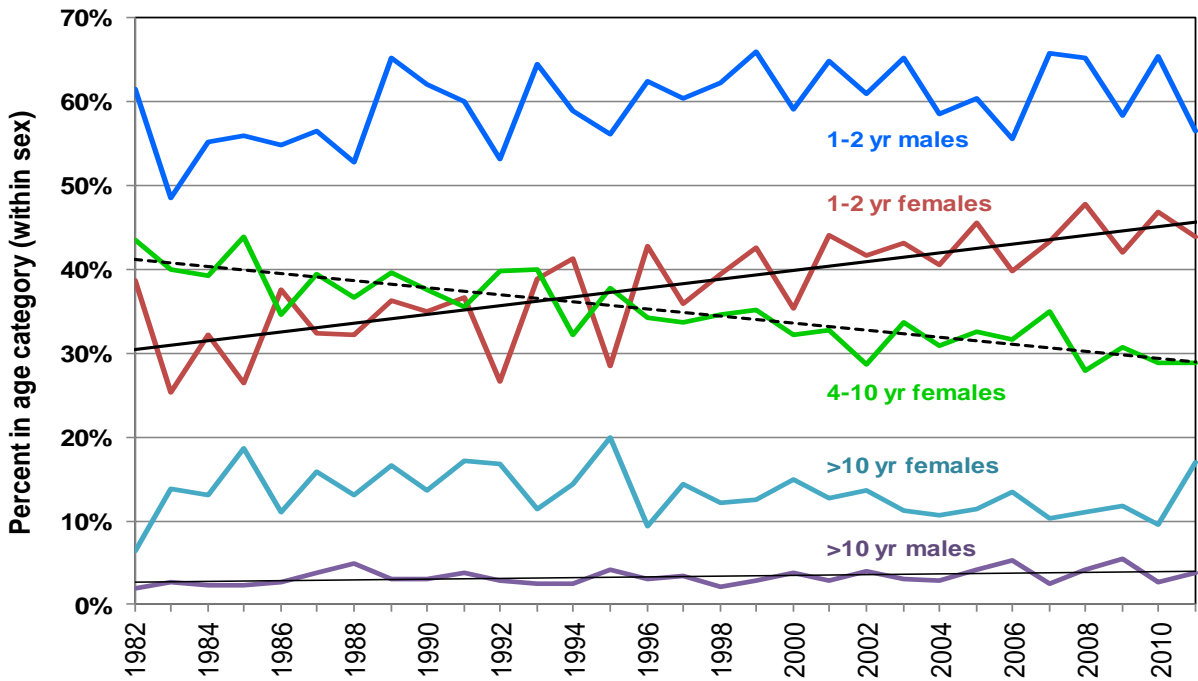


Figure 5. Statewide harvest structure: proportion of each sex in age category, 1982–2011. Trend lines are significant.

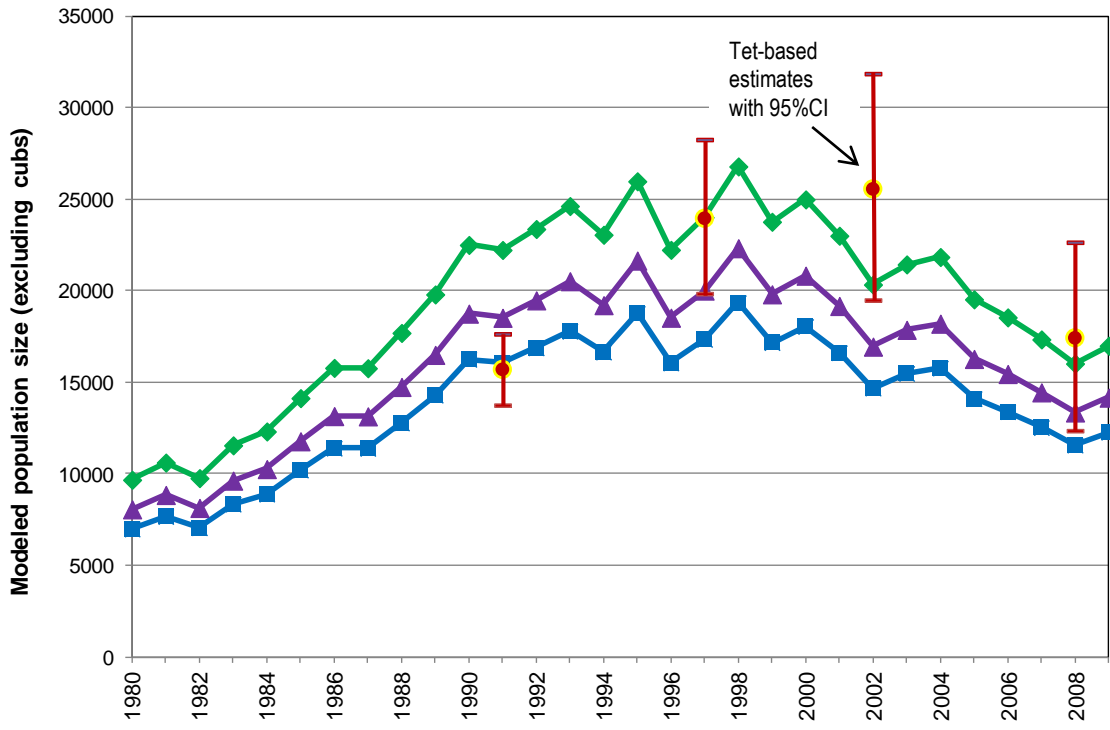


Figure 6. Statewide population trend derived from Downing reconstruction using the harvest age structure. Curves were scaled (elevated) to various degrees to match the tetracycline-based mark-recapture estimates (3 curves shown match different sets of tetracycline estimates).

2011 MINNESOTA DEER HARVEST REPORT

Lou Cornicelli, Big Game / Season Program Consultant, Division of Fish and Wildlife

INTRODUCTION

The white-tailed deer may be considered Minnesota's most popular wildlife species. Each year 500,000 hunters harvest over 190,000. In 2010, hunters registered 192,331 deer

METHODS

Every deer taken by hunting in Minnesota must be registered within 24 hours of the close of the season under which the deer was taken. Deer may be registered at any of the 825 to nearly 900 "Big Game Registration" stations available throughout the state. Starting in 2011, deer could be registered using the internet and telephone except in areas with Disease Management tag restrictions (101 and 602). Implementation of electronic licensing (ELS) has improved the efficiency and accuracy of deer harvest estimates and provides a more timely release of harvest information. Registered deer are recorded as adult buck, fawn buck, adult doe, or fawn doe. Additional information gathered at time of registration includes date of kill, deer permit area, and season.

RESULTS

Outcome of the 2011 deer harvest are presented in the following tables.

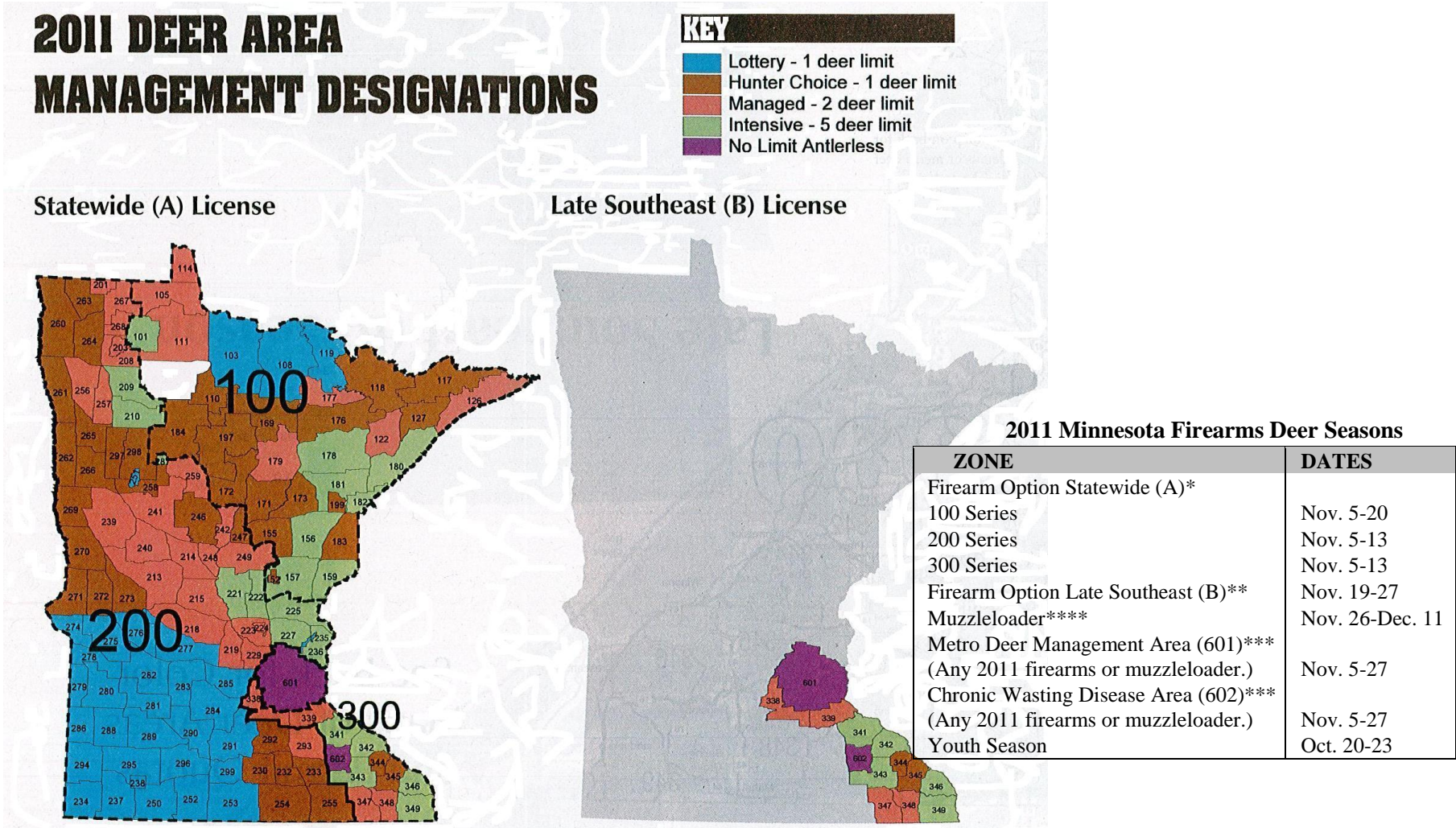


Figure 1. 2011 Firearms and Archery Deer Seasons.

2011 Minnesota Archery Deer Season Dates: September 17-December 31.

Antlerless deer and legal bucks may be taken by archery, except only legal bucks may be taken in permit areas that have no either-sex permits or have youth-only either-sex permits.

Table 1. Statewide Firearms, Archery, and Muzzleloader Harvest, License Sales, and Success Rates, 2000-2011.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
REGULAR FIREARMS												
Resident License Sales	400,814	401,005	367,964	344,875	309,698	291,298	299,774	285,286	376,006	377,077	379,866	382,668
Non-Resident License Sales	10,595	10,972	10,835	11,334	12,036	12,523	12,520	12,520	11,883	11,759	11,908	11,955
Bonus Permit Sales	34,802	59,013	105,699	194,201	183,186	184,566	167,343	145,522	190,156	140,920	143,763	142,049
Multi-Zone Buck License Sales	42,669	41,921	35,658	32,929	32,359	28,233	15,984	15,051	N/A	N/A	N/A	N/A
Youth License Sales	3,215	4,011	2,884	34,463	51,347	50,501	49,599	49,242	50,397	56,678	59,726	60,943
All Season Deer License Sales	2,384	3,986	22,125	30,998	46,008	59,090	75,511	76,385	N/A	N/A	N/A	N/A
Total License Sales	495,289	519,601	545,165	648,800	634,634	626,211	620,731	584,006	628,442	586,434	595,263	597,615
Registered Buck Harvest ¹	102,961	98,894	101,333	110,440	116,612	95,594	95,695	97,528	85,646	83,820	88,027	76,003
Antlerless Permits Offered	232,595	286,540	365,667	31,625	30,760	28,830	18,925	18,830	32,325	60,100	60,083	15,252
Antlerless Permits Issued	180,490	196,603	192,907	25,386	24,111	25,656	18,925	18,830	32,325	60,100	60,083	60,083
Antlerless Permits App.	237,571	225,341	202,086	30,253	28,454	31,403	31,403	31,403	31,403	90,882	86,783	86,783
Registered AL Harvest ¹	88,492	98,169	102,280	147,420	123,278	119,363	135,981	118,860	98,147	78,525	78,525	88,197
Registered Total Harvest ¹	191,453	197,063	203,613	257,860	239,890	214,957	231,676	216,388	183,793	162,345	174,104	164,200
Registered % Successful ²	38.6	37.9	37.3	39.7	37.8	34.3	37.3	37.1	35.1	32.1	35.6	32.9
	414,624	415,988	381,683	390,672	373,081	354,322	361,893	347,048	438,286	445,514	451,500	455,566
ARCHERY												
Resident License Sales	68,947	69,608	57,532	59,339	50,601	50,293	49,595	52,780	87,872	88,707	91,156	90,252
Non-Resident License Sales	1,271	1,288	1,275	1,428	1,144	1,207	1,286	1,509	1,509	1,610	1,638	1,718
Youth Archery Sales	N/A	N/A	N/A	3,748	7,261	7,489	7,688	7,663	9,005	9,157	9,577	10,306
Mgmt Permit License Sales	20,393	22,141	18,126	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total License Sales	90,611	93,037	76,933	60,767	59,006	58,989	58,569	61,952	99,033	99,474	102,371	102,276
Total Harvest - All-Season License				2,356	3,489	4,563	8,284	6,900	N/A	N/A	N/A	N/A
Total Archery Harvest	15,776	15,884	14,744	21,691	20,726	23,538	25,360	24,161	22,632	20,629	22,057	20,444
Registered % Successful ²	17.4	17.1	19.2	22.3	29.2	24.6	24.8	24.3	18.5	17.5	17.8	17.0
MUZZLELOADER												
Total Muzzleloader License Sales	11,972	13,043	11,764	9,142	10,512	9,226	10,781	9,867	64,673	63,282	55,640	59,384
Estimated All-Season Hunters	--	--	--	12,020	14,168	23,293	23,293	26,813	N/A	N/A	N/A	N/A
Total Muzzleloader Harvest	4,548	4,494	3,505	9,466	9,289	15,421	13,507	12,138	9,572	7,929	9,023	7,416
Registered % Successful ²	38.0	34.5	29.8	44.7	37.6	47.4	39.6	28.2	13.4	11.3	16.2	12.4
Antlerless Permits Offered											5,792	1,997
Antlerless Permits App.											7,260	2,615
TOTAL Registered Harvest	211,777	217,452	222,050	290,525	260,604	255,736	270,778	260,434	221,837	194,186	207,313	192,331

¹ Does not include free landowner licenses

² Based on total license sales - does not include all-season deer

Table 2. Deer Harvest by License Type and Zone, 2011.

Firearms/Zone	Hunters	Harvest			Overall Success
		Bucks	Antlerless	Total	
1	176,551	30,481	33,176	63,657	33.0%
2	234,353	39,358	44,244	83,602	33.1%
3A	24,051	4,053	4,796	8,849	31.9%
3B	13,617	886	3,553	4,439	27.9%
CWD	1,769	451	709	1,160	49.7%
Free Landowner ¹	3,631	0	1,084	1,084	29.9%
Muzzleloader ²	55,640	2,222	5,194	7,416	12.4%
Archery ³	102,276	6,987	13,457	20,444	17.0%
TOTAL⁴	497,995	85,549	106,782	192,331	34.9%

¹ Includes deer taken during regular firearms, muzzleloader, and archery seasons.

² Total number of people who bought only a muzzleloader license was 6,989.

³ Includes Camp Ripley. Total number of people who bought only an archery license was 32,495.

⁴ Due to the fact that a hunter can buy multiple licenses, hunter numbers and success rates are calculated using unique MNDNR numbers.

Table 3. Firearms Harvest and Harvest per Square Mile by Permit Area, 2011. Includes all firearm licenses but does not include early antlerless harvest.

Permit Area	Zone	Adult Male	Fawn Male	Adult Female	Fawn Female	Total	Area Size (sq.mi.)	Bucks/Sq. Mile	Antlerless/Sq. Mile	Total/Sq. Mile
101	1A	211	65	227	57	560	496	0.43	0.70	1.13
103	1A	570	36	205	36	847	1,824	0.31	0.15	0.46
105	1A	512	123	532	97	1,264	932	0.55	0.81	1.36
108	1A	837	27	145	17	1,026	1,701	0.49	0.11	0.60
110	1A	773	124	558	103	1,558	530	1.46	1.48	2.94
111	1A	329	82	248	41	700	1,440	0.23	0.26	0.49
114	1A	44	5	23	3	75	412	0.11	0.08	0.18
117	1A	22	2	13	0	37	1,129	0.02	0.01	0.03
118	1A	572	56	319	37	984	1,445	0.40	0.29	0.68
119	1A	612	19	172	21	824	946	0.65	0.22	0.87
122	1A	463	52	279	41	835	622	0.74	0.60	1.34
126	1A	362	32	250	40	684	979	0.37	0.33	0.70
127	1A	77	3	35	5	120	587	0.13	0.07	0.20
152	1A	103	21	60	16	200	62	1.67	1.57	3.25
155	1A	1439	277	968	179	2,863	639	2.25	2.23	4.48
156	1A	1638	495	1589	362	4,084	834	1.96	2.93	4.89
157	1A	2393	680	1995	560	5,628	904	2.65	3.58	6.23
159	1A	1141	297	972	211	2,621	575	1.98	2.57	4.55
169	1A	1179	243	942	198	2,562	1,202	0.98	1.15	2.13
171	1A	1149	211	748	143	2,251	729	1.58	1.51	3.09
172	1A	1679	390	1231	260	3,560	786	2.14	2.39	4.53
173	1A	787	117	581	92	1,577	617	1.27	1.28	2.55
176	1A	1345	176	779	130	2,430	1,150	1.17	0.94	2.11
177	1A	737	168	706	140	1,751	553	1.33	1.83	3.17
178	1A	2085	494	2045	468	5,092	1,325	1.57	2.27	3.84
179	1A	1699	431	1583	377	4,090	939	1.81	2.55	4.36
180	1A	1134	169	760	145	2,208	999	1.14	1.08	2.21
181	1A	1408	355	1240	251	3,254	746	1.89	2.47	4.36
182	1A	427	88	278	45	838	280	1.53	1.47	2.99
183	1A	1268	198	819	132	2,417	675	1.88	1.70	3.58
184	1A	2420	437	1595	321	4,773	1,318	1.84	1.78	3.62
197	1A	969	146	545	111	1,771	1,343	0.72	0.60	1.32
199	1A	97	11	60	5	173	152	0.64	0.50	1.14
201	2A	70	19	75	11	175	169	0.41	0.62	1.03
203	2A	51	14	53	8	126	132	0.39	0.57	0.96
208	2A	142	52	178	33	405	379	0.38	0.69	1.07
209	2A	402	152	496	111	1,161	641	0.63	1.18	1.81
210	2A	711	265	812	226	2,014	635	1.12	2.05	3.17
213	2A	1480	493	1197	370	3,540	1,161	1.27	1.77	3.05
214	2A	1337	467	1004	360	3,168	566	2.36	3.24	5.60
215	2A	1013	361	744	287	2,405	730	1.39	1.91	3.29
218	2A	844	285	696	187	2,012	912	0.93	1.28	2.21
219	2A	514	147	371	111	1,143	427	1.20	1.47	2.68
221	2A	918	391	704	298	2,311	647	1.42	2.15	3.57
222	2A	900	266	616	202	1,984	413	2.18	2.63	4.81
223	2A	537	122	343	113	1,115	385	1.39	1.50	2.90
224	2A	95	34	77	15	221	49	1.94	2.57	4.51
225	2A	1261	369	872	326	2,828	635	1.99	2.47	4.45
227	2A	800	239	566	175	1,780	491	1.63	1.99	3.62

Table 3. (Continued)

Permit Area	Zone	Adult Male	Fawn Male	Adult Female	Fawn Female	Total	Area Size (sq.mi.)	Bucks/Sq. Mile	Antlerless/Sq. Mile	Total/Sq. Mile
229	2A	204	52	124	35	415	313	0.65	0.67	1.32
230	2A	194	56	143	32	425	464	0.42	0.50	0.92
232	2A	232	42	134	18	426	380	0.61	0.51	1.12
233	2A	154	25	65	10	254	386	0.40	0.26	0.66
234	2A	160	33	100	26	319	637	0.25	0.25	0.50
235	2A	51	4	19	7	81	37	1.39	0.82	2.20
236	2A	572	126	340	100	1,138	404	1.42	1.40	2.82
237	2A	209	22	92	15	338	737	0.28	0.17	0.46
238	2A	67	5	30	4	106	98	0.69	0.40	1.09
239	2A	1231	329	964	293	2,817	1,110	1.11	1.43	2.54
240	2A	1499	469	1104	375	3,447	694	2.16	2.81	4.97
241	2A	2606	856	2150	664	6,276	1,047	2.49	3.51	5.99
242	2A	589	155	504	134	1,382	307	1.92	2.58	4.50
246	2A	2079	448	1405	330	4,262	860	2.42	2.54	4.96
247	2A	715	152	498	121	1,486	263	2.72	2.93	5.64
248	2A	404	109	265	60	838	229	1.77	1.90	3.67
249	2A	1137	332	850	284	2,603	729	1.56	2.01	3.57
250	2A	254	24	126	19	423	730	0.35	0.23	0.58
251	2A	55	10	29	7	101	68	0.81	0.68	1.48
252	2A	271	31	98	18	418	735	0.37	0.20	0.57
253	2A	363	35	152	23	573	987	0.37	0.21	0.58
254	2A	434	66	243	51	794	946	0.46	0.38	0.84
255	2A	378	61	160	38	637	774	0.49	0.33	0.82
256	2A	317	86	322	81	806	654	0.48	0.75	1.23
257	2A	299	76	264	68	707	426	0.70	0.96	1.66
258	2A	722	200	494	146	1,562	381	1.90	2.20	4.10
259	2A	1360	409	1370	342	3,481	546	2.49	3.89	6.38
260	2A	254	41	167	36	498	1,252	0.20	0.19	0.40
261	2A	114	9	60	12	195	796	0.14	0.10	0.24
262	2A	159	39	128	24	350	677	0.23	0.28	0.52
263	2A	255	42	165	32	494	513	0.50	0.47	0.96
264	2A	450	98	330	61	939	672	0.67	0.73	1.40
265	2A	317	74	218	54	663	495	0.64	0.70	1.34
266	2A	268	43	207	50	568	625	0.43	0.48	0.91
267	2A	138	47	152	28	365	472	0.29	0.48	0.77
268	2A	193	53	166	38	450	239	0.81	1.07	1.88
269	2A	153	39	120	14	326	652	0.23	0.27	0.50
270	2A	154	18	82	14	268	758	0.20	0.15	0.35
271	2A	216	37	149	28	430	646	0.33	0.33	0.67
272	2A	169	33	113	10	325	544	0.31	0.29	0.60
273	2A	396	75	226	57	754	634	0.63	0.57	1.19
274	2A	225	10	100	9	344	381	0.59	0.31	0.90
275	2A	321	28	132	24	505	777	0.41	0.24	0.65
276	2A	420	73	242	33	768	575	0.73	0.60	1.33
277	2A	1049	122	525	87	1,783	876	1.20	0.84	2.04
278	2A	346	27	166	28	567	422	0.82	0.52	1.34
279	2A	181	17	98	23	319	346	0.52	0.40	0.92

Table 3. (Continued)

Permit Area	Zone	Adult Male	Fawn Male	Adult Female	Fawn Female	Total	Area Size (sq.mi.)	Bucks/ Sq. Mile	Antlerless/ Sq. Mile	Total/ Sq. Mile
280	2A	214	20	128	18	380	676	0.32	0.25	0.56
281	2A	367	48	176	30	621	579	0.63	0.44	1.07
282	2A	112	4	35	3	154	780	0.14	0.05	0.20
283	2A	257	20	97	13	387	640	0.40	0.20	0.61
284	2A	274	23	111	19	427	853	0.32	0.18	0.50
285	2A	362	49	156	37	604	580	0.62	0.42	1.04
286	2A	243	18	98	15	374	458	0.53	0.29	0.82
287	2A	74	45	110	27	256	51	1.46	3.59	5.05
288	2A	288	24	90	18	420	630	0.46	0.21	0.67
289	2A	156	9	44	17	226	820	0.19	0.09	0.28
290	2A	363	36	223	31	653	666	0.55	0.44	0.98
291	2A	557	78	266	50	951	832	0.67	0.47	1.14
292	2A	437	68	250	53	808	517	0.84	0.72	1.56
293	2A	531	104	307	58	1,000	512	1.04	0.92	1.95
294	2A	238	24	123	20	405	689	0.35	0.24	0.59
295	2A	357	26	142	23	548	855	0.42	0.22	0.64
296	2A	231	24	96	11	362	675	0.34	0.19	0.54
297	2A	132	17	67	20	236	449	0.29	0.23	0.53
298	2A	511	100	298	70	979	677	0.76	0.69	1.45
299	2A	245	36	106	10	397	389	0.63	0.39	1.02
338	3A	131	27	133	27	318	472	0.28	0.40	0.67
338	3B	28	21	71	17	137	472	0.06	0.23	0.29
339	3A	176	32	137	34	379	406	0.43	0.50	0.93
339	3B	26	20	51	14	111	406	0.06	0.21	0.27
341	3A	419	101	336	105	961	483	0.87	1.12	1.99
341	3B	110	88	250	71	519	483	0.23	0.85	1.07
342	3A	386	117	346	96	945	374	1.03	1.49	2.53
342	3B	98	97	253	82	530	374	0.26	1.15	1.42
343	3A	296	103	277	66	742	486	0.61	0.92	1.53
343	3B	53	56	142	37	288	486	0.11	0.48	0.59
344	3A	271	51	226	53	601	190	1.43	1.74	3.17
344	3B	48	37	150	34	269	190	0.25	1.16	1.42
345	3A	258	40	115	36	449	335	0.77	0.57	1.34
345	3B	69	54	153	43	319	335	0.21	0.75	0.95
346	3A	658	115	467	102	1,342	328	2.01	2.09	4.09
346	3B	139	94	295	91	619	328	0.42	1.46	1.89
347	3A	286	65	232	35	618	434	0.66	0.77	1.42
347	3B	66	50	183	40	339	434	0.15	0.63	0.78
348	3A	395	72	351	67	885	332	1.19	1.47	2.66
348	3B	56	57	181	40	334	332	0.17	0.84	1.00
349	3A	777	108	615	109	1,609	499	1.56	1.67	3.22
349	3B	193	146	525	110	974	499	0.39	1.57	1.95

Table 3. (Continued)

Permit Area	Zone	Adult Male	Fawn Male	Adult Female	Fawn Female	Total	Area Size (sq.mi.)	Bucks/Sq. Mile	Antlerless /Sq. Mile	Total/Sq. Mile
601	Metro	611	136	428	120	1,295	1,756	0.35	0.39	0.74
602	CWD	451	192	401	116	1,160	304	1.48	2.33	3.82
900	Park	1	0	4	1	6				
901	Park	4	1	1	0	6				
902	Park	47	38	79	24	188				
903	Park	1	0	0	0	1				
904	Park	3	3	6	1	13				
905	Park	3	0	1	2	6				
906	Park	7	1	1	1	10				
907	Park	1	0	1	0	2				
908	Park	1	0	0	0	1				
909	Park	1	1	2	0	4				
910	Park	0	4	6	2	12				
913	Park	0	1	7	2	10				
914	Park	10	3	15	1	29				
915	Park	3	1	0	1	5				
916	Park	29	6	22	1	58				
917	Park	0	1	2	0	3				
918	Park	1	1	3	3	8				
919	Park	0	1	5	4	10				
920	Park	0	4	3	3	10				
921	Park	13	9	23	2	47				
922	Park	3	3	14	5	25				
923	Park	0	0	2	4	6				
924	Park	0	4	14	1	19				
925	Park	5	2	1	1	9				
926	Park	5	3	13	3	24				
927	Park	3	1	3	0	7				
928	Park	19	8	27	13	67				
929	Park	3	5	9	3	20				
TOTAL		76,003	17,597	56,402	13,606	163,608	83,265	0.91	1.05	1.96

Table 4. Firearm Harvest using Bonus and Disease Management Permits, 2011.
Managed Permit Areas.

Permit Area	Zone	Fawn Male	Adult Female	Fawn Female	Total
105	1A	71	316	60	447
111	1A	42	131	21	194
114	1A	2	13	1	16
122	1A	23	119	26	168
126	1A	16	131	25	172
177	1A	80	369	74	523
179	1A	231	859	232	1,322
201	2A	10	54	11	75
203	2A	9	27	6	42
208	2A	26	97	20	143
213	2A	207	552	190	949
214	2A	238	495	185	918
215	2A	159	349	131	639
218	2A	117	303	84	504
219	2A	70	212	55	337
223	2A	58	180	52	290
224	2A	16	42	11	69
229	2A	24	75	12	111
239	2A	154	477	165	796

Permit Area	Zone	Fawn Male	Adult Female	Fawn Female	Total
240	2A	258	610	206	1,074
241	2A	454	1,240	375	2,069
242	2A	79	262	69	410
248	2A	47	134	33	214
249	2A	136	419	147	702
256	2A	39	184	39	262
257	2A	47	142	41	230
259	2A	205	682	164	1,051
267	2A	25	86	17	128
268	2A	30	108	22	160
293	2A	51	167	34	252
338	3A	15	75	14	104
338	3B	8	33	11	52
339	3A	19	83	19	121
339	3B	13	29	5	47
347	3A	39	167	24	230
347	3B	28	85	14	127
348	3A	42	234	47	323
348	3B	22	73	20	115
Total		3,110	9,614	2,662	15,386

Intensive Permit Areas

Permit Area	Zone	Fawn Male	Adult Female	Fawn Female	Total
101	1A	49	168	46	263
156	1A	283	972	245	1,500
157	1A	394	1171	368	1,933
159	1A	187	569	135	891
178	1A	336	1274	329	1,939
180	1A	104	492	103	699
181	1A	254	800	180	1,234
182	1A	56	176	29	261
209	2A	113	354	80	547
210	2A	192	531	168	891
221	2A	251	431	206	888
222	2A	163	360	132	655
225	2A	210	534	201	945
227	2A	169	388	114	671

Permit Area	Zone	Fawn Male	Adult Female	Fawn Female	Total
236	2A	90	206	68	364
287	2A	32	79	24	135
341	3A	77	245	81	403
341	3B	49	138	51	238
342	3A	81	268	67	416
342	3B	62	132	52	246
343	3A	76	200	48	324
343	3B	34	87	26	147
346	3A	83	362	76	521
346	3B	40	155	60	255
349	3A	65	460	82	607
349	3B	87	299	76	462
601	Metro	97	316	101	514
602	CWD	161	350	108	619
Total		3,795	11,517	3,256	18,568

Table 5. Summary of Firearms Special Hunts, 2011. Includes regular, youth, and bonus permits.

Area	Dates	Permits Issued	Harvest				Total
			Adult Male	Fawn Male	Adult Female	Fawn Female	
900 - Lake Vermilion State Park ¹	11/5-11/20	50*	1	0	4	1	6
901 - Rice Lake Nat. Wildlife Refuge	11/12-11/20	40***	4	1	1	0	6
902 - St. Croix State Park ¹	11/11-11/14	400**	47	39	79	24	189
903 - Savanna Portage State Park	11/12-11/16	15***	1	0	0	0	1
904 - Gooseberry Falls State Park ¹	11/5-11/20	30*	3	3	7	1	14
905 - Split Rock Lighthouse State Park ¹	11/5-11/20	30*	3	0	1	2	6
906 - Tettegouche State Park ¹	11/5-11/20	125*	7	1	1	1	10
907 - Scenic State Park ¹	11/5-11/20	30*	1	0	1	0	2
908 - Hayes Lake State Park ¹	11/5-11/20	75*	1	0	0	0	1
909 - Lake Bemidji State Park ¹	11/5-11/8	30**	1	1	2	0	4
910 - Zippel Bay State Park ¹	11/5-11/20	55#	0	4	7	2	13
911 - Judge CR Magney SP ¹	11/5-11/20	N/A*	0	0	0	0	0
912 - Schoolcraft State Park ¹	11/5-11/20	N/A*	0	0	0	0	0
913 - Lake Carlos State Park ¹	11/5-11/8	20#	0	1	7	2	10
914 - William O'Brien State Park ¹	11/5-11/6	70*	10	3	15	1	29
915 - Lake Bronson State Park	11/5-11/13	30*	3	1	0	1	5
916 - Maplewood State Park ¹	11/5-11/8	100*	29	6	22	1	58
917 - Rydell NWR	11/5-11/13	5#	0	1	2	0	3
918 - Lake Alexander SNA ¹	11/5-11/13	40*	1	1	3	3	8
919 - Glacial Lakes State Park	11/10-11/13	30#	0	1	5	4	10
920 - Zumbro Falls SNA - A ¹	11/5-11/13	12#	0	4	3	3	10
921 - Frontenac State Park - A ¹	11/7-11/9	60***	13	9	23	2	47
922 - Whitewater State Park ¹	11/19-11/20	50***	3	3	14	5	25
923 - Zumbro Falls SNA - B ¹	11/19-11/27	12#	0	0	2	4	6
924 - Whitewater State Game Refuge	11/19-11/27	75**	0	4	14	1	19
925 - Vermillion Highlands WMA ¹	11/5-11/18	25*	5	2	1	1	9
926 - Carver Park Reserve ¹	11/19-11/20	105*	5	3	13	3	24
927 - Lake Rebecca Park Reserve ¹	11/26-11/27	80*	3	1	3	0	7
928 - Wild River State Park ¹	11/5-11/8	100**	19	8	27	13	67
929 - Frontenac State Park - B ¹	11/19-11/20	60***	3	5	10	3	21
TOTAL			163	102	267	78	610

¹ Bonus permits available

*Either sex

** Earn-A-Buck

***Antler Point Restriction

#Antlerless Only

Table 6. Free Landowner Firearms Harvest by Permit Area, 2011.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
101	0	2	0	2
105	0	5	3	8
111	1	1	2	4
114	0	1	0	1
156	3	9	3	15
157	19	20	9	48
159	0	4	0	4
177	3	6	2	11
178	2	9	1	12
179	4	6	1	11
180	1	1	0	2
181	0	3	1	4
182	1	3	0	4
208	0	5	0	5
209	3	13	2	18
210	4	16	7	27
213	12	40	11	63
214	18	65	16	99
215	17	23	11	51
218	3	8	2	13
219	2	0	0	2
221	5	22	9	36
222	3	5	0	8
223	0	2	0	2
225	6	9	4	19
227	1	3	2	6
229	0	1	0	1
236	1	5	1	7
239	8	17	4	29
240	13	36	9	58
241	27	45	14	86
242	1	1	1	3
248	4	5	1	10
249	8	20	11	39
256	2	8	1	11
257	4	9	2	15
259	1	10	4	15
267	4	2	0	6
268	0	4	2	6
293	0	2	0	2
338	1	3	0	4
339	1	2	1	4
341	5	16	3	24
342	5	22	7	34
343	0	7	3	10
346	8	19	6	33
347	2	6	2	10
348	2	11	3	16
349	7	45	8	60
601	1	2	0	3
602	1	3	2	6
TOTAL	214	582	171	967

Table 7. Archery Harvest by Permit Area, 2011.
Includes Regular, Youth, All-Season, and Bonus Permits.

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
101	3	3	13	2	21
103	3	0	8	0	11
105	13	5	24	4	46
108	20	4	24	1	49
110	18	0	18	3	39
111	3	3	9	2	17
114	10	1	1	0	12
117	0	0	1	0	1
118	7	1	19	1	28
119	8	1	11	0	20
122	8	2	14	2	26
126	11	4	28	2	45
127	2	0	1	0	3
152	2	1	4	2	9
155	41	3	51	0	95
156	72	24	224	29	349
157	116	47	256	39	458
159	62	15	136	20	233
169	19	6	24	7	56
171	25	5	23	1	54
172	54	11	52	5	122
173	30	4	14	2	50
176	28	5	22	6	61
177	15	6	53	6	80
178	74	34	211	21	340
179	93	22	185	26	326
180	68	17	155	18	258
181	84	34	182	28	328
182	222	107	524	111	964
183	34	5	23	4	66
184	105	10	81	9	205
197	17	5	18	1	41
199	3	1	4	1	9
201	3	2	6	1	12
203	1	0	2	0	3
208	4	1	16	0	21
209	21	10	58	8	97
210	44	22	123	9	198
213	196	47	207	26	476
214	84	28	103	12	227
215	115	33	140	25	313
218	120	28	169	21	338
219	101	28	148	16	293
221	93	59	255	50	457
222	75	32	154	28	289
223	151	38	150	21	360
224	14	1	17	2	34

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
225	99	55	193	38	385
227	198	87	310	50	645
229	62	13	67	7	149
230	39	2	23	1	65
232	15	2	17	2	36
288	33	2	28	2	65
289	23	1	12	0	36
290	47	7	41	7	102
291	136	13	82	2	233
292	71	3	36	2	112
293	91	20	94	11	216
294	21	2	15	1	39
295	30	7	33	3	73
296	20	1	12	1	34
297	6	0	3	0	9
298	8	1	8	1	18
299	62	3	27	2	94
233	38	2	20	2	62
234	18	2	13	4	37
235	11	1	14	4	30
236	205	84	284	57	630
237	18	1	10	1	30
238	5	0	5	0	10
239	78	20	129	13	240
240	64	30	163	11	268
241	140	47	291	38	516
242	80	31	179	22	312
246	73	15	77	7	172
247	52	9	38	5	104
248	27	7	54	5	93
249	88	22	97	17	224
250	36	5	15	1	57
251	2	0	0	1	3
252	29	2	19	3	53
253	45	5	36	0	86
254	64	4	34	4	106
255	71	4	35	8	118
256	6	3	11	0	20
257	7	6	36	2	51
258	30	0	18	6	54
259	60	17	107	18	202
260	14	1	8	0	23
261	7	2	8	0	17
262	25	2	15	1	43
263	9	1	3	1	14
264	17	3	6	1	27
265	12	0	3	0	15

Table 7. (Continued)

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
266	24	0	6	0	30
267	4	0	9	0	13
268	8	1	16	2	27
269	16	1	9	0	26
270	12	3	3	0	18
271	23	3	15	0	41
272	9	0	3	0	12
273	13	2	15	1	31
274	12	2	10	3	27
275	30	0	13	2	45
276	42	7	32	2	83
277	115	14	87	10	226
278	33	7	24	2	66
279	16	2	6	0	24
280	19	3	14	0	36
281	37	3	25	4	69
282	15	1	6	1	23
283	37	2	21	2	62
284	34	1	18	2	55

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
285	71	8	33	6	118
286	21	4	14	1	40
287	0	0	1	0	1
338	39	15	73	7	134
339	53	14	54	14	135
341	120	44	239	44	447
342	97	29	170	25	321
343	143	57	296	51	547
344	35	5	17	4	61
345	61	8	18	5	92
346	139	34	219	46	438
347	64	11	84	14	173
348	81	11	96	13	201
349	125	23	252	31	431
601	649	243	1106	230	2,228
602	57	33	154	32	276
970*	94	34	133	26	287
971**	55	20	51	6	132
Total	6,987	1,905	10,032	1,520	20,444

*Camp Ripley First Hunt

**Camp Ripley Second Hunt

Table 8. Archery Harvest using Bonus and Disease Management Permits by Permit Area, 2011.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
101	2	13	1	16
105	1	13	1	15
111	1	6	1	8
114	1	0	0	1
122	1	10	2	13
126	2	17	2	21
156	16	185	25	226
157	36	205	33	274
159	12	110	17	139
177	2	36	4	42
178	25	162	14	201
179	13	136	16	165
180	13	130	16	159
181	29	147	25	201
182	102	482	107	691
201	2	6	1	9
203	0	1	0	1
208	1	12	0	13
209	7	49	8	64
210	19	115	8	142
213	27	145	19	191
214	23	88	9	120
215	23	113	17	153
218	20	124	16	160
219	20	113	12	145
221	51	235	41	327
222	30	131	24	185
223	21	117	15	153
224	0	12	2	14

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
225	47	173	32	252
227	79	274	44	397
229	8	52	3	63
236	76	250	50	376
239	17	106	10	133
240	17	130	5	152
241	38	243	33	314
242	22	142	14	178
248	2	43	1	46
249	15	74	12	101
256	1	10	0	11
257	5	28	2	35
259	10	78	12	100
267	0	8	0	8
268	1	12	2	15
287	0	1	0	1
293	19	80	11	110
338	11	56	6	73
339	14	47	13	74
341	35	221	39	295
342	28	157	23	208
343	51	273	49	373
346	28	206	43	277
347	8	71	11	90
348	7	79	11	97
349	20	231	27	278
601	227	1010	206	1443
602	32	149	31	212
TOTAL	1,318	7,117	1,126	9,561

Table 9. Summary of Archery Special Hunts, 2011. Includes Regular, Youth, and Bonus Permits.

Area	Dates	Permits Issued	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
970 - Camp Ripley	10/20 - 10/21	2,500	94	133	34	26	287
971 - Camp Ripley	10/29 - 10/30	2,500	55	51	20	6	132
972 - Crow-Hassan Park Reserve	11/11 - 11/13	130	0	2	2	0	4
973 - Murphy-Hanrehan Park Reserve	11/11 - 11/13	180	0	0	0	0	0
974 - Cleary Lake Regional Park	11/11 - 11/13	55	0	0	0	0	0
975 - Vermillion Highlands WMA	9/17-10/30	60	3	3	0	0	6
976 - City of New Ulm	10/15 - 12/31	50	0	1	0	0	1
977 - City of Red Wing	9/17 - 12/31	Unl.	0	0	0	0	0
978 - City of Sandstone	9/17 - 12/31	Unl.	0	0	0	0	0
979 - City of St. Cloud	9/17 - 12/31	70	3	6	5	1	15
980 - City of Taylors Falls	9/17 - 12/31	Unl.	0	0	0	0	0
981 - City of Mankato	10/15 - 12/31	40	0	22	2	1	25
982 - City of Granite Falls	9/17 - 12/31	10	0	1	0	0	1
983 - City of Ortonville	9/17 - 12/31	30	1	7	2	0	10
984 - City of Canby	9/17 - 12/31	20	1	2	0	0	3
985 - City of Bemidji	9/17 - 12/31	40	0	12	2	5	19
986 - Bemidji Airport	9/17 - 12/31	30	2	13	0	4	19
987 - Greenleaf State SRA	9/17 - 12/31	Unl.	1	0	0	0	1
988 - Kellogg Weaver Dunes SNA	9/17 - 12/31	10	0	0	0	0	0
989 - Cedar Mountain SNA	9/17 - 12/31	Unl.	0	0	0	0	0
990 - City of Warroad	9/17 - 12/31	10	0	4	0	3	7
Total			160	257	67	46	530

*In many cases, city archery harvest is under-reported because individuals do not use the applicable number when registering their deer.

Table 10. Free Landowner Archery Harvest by Permit Area, 2011.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total	Permit Area	Fawn Male	Adult Female	Fawn Female	Total
157	0	1	0	1	240	0	3	0	3
177	0	1	0	1	241	1	3	1	5
179	0	1	0	1	248	1	0	1	2
213	2	1	0	3	249	1	2	0	3
214	0	1	1	2	293	0	1	0	1
215	0	4	0	4	338	0	1	0	1
221	0	1	0	1	341	0	1	0	1
222	0	1	0	1	342	1	1	0	2
225	1	0	0	1	346	0	2	0	2
229	0	2	0	2	347	0	3	0	3
236	0	1	0	1	348	0	1	0	1
239	0	2	0	2	349	0	2	1	3
					TOTAL	7	36	4	47

Table 11. Muzzleloader Harvest by Permit Area, 2011.
Includes Regular, Muzzleloader, Youth, and Bonus permits. Does not include Park hunts.

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
101	2	1	7	2	12
103	4	0	2	0	6
105	7	3	13	1	24
108	9	0	2	0	11
110	6	0	12	0	18
111	4	0	8	1	13
117	0	0	2	0	2
118	20	0	21	0	41
119	12	0	5	0	17
122	8	1	3	0	12
126	11	2	22	2	37
127	2	0	1	0	3
152	1	0	1	0	2
155	7	4	11	5	27
156	11	4	31	7	53
157	27	18	77	25	147
159	9	7	28	4	48
169	10	5	23	3	41
171	9	0	12	3	24
172	10	3	25	5	43
173	5	1	10	0	16
176	20	3	18	3	44
177	8	6	23	3	40
178	15	6	57	4	82
179	14	12	48	11	85
180	22	0	35	5	62
181	10	9	42	8	69
182	4	0	17	2	23
183	4	1	16	0	21
184	28	4	38	13	83
197	8	2	8	1	19
199	1	0	1	0	2
201	4	1	5	0	10
203	1	0	7	2	10
208	12	1	12	1	26
209	24	5	34	11	74
210	14	10	33	4	61
213	51	20	85	12	168
214	15	15	41	19	90
215	28	24	72	21	145
218	38	22	87	14	161
219	31	14	55	19	119
221	15	17	63	17	112
222	15	20	32	12	79

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
223	23	11	24	6	64
224	2	0	0	0	2
225	22	26	55	14	117
227	41	23	76	22	162
229	7	6	18	3	34
230	10	4	20	0	34
232	16	1	27	2	46
233	15	5	28	3	51
234	14	0	10	0	24
235	1	0	2	0	3
236	31	15	54	12	112
237	21	3	6	0	30
238	2	0	1	0	3
239	31	19	59	11	120
240	25	13	63	7	108
241	55	30	132	24	241
242	12	5	21	2	40
246	24	6	38	6	74
247	13	4	24	4	45
248	13	9	15	6	43
249	17	14	40	13	84
250	13	0	21	3	37
251	1	0	4	0	5
252	17	2	15	3	37
253	35	3	23	5	66
254	29	9	45	5	88
255	27	9	35	7	78
256	16	4	19	3	42
257	10	4	20	2	36
258	15	2	15	2	34
259	16	9	47	12	84
260	19	1	15	2	37
261	8	2	11	0	21
262	17	2	15	0	34
263	12	2	7	0	21
264	27	1	26	4	58
265	17	8	17	2	44
266	15	2	16	2	35
267	9	0	6	1	16
268	8	2	9	0	19
269	33	2	13	3	51
270	12	2	13	1	28
271	19	3	9	2	33
272	14	3	11	0	28

Table 11. (Continued).

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total	Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
273	19	0	27	0	46	294	20	4	15	2	41
274	12	1	7	1	21	295	38	1	21	0	60
275	22	3	15	1	41	296	15	2	15	1	33
276	28	4	23	2	57	297	5	0	7	2	14
277	60	8	44	8	120	298	10	2	11	2	25
278	41	6	32	2	81	299	21	4	19	1	45
279	17	4	15	0	36	338	9	2	32	7	50
280	14	1	5	0	20	339	9	4	22	1	36
281	36	3	27	1	67	341	20	20	83	14	137
282	7	0	1	0	8	342	37	19	124	22	202
283	10	0	6	0	16	343	24	16	92	17	149
284	24	4	9	1	38	344	14	4	39	8	65
285	21	5	12	1	39	345	14	2	13	1	30
286	25	2	8	1	36	346	37	26	133	23	219
287	0	0	2	0	2	347	16	8	52	15	91
288	43	1	10	0	54	348	9	8	56	10	83
289	17	1	6	0	24	349	30	15	133	21	199
290	28	7	31	6	72	601	17	11	52	10	90
291	43	11	41	5	100	602	8	0	7	1	16
292	27	11	34	7	79	TOTAL	2,222	746	3,619	633	7,220
293	35	19	68	5	127						

Table 13. Summary of Muzzleloader Special Hunts, 2011.
Includes Regular, Youth, All-Season, and Bonus Permits.

Area	Dates	Permits Issued	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
935 - Jay Cooke SP ¹	12/3-12/7	120*	13	6	21	3	43
936 - Crow Wing SP ¹	12/2-12/4	40***	2	6	5	4	17
937 - Soudan SP ¹	11/26-12/11	30*	2	1	4	1	8
938 - City of Tower ¹	11/26-12/11	20*	0	1	0	0	1
939 - Lake Shetek SP ¹	12/3-12/4	15**	0	1	7	5	13
940 - Lake Maria SP ¹	12/3-12/5	25***	1	4	8	4	17
941 - Nerstrand Big Woods SP ¹	11/26-11/27	50***	0	7	16	6	29
942 - Sibley SP	11/26-11/27	50**	2	1	17	1	21
943 - Myre-Big Island SP	11/26-11/28	40**	0	3	18	1	22
944 - Vermilion Highlands WMA ¹	11/26-12/11	25*	1	0	1	0	2
945 - Big Stone SP ¹	12/3 - 12/4	10**	0	1	6	1	8
946 - Murphy-Hanrehan Park Res. ¹	12/3 - 12/4	90*	0	1	7	0	8
947 - Itasca State Park ¹	11/26 - 12/4	125	2	1	4	0	7
TOTAL			23	33	114	26	196

Bonus permits available *Either Sex **Antlerless Only ***Earn-A-Buck

Table 14. Free Landowner Muzzleloader Harvest by Permit Area, 2011.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
105	0	2	0	2
111	0	1	0	1
157	0	0	1	1
179	1	1	0	2
213	2	1	1	4
214	2	1	0	3
215	0	2	1	3
219	0	1	0	1
221	0	1	1	2
225	0	2	0	2
239	0	1	0	1
240	1	3	1	5
241	1	6	1	8
256	0	2	0	2
257	0	1	0	1
293	0	3	0	3
338	0	1	0	1
341	0	1	1	2
342	0	2	1	3
346	2	3	0	5
347	0	4	0	4
348	0	4	1	5
349	1	7	1	9
Total	10	50	10	70

Table 15. Summary of Youth Firearm Hunts and NW Youth Season, 2011.

Area	Dates	Permits Issued	Harvest				Total
			Adult Male	Adult Female	Fawn Male	Fawn Female	
950 - Camp Ripley Archery	10/7-10/9	175	1	4	0	1	6
954 - Lake Bemidji SP	10/15-10/16	20	1	0	0	0	1
955 - Lake Alexander TNC	10/7-10/9	20	0	0	0	0	0
956 - St. Croix SP	10/29-10/30	90	5	5	3	0	13
957 - Rydell NWR	10/22-10/23	20	0	1	0	1	2
958 - Savanna Portage SP	10/29-10/30	10	3	0	0	1	4
959 - Buffalo River SP - A	10/22-10/23	10	1	1	0	0	2
960 - Tettegouche SP	10/15-10/16	10	0	1	0	0	1
961 - Itasca SP	10/15-10/16	75	3	2	3	0	8
965 - Banning SP	10/29-10/30	6	1	0	0	0	1
969 - Buffalo River SP - B	10/29-10/30	10	1	0	0	0	1
999 - Afton SP	11/5-11/6	15	4	10	2	1	17
Total		461	20	24	8	4	56

Youth Deer Season - October 20 - 24, unlimited permits

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
101	0	0	0	2	2
105	22	22	2	5	51
111	6	6	1	0	13
114	0	2	0	0	2
201	4	4	1	1	10
203	1	0	1	0	2
208	7	7	3	2	19
209	17	17	4	5	43
256	14	10	4	4	32
257	7	10	1	3	21
260	4	13	3	8	28
263	5	9	0	2	16
264	8	17	3	3	31
267	5	11	0	1	17
268	1	9	2	0	12
338	7	10	1	1	19
339	7	2	3	0	12
341	26	12	7	9	54
342	16	8	7	2	33
343	14	11	5	2	32
344	12	6	4	4	26
345	7	3	1	1	12
346	14	16	7	3	40
347	19	11	2	3	35
348	9	3	5	4	21
349	26	18	5	7	56
601	9	5	5	4	23
602	11	3	0	0	14
Total	278	245	77	76	676

Table 16. Total Deer Harvest by Permit Area, 2011.
Includes all license types, permits, and special hunts.

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
101	216	247	69	63	595
103	577	215	36	36	864
105	554	591	133	107	1,385
108	866	171	31	18	1,086
110	797	588	124	106	1,615
111	342	271	86	44	743
114	54	26	6	3	89
117	22	16	2	0	40
118	599	359	57	38	1,053
119	632	188	20	21	861
122	479	296	55	43	873
126	384	300	38	44	766
127	81	37	3	5	126
152	106	65	22	18	211
155	1487	1030	284	184	2,985
156	1721	1844	523	398	4,486
157	2536	2328	745	624	6,233
159	1212	1136	319	235	2,902
169	1208	989	254	208	2,659
171	1183	783	216	147	2,329
172	1743	1308	404	270	3,725
173	822	605	122	94	1,643
176	1393	819	184	139	2,535
177	760	782	180	149	1,871
178	2174	2313	534	493	5,514
179	1806	1816	465	414	4,501
180	1224	950	186	168	2,528
181	1502	1464	398	287	3,651
182	653	819	195	158	1,825
183	1306	858	204	136	2,504
184	2553	1714	451	343	5,061
197	994	571	153	113	1,831
199	101	65	12	6	184
201	81	90	23	13	207
203	54	62	15	10	141
208	165	213	57	36	471
209	464	605	171	135	1,375
210	770	968	297	239	2,274
213	1727	1489	560	408	4,184
214	1436	1148	510	391	3,485
215	1156	956	418	333	2,863
218	1002	952	335	222	2,511
219	646	574	189	146	1,555
221	1026	1022	467	365	2,880
222	990	802	318	242	2,352
223	711	517	171	140	1,539
224	111	94	35	17	257
225	1382	1120	450	378	3,330
227	1039	952	349	247	2,587

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
229	273	209	71	45	598
230	243	186	62	33	524
232	263	178	45	22	508
233	207	113	32	15	367
234	192	123	35	30	380
235	64	37	6	11	118
236	808	678	225	169	1,880
237	248	108	26	16	398
238	74	36	5	4	119
239	1340	1152	368	317	3,177
240	1588	1330	512	393	3,823
241	2801	2573	933	726	7,033
242	681	704	191	158	1,734
246	2176	1520	469	343	4,508
247	780	560	165	130	1,635
248	447	341	126	71	985
249	1242	987	368	314	2,911
250	303	162	29	23	517
251	58	33	10	8	109
252	317	132	35	24	508
253	443	211	43	28	725
254	527	322	79	60	988
255	476	230	74	53	833
256	353	362	97	88	900
257	323	330	87	75	815
258	767	527	202	154	1,650
259	1436	1524	435	372	3,767
260	291	203	46	46	586
261	129	79	13	12	233
262	201	158	43	25	427
263	281	184	45	35	545
264	502	379	105	69	1,055
265	346	238	82	56	722
266	307	229	45	52	633
267	156	178	47	30	411
268	210	200	58	40	508
269	202	142	42	17	403
270	178	98	23	15	314
271	258	173	43	30	504
272	192	127	36	10	365
273	428	268	77	58	831
274	249	117	13	13	392
275	373	160	31	27	591
276	490	297	84	37	908
277	1224	656	144	105	2,129
278	421	222	40	32	715
279	214	119	23	23	379
280	247	147	24	18	436
281	440	228	54	35	757

Table 16. (Continued).

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
282	134	42	5	4	185
283	304	124	22	15	465
284	332	138	28	22	520
285	454	201	62	44	761
286	289	120	24	17	450
287	74	113	45	27	259
288	364	128	27	20	539
289	196	62	11	17	286
290	438	295	50	44	827
291	736	389	102	57	1,284
292	535	320	82	62	999
293	657	469	143	74	1,343
294	279	153	30	23	485
295	425	196	34	26	681
296	266	123	27	13	429
297	143	77	17	22	259
298	529	317	103	73	1,022
299	328	152	43	13	536
338	214	319	66	59	658
339	271	266	73	63	673
341	695	920	260	243	2,118
342	634	901	269	227	2,031
343	530	818	237	173	1,758
344	380	438	101	103	1,022
345	409	302	105	86	902
346	987	1130	276	265	2,658
347	451	562	136	107	1,256
348	550	687	153	134	1,524
349	1151	1543	297	278	3,269
601	1286	1591	395	364	3,636
602	527	565	225	149	1,466
900	1	4	0	1	6
901	4	1	1	0	6
902	47	79	39	24	189
903	1	0	0	0	1
904	3	7	3	1	14
905	3	1	0	2	6
906	7	1	1	1	10
907	1	1	0	0	2
908	1	0	0	0	1
909	1	2	1	0	4
910	0	7	4	2	13
913	0	7	1	2	10
914	10	15	3	1	29
915	3	0	1	1	5
916	29	22	6	1	58
917	0	2	1	0	3
918	1	3	1	3	8
919	0	5	1	4	10

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
920	0	3	4	3	10
921	13	23	9	2	47
922	3	14	3	5	25
923	0	2	0	4	6
924	0	14	4	1	19
925	5	1	2	1	9
926	5	13	3	3	24
927	3	3	1	0	7
928	19	27	8	13	67
929	3	10	5	3	21
935	13	21	6	3	43
936	2	5	6	4	17
937	2	4	1	1	8
938	0	0	1	0	1
939	0	7	1	5	13
940	1	8	4	4	17
941	0	16	7	6	29
942	2	17	1	1	21
943	0	18	3	1	22
944	1	1	0	0	2
945	0	6	1	1	8
946	0	7	1	0	8
947	2	4	1	0	7
950	1	4	0	1	6
954	1	0	0	0	1
956	5	5	3	0	13
957	0	1	0	1	2
958	3	0	0	1	4
959	1	1	0	0	2
960	0	1	0	0	1
961	3	2	3	0	8
965	1	0	0	0	1
969	1	0	0	0	1
970	94	133	34	26	287
971	55	51	20	6	132
972	0	2	2	0	4
975	3	3	0	0	6
976	0	1	0	0	1
979	3	6	5	1	15
981	0	22	2	1	25
982	0	1	0	0	1
983	1	7	2	0	10
984	0	2	0	0	2
985	0	12	2	5	19
986	2	13	0	4	19
987	1	0	0	0	1
990	0	4	0	3	7
999	4	10	2	1	17
TOTAL	85,549	70,521	20,382	15,879	192,331

Table 17. Estimated firearm hunter numbers, density, and harvest by Permit Area, 2011.

Permit Area	Firearm Hunters	Area Size (sq mi)	Hunters/mile ²	Harvest/mile ²	Permit Area	Firearm Hunters	Area Size (sq mi)	Hunters/mile ²	Harvest/mile ²
101	1,827	496	3.7	1.1	218	5,234	912	5.7	2.2
103	3,293	1,824	1.8	0.5	219	3,370	427	7.9	2.7
105	3,702	932	4.0	1.4	221	5,022	647	7.8	3.6
108	4,966	1,701	2.9	0.6	222	4,683	413	11.3	4.8
110	4,289	530	8.1	2.9	223	2,998	385	7.8	2.9
111	2,926	1,440	2.0	0.5	224	766	49	15.6	4.5
114	278	412	0.7	0.2	225	6,580	635	10.4	4.5
117	219	1,129	0.2	0.03	227	4,675	491	9.5	3.6
118	3,610	1,445	2.5	0.7	229	1,512	313	4.8	1.3
119	3,802	946	4.0	0.9	230	1,539	464	3.3	0.9
122	2,336	622	3.8	1.3	232	1,265	380	3.3	1.1
126	2,034	979	2.1	0.7	233	1,086	386	2.8	0.7
127	564	587	1.0	0.2	234	835	637	1.3	0.5
152	946	62	15.4	3.2	235	392	37	10.7	2.2
155	7,353	639	11.5	4.5	236	3,117	404	7.7	2.8
156	9,390	834	11.3	4.9	237	1,028	737	1.4	0.5
157	13,244	904	14.6	6.2	238	307	98	3.1	1.1
159	7,232	575	12.6	4.6	239	7,562	1,110	6.8	2.5
169	8,980	1,202	7.5	2.1	240	7,431	694	10.7	5.0
171	6,478	729	8.9	3.1	241	12,753	1,047	12.2	6.0
172	10,318	786	13.1	4.5	242	2,830	307	9.2	4.5
173	4,555	617	7.4	2.6	246	11,350	860	13.2	5.0
176	7,316	1,150	6.4	2.1	247	3,549	263	13.5	5.6
177	3,905	553	7.1	3.2	248	2,125	229	9.3	3.7
178	10,465	1,325	7.9	3.8	249	5,759	729	7.9	3.6
179	9,735	939	10.4	4.4	250	1,514	730	2.1	0.6
180	6,131	999	6.1	2.2	251	543	68	8.0	1.5
181	7,002	746	9.4	4.4	252	1,423	735	1.9	0.6
182	2,092	280	7.5	3.0	253	2,096	987	2.1	0.6
183	7,504	675	11.1	3.6	254	2,672	946	2.8	0.8
184	13,776	1,318	10.4	3.6	255	1,783	774	2.3	0.8
197	5,750	1,343	4.3	1.3	256	2,444	654	3.7	1.2
199	533	152	3.5	1.1	257	1,887	426	4.4	1.7
201	477	169	2.8	1.0	258	4,205	381	11.0	4.1
203	352	132	2.7	1.0	259	7,952	546	14.6	6.4
208	1,234	379	3.3	1.1	260	1,824	1,252	1.5	0.4
209	2,587	641	4.0	1.8	261	863	796	1.1	0.2
210	4,592	635	7.2	3.2	262	1,047	677	1.5	0.5
213	8,512	1,161	7.3	3.0	263	1,920	513	3.7	1.0
214	7,186	566	12.7	5.6	264	3,466	672	5.2	1.4
215	6,423	730	8.8	3.3	265	2,059	495	4.2	1.3

Table 17. (Continued).

Permit Area	Firearm Hunters	Area Size (sq mi)	Hunters/mile ²	Harvest/mile ²
266	2,169	625	3.5	0.9
267	1,106	472	2.3	0.8
268	1,303	239	5.4	1.9
269	1,405	652	2.2	0.5
270	977	758	1.3	0.4
271	1,088	646	1.7	0.7
272	1,171	544	2.2	0.6
273	2,705	634	4.3	1.2
274	924	381	2.4	0.9
275	1,991	777	2.6	0.7
276	3,064	575	5.3	1.3
277	5,991	876	6.8	2.0
278	2,044	422	4.8	1.3
279	1,142	346	3.3	0.9
280	1,544	676	2.3	0.6
281	2,412	579	4.2	1.1
282	778	780	1.0	0.2
283	1,540	640	2.4	0.6
284	1,448	853	1.7	0.5
285	2,441	580	4.2	1.0
286	1,280	458	2.8	0.8
287	658	51	13.0	5.1
288	1,619	630	2.6	0.7
289	1,001	820	1.2	0.3

Permit Area	Firearm Hunters	Area Size (sq mi)	Hunters/mile ²	Harvest/mile ²
290	2,359	666	3.5	1.0
291	3,657	832	4.4	1.1
292	2,829	517	5.5	1.6
293	2,667	512	5.2	2.0
294	1,159	689	1.7	0.6
295	2,039	855	2.4	0.6
296	1,608	675	2.4	0.5
297	1,216	449	2.7	0.5
298	3,776	677	5.6	1.4
299	1,528	389	3.9	1.0
338	2,097	472	4.4	1.0
339	1,775	406	4.4	1.2
341	4,292	483	8.9	3.1
342	3,934	374	10.5	3.9
343	3,260	486	6.7	2.1
344	3,045	190	16.0	4.6
345	2,672	335	8.0	2.3
346	4,143	328	12.6	6.0
347	3,064	434	7.1	2.2
348	3,638	332	10.9	3.7
349	5,748	499	11.5	5.2
601	2,885	1,756	1.6	0.7
602	1,769	304	5.8	3.8
Total	448,572	83,265	5.4	1.9

Table 18. Deer harvest per square mile by season, 2011.

Permit Area	Area Size (sq mi)	Archery Harvest/mi ²	Firearm Harvest/mi ²	Muzz. Harvest/mi ²	EA Harvest/mi ²	Total Harvest/mi ²
101	496	0.04	1.13	0.02		1.20
103	1,824	0.01	0.46	0.00		0.47
105	932	0.05	1.36	0.03		1.43
108	1,701	0.03	0.60	0.01		0.64
110	530	0.07	2.94	0.03		3.04
111	1,440	0.01	0.49	0.01		0.51
114	412	0.03	0.18	0.00		0.21
117	1,129	0.00	0.03	0.00		0.04
118	1,445	0.02	0.68	0.03		0.73
119	946	0.02	0.87	0.02		0.91
122	622	0.04	1.34	0.02		1.40
126	979	0.05	0.70	0.04		0.78
127	587	0.01	0.20	0.01		0.21
152	62	0.15	3.25	0.03		3.42
155	639	0.15	4.48	0.04		4.67
156	834	0.42	4.89	0.06		5.38
157	904	0.51	6.23	0.16		6.89
159	575	0.40	4.55	0.08		5.04
169	1,202	0.05	2.13	0.03		2.21
171	729	0.07	3.09	0.03		3.19
172	786	0.16	4.53	0.05		4.74
173	617	0.08	2.55	0.03		2.66
176	1,150	0.05	2.11	0.04		2.20
177	553	0.14	3.17	0.07		3.39
178	1,325	0.26	3.84	0.06		4.16
179	939	0.35	4.36	0.09		4.79
180	999	0.26	2.21	0.06		2.53
181	746	0.44	4.36	0.09		4.89
182	280	3.44	2.99	0.08		6.52
183	675	0.10	3.58	0.03		3.71
184	1,318	0.16	3.62	0.06		3.84
197	1,343	0.03	1.32	0.01		1.36
199	152	0.06	1.14	0.01		1.21
201	169	0.07	1.03	0.06		1.16
203	132	0.02	0.96	0.08		1.06
208	379	0.06	1.07	0.07		1.19
209	641	0.15	1.81	0.12		2.08
210	635	0.31	3.17	0.10		3.58
213	1,161	0.41	3.05	0.14		3.60
214	566	0.40	5.60	0.16		6.16
215	730	0.43	3.29	0.20		3.92
218	912	0.37	2.21	0.18		2.75
219	427	0.69	2.68	0.28		3.64
221	647	0.71	3.57	0.17		4.45
222	413	0.70	4.81	0.19		5.70
223	385	0.93	2.90	0.17		4.00
224	49	0.69	4.51	0.04		5.24
225	635	0.61	4.45	0.18		5.24
227	491	1.31	3.62	0.33		5.26

Table 18. (Continued).

Permit Area	Area Size (sq mi)	Archery Harvest/mi ²	Firearm Harvest/mi ²	Muzz. Harvest/mi ²	EA Harvest/mi ²	Total Harvest/mi ²
229	313	0.48	1.32	0.11		1.91
230	464	0.14	0.92	0.07		1.13
232	380	0.09	1.12	0.12		1.34
233	386	0.16	0.66	0.13		0.95
234	637	0.06	0.50	0.04		0.60
235	37	0.82	2.20	0.08		3.10
236	404	1.56	2.82	0.28		4.66
237	737	0.04	0.46	0.04		0.54
238	98	0.10	1.09	0.03		1.22
239	1,110	0.22	2.54	0.11		2.86
240	694	0.39	4.97	0.16		5.51
241	1,047	0.49	5.99	0.23		6.72
242	307	1.02	4.50	0.13		5.65
246	860	0.20	4.96	0.09		5.24
247	263	0.39	5.64	0.17		6.21
248	229	0.41	3.67	0.19		4.26
249	729	0.31	3.57	0.12		3.99
250	730	0.08	0.58	0.05		0.71
251	68	0.04	1.48	0.07		1.60
252	735	0.07	0.57	0.05		0.69
253	987	0.09	0.58	0.07		0.73
254	946	0.11	0.84	0.09		1.04
255	774	0.15	0.82	0.10		1.08
256	654	0.03	1.23	0.06		1.33
257	426	0.12	1.66	0.08		1.86
258	381	0.14	4.10	0.09		4.33
259	546	0.37	6.38	0.15		6.90
260	1,252	0.02	0.40	0.03		0.45
261	796	0.02	0.24	0.03		0.29
262	677	0.06	0.52	0.05		0.63
263	513	0.03	0.96	0.04		1.03
264	672	0.04	1.40	0.09		1.52
265	495	0.03	1.34	0.09		1.46
266	625	0.05	0.91	0.06		1.01
267	472	0.03	0.77	0.03		0.83
268	239	0.11	1.88	0.08		2.07
269	652	0.04	0.50	0.08		0.62
270	758	0.02	0.35	0.04		0.41
271	646	0.06	0.67	0.05		0.78
272	544	0.02	0.60	0.05		0.67
273	634	0.05	1.19	0.07		1.31

Table 18. (Continued).

Permit Area	Area Size (sq mi)	Archery Harvest/mi ²	Firearm Harvest/mi ²	Muzz. Harvest/mi ²	EA Harvest/mi ²	Total Harvest/mi ²
274	381	0.07	0.90	0.06		1.03
275	777	0.06	0.65	0.05		0.76
276	575	0.14	1.33	0.10		1.58
277	876	0.26	2.04	0.14		2.43
278	422	0.16	1.34	0.19		1.69
279	346	0.07	0.92	0.10		1.10
280	676	0.05	0.56	0.03		0.64
281	579	0.12	1.07	0.12		1.31
282	780	0.03	0.20	0.01		0.24
283	640	0.10	0.61	0.03		0.73
284	853	0.06	0.50	0.04		0.61
285	580	0.20	1.04	0.07		1.31
286	458	0.09	0.82	0.08		0.98
287	51	0.02	5.05	0.04		5.11
288	630	0.10	0.67	0.09		0.86
289	820	0.04	0.28	0.03		0.35
290	666	0.15	0.98	0.11		1.24
291	832	0.28	1.14	0.12		1.54
292	517	0.22	1.56	0.15		1.93
293	512	0.42	1.95	0.25		2.62
294	689	0.06	0.59	0.06		0.70
295	855	0.09	0.64	0.07		0.80
296	675	0.05	0.54	0.05		0.64
297	449	0.02	0.53	0.03		0.58
298	677	0.03	1.45	0.04		1.51
299	389	0.24	1.02	0.12		1.38
338	472	0.28	0.96	0.11		1.35
339	406	0.33	1.21	0.09		1.63
341	483	0.93	3.06	0.28		4.27
342	374	0.86	3.94	0.54		5.34
343	486	1.13	2.12	0.31		3.55
344	190	0.32	4.58	0.34		5.25
345	335	0.27	2.29	0.09		2.65
346	328	1.34	5.98	0.67		7.98
347	434	0.40	2.21	0.21		2.82
348	332	0.60	3.67	0.25		4.52
349	499	0.86	5.18	0.40		6.44
601	1,756	1.27	0.74	0.05		2.06
602	304	0.91	3.82	0.05		4.78
Total	83,265	0.24	1.96	0.09		2.28

Table 19. 2011 Antlerless Lottery Distribution Report.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
103	1	1,291	0	446	845	967	0.0%
	2	91	0	0	91		
	3	31	0	0	31		
		1,413	0	446	967		
108	1	424	1	424	0	97	0.0%
	2	495	0	495	0		
	3	593	0	496	97		
		1,512	1	1,415	97		
119	1	907	1	907	0	475	0.0%
	2	683	0	254	429		
	3	45	0	0	45		
	9	1	0	0	1		
		1,636	1	1,161	475		
234	1	179	1	0	179	369	33.6%
	2	59	0	0	59		
	3	6	0	0	6		
	4	1	0	0	1		
		245	1	0	245		
235	1	43	0	38	5	60	0.0%
	2	39	0	0	39		
	3	15	0	0	15		
	4	1	0	0	1		
		98	0	38	60		
237	1	154	2	121	33	182	0.0%
	2	105	0	0	105		
	3	40	0	0	40		
	4	3	0	0	3		
	7	1	0	0	1		
		303	2	121	182		
238	1	40	0	17	23	96	0.0%
	2	49	0	0	49		
	3	24	0	0	24		
		113	0	17	96		
250	1	390	0	196	194	433	0.0%
	2	189	0	0	189		
	3	48	0	0	48		
	4	1	0	0	1		
	5	1	1	0	1		
		629	1	196	433		
251	1	211	0	0	164	185	0.0%
	2	21	0	0	21		
		232	0	0	185		

Table 19. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
252	1	262	2	262	0	258	0.0%
	2	149	0	12	137		
	3	117	0	0	117		
	4	3	0	0	3		
	5	1	0	0	1		
		532	2	274	258		
253	1	312	0	312	0	423	0.0%
	2	281	1	27	254		
	3	167	0	0	167		
	4	2	0	0	2		
		762	1	339	423		
274	1	139	0	139	0	226	0.0%
	2	93	0	2	91		
	3	73	0	0	73		
	4	60	0	0	60		
	5	2	0	0	2		
		367	0	141	226		
275	1	204	0	204	0	362	0.0%
	2	189	0	93	96		
	3	123	0	0	123		
	4	126	0	0	126		
	5	16	0	0	16		
	6	1	0	0	1		
		659	0	297	362		
276	1	559	0	238	321	1,084	0.0%
	2	415	0	0	415		
	3	339	0	0	339		
	4	8	0	0	8		
	5	1	0	0	1		
		1,322	0	238	1,084		
277	1	1,602	0	708	894	2,146	0.0%
	2	1,031	0	0	1,031		
	3	209	0	0	209		
	4	8	0	0	8		
	5	4	0	0	4		
		2,854	0	708	2,146		
278	1	426	3	365	61	635	0.0%
	2	259	0	0	259		
	3	295	0	0	295		
	4	18	0	0	18		
	5	1	0	0	1		
	6	1	0	0	1		
		1,000	3	365	635		

Table 19. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
279	1	212	0	178	34	310	0.0%
	2	154	0	0	154		
	3	118	0	0	118		
	4	1	0	0	1		
	5	2	0	0	2		
	6	1	0	0	1		
		488	0	178	310		
280	1	236	0	144	92	360	0.0%
	2	117	0	0	117		
	3	132	0	0	132		
	4	18	0	0	18		
	5	1	0	0	1		
		504	0	144	360		
281	1	365	1	230	135	644	0.0%
	2	291	0	0	291		
	3	188	0	0	188		
	4	29	1	0	29		
	7	1	0	0	1		
		874	2	230	644		
282	1	56	0	56	0	46	0.0%
	2	36	0	24	12		
	3	26	0	0	26		
	4	7	0	0	7		
	6	1	0	0	1		
		126	0	80	46		
283	1	186	0	186	0	224	0.0%
	2	139	0	111	28		
	3	107	0	0	107		
	4	89	0	0	89		
		521	0	297	224		
284	1	212	1	212	0	183	0.0%
	2	179	0	179	0		
	3	112	0	34	78		
	4	70	0	0	70		
	5	30	0	0	30		
	6	3	0	0	3		
	7	2	0	0	2		
		608	1	425	183		
285	1	717	0	302	415	818	0.0%
	2	379	0	0	379		
	3	13	0	0	13		
	4	8	1	0	8		
	5	1	0	0	1		
	6	2	0	0	2		
		1,120	1	302	818		

Table 19. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
286	1	171	2	171	0	181	0.0%
	2	170	0	115	55		
	3	101	0	0	101		
	4	23	0	0	23		
	5	2	0	0	2		
		467	2	286	181		
288	1	171	0	171	0	178	0.0%
	2	174	1	174	0		
	3	138	0	4	134		
	4	39	0	0	39		
	5	4	0	0	4		
	9	1	0	0	1		
		527	1	349	178		
289	1	85	0	85	0	89	0.0%
	2	79	0	79	0		
	3	53	0	11	42		
	4	39	0	0	39		
	5	8	0	0	8		
		264	0	175	89		
290	1	402	0	402	0	623	0.0%
	2	345	0	59	286		
	3	293	1	0	293		
	4	44	0	0	44		
		1,084	1	461	623		
291	1	826	1	826	0	834	0.0%
	2	585	0	67	518		
	3	311	0	0	311		
	4	4	0	0	4		
	5	1	0	0	1		
		1,727	1	893	834		
294	1	123	1	105	18	268	0.0%
	2	122	0	0	122		
	3	100	0	0	100		
	4	27	0	0	27		
	5	1	0	0	1		
		373	1	105	268		
295	1	299	1	299	0	428	0.0%
	2	222	1	108	114		
	3	239	0	0	239		
	4	73	0	0	73		
	5	2	0	0	2		
		835	2	407	428		

Table 19. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
296	1	297	0	297	0	260	0.0%
	2	167	0	141	26		
	3	179	1	0	179		
	4	54	0	0	54		
	5	1	0	0	1		
		698	1	438	260		
299	1	264	0	264	0	332	0.0%
	2	253	0	73	180		
	3	150	0	0	150		
	4	2	0	0	2		
		669	0	337	332		
TOTAL		21,071	18	9,568	11,456	13,776	

Table 20. 2011 Muzzleloader Lottery Distribution Report.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
103	1	45	0	14	31	33	0.0%
	2	2	0	0	2		
	47	0	14	33			
108	1	17	0	17	0	3	0.0%
	2	7	0	7	0		
	3	3	0	0	3		
		27	0	24	3		
119	1	49	0	49	0	25	0.0%
	2	32	0	7	25		
		81	0	56	25		
234	1	24	0	0	24	25	0.0%
	2	1	0	0	1		
		25	0	0	25		
235	1	12	0	4	8	15	0.0%
	2	6	0	0	6		
	3	1	0	0	1		
		19	0	4	15		
237	1	23	0	9	14	18	0.0%
	2	4	0	0	4		
		27	0	9	18		
238	1	3	0	0	3	4	0.0%
	2	1	0	0	1		
		4	0	0	4		
250	1	62	0	17	45	67	0.0%
	2	21	0	0	21		
	3	1	0	0	1		
		84	0	17	67		
251	1	17	0	2	15	15	0.0%
		17	0	2	15		
252	1	46	0	32	14	42	0.0%
	2	26	0	0	26		
	3	2	0	0	2		
		74	0	32	42		
253	1	71	0	41	30	77	0.0%
	2	47	0	0	47		
		118	0	41	77		
274	1	22	0	11	11	24	0.0%
	2	13	0	0	13		
		35	0	11	24		
275	1	37	0	25	12	38	0.0%
	2	24	0	0	24		
	3	2	0	0	2		
		63	0	25	38		
276	1	83	0	12	71	116	0.0%
	2	44	0	0	44		
	3	1	0	0	1		
		128	0	12	116		

Table 20. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
277	1	223	0	48	175	254	0.0%
	2	77	0	0	77		
	3	2	0	0	2		
		302	0	48	254		
278	1	96	0	38	58	115	0.0%
	2	57	0	0	57		
		153	0	38	115		
279	1	40	0	16	24	40	0.0%
	2	16	0	0	16		
		56	0	16	40		
280	1	32	0	10	22	40	0.0%
	2	17	0	0	17		
	3	1	0	0	1		
		50	0	10	40		
281	1	79	0	18	61	106	0.0%
	2	41	0	0	41		
	3	4	0	0	4		
		124	0	18	106		
282	1	8	0	7	1	4	0.0%
	2	3	0	0	3		
		11	0	7	4		
283	1	29	0	29	0	26	0.0%
	2	24	0	0	24		
	3	2	0	0	2		
		55	0	29	26		
284	1	44	0	36	8	17	0.0%
	2	8	0	0	8		
	4	1	0	0	1		
		53	0	36	17		
285	1	76	0	20	56	82	0.0%
	2	25	0	0	25		
	3	1	0	0	1		
		102	0	20	82		
286	1	32	0	26	6	19	0.0%
	2	12	0	0	12		
	3	1	0	0	1		
		45	0	26	19		
288	1	44	0	35	9	22	0.0%
	2	10	0	0	10		
	3	3	0	0	3		
		57	0	35	22		
289	1	21	0	19	2	11	0.0%
	2	9	0	0	9		
		30	0	19	11		

Table 20. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
290	1	111	0	57	54	127	0.0%
	2	70	0	0	70		
	3	3	0	0	3		
		184	0	57	127		
291	1	186	0	120	66	166	0.0%
	2	94	0	0	94		
	3	5	0	0	5		
	9	1	0	0	1		
		286	0	120	166		
294	1	24	0	8	16	32	0.0%
	2	15	0	0	15		
	3	1	0	0	1		
		40	0	8	32		
295	1	65	0	49	16	72	0.0%
	2	51	0	0	51		
	3	5	0	0	5		
		121	0	49	72		
296	1	62	0	52	10	40	0.0%
	2	25	0	0	25		
	3	5	0	0	5		
		92	0	52	40		
299	1	71	0	46	25	68	0.0%
	2	41	0	0	41		
	3	2	0	0	2		
		114	0	46	68		
TOTAL		2,180	0	761	1,419	1,743	

Table 21. 2011 Special Permit Areas for Firearms Hunters.

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
900 - Lake Vermilion State Park	1	7	0	0	7	50
	2	1	0	0	1	
		8	0	0	8	
901 - Rice Lake NWR	1	35	0	20	15	40
	2	25	0	0	25	
	3	2	0	0	2	
		62	0	20	42	
902 - Saint Croix State Park	1	429	0	224	205	400
	2	191	0	0	191	
	3	4	0	0	4	
		624	0	224	400	
903 - Savanna Portage State Park	1	29	0	13	16	15
	2	2	0	0	2	
		31	0	13	18	
904 - Gooseberry Falls State Park	1	34	0	18	16	30
	2	13	0	0	13	
	3	1	0	0	1	
		48	0	18	30	
905 - Split Rock Lighthouse State Park	1	22	0	0	22	30
	2	1	0	0	1	
		23	0	0	23	
906 - Tettegouche State Park	1	72	0	0	72	125
	2	5	0	0	5	
	3	1	0	0	1	
		78	0	0	78	
907 - Scenic State Park	1	32	0	3	29	30
	2	1	0	0	1	
	3	1	0	0	1	
		34	0	3	31	
908 - Hayes Lake State Park	1	21	0	0	21	75
		21	0	0	21	
909 - Lake Bemidji State Park	1	39	0	14	25	30
	2	5	0	0	5	
		44	0	14	30	
910 - Zippel Bay State Park	1	50	0	0	50	55
	2	1	0	0	1	
		51	0	0	51	
913 - Lake Carlos State Park	1	30	0	27	3	20
	2	19	0	0	19	
		49	0	27	22	
914 - William O'Brien State Park	1	82	0	49	33	70
	2	38	0	0	38	
		120	0	49	71	
915 - Lake Bronson State Park	1	3	0	0	3	30
		3	0	0	3	

Table 21. (Continued).

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
916 - Maplewood State Park	1	156	0	156	0	100
	2	132	0	132	0	
	3	101	0	38	63	
	4	37	0	0	37	
		426	0	326	100	
917 - Rydell NWR	1	4	0	0		5
	2	1	0	0		
		5	0	0		
918 - Lake Alexander Woods SNA	1	34	0	2	32	40
	2	8	0	0	8	
		42	0	2	40	
919 - Glacial Lakes State Park	1	16	0	0	16	30
	2	10	0	0	10	
		26	0	0	26	
920 - Zumbro Falls SNA	1	21	0	19	2	12
	2	10	0	0	10	
		31	0	19	12	
921 - Frontenac State Park - A	1	58	0	31	27	60
	2	33	0	0	33	
		91	0	31	60	
922 - Whitewater State Park	1	67	0	67	0	50
	2	50	0	3	47	
	3	4	0	0	4	
		121	0	70	51	
923 - Zumbro Falls SNA	1	8	0	0	8	12
	2	2	0	0	2	
		10	0	0	10	
924 - Whitewater State Game Refuge	1	63	0	0	63	75
	2	11	0	0	11	
		74	0	0	74	
925 - Vermillion Highlands Research, Recr	1	62	0	62	0	25
	2	36	0	21	15	
	3	9	0	0	9	
		107	0	83	24	
926 - Carver Park Reserve	1	191	0	191	0	95
	2	128	0	36	92	
	3	1	0	0	1	
	4	1	0	0	1	
	6	1	0	0	1	
		322	0	227	95	
927 - Lake Rebecca Park Reserve	1	116	0	80	36	72
	2	34	0	0	34	
	3	3	0	0	3	
		153	0	80	73	

Table 21. (Continued).

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
928 - Wild River SP	1	170	0	167	3	100
	2	90	0	0	90	
	3	7	0	0	7	
		267	0	167	100	
929 - Frontenac State Park - B	1	42	0	0	42	60
	2	17	0	0	17	
		59	0	0	59	
		2,930	0	909	1,281	1,736

Table 22. 2011 Special Permit Areas for Muzzleloader Hunters.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
935 - Jay Cooke SP	1	94	0	94	0	120
	2	111	0	1	110	
	3	10	0	0	10	
		215	0	95	120	
936 - Crow Wing SP	1	86	0	86	0	40
	2	73	0	73	0	
	3	57	0	21	36	
	4	7	0	0	7	
	223	0	180	43		
937 - Soudan SP	1	13	0	0	13	20
	2	4	0	0	4	
		17	0	0	17	
938 - City of Tower	1	9	0	0	9	15
	2	2	0	0	2	
		11	0	0	11	
939 - Lake Shetek SP	1	27	0	27	0	15
	2	13	0	9	4	
	3	11	0	0	11	
		51	0	36	15	
940 - Lake Maria SP	1	79	0	79	0	25
	2	42	0	25	17	
	3	7	0	0	7	
	4	1	0	0	1	
	129	0	104	25		
941 - Nerstrand Big Woods SP	1	72	0	72	0	50
	2	61	0	41	20	
	3	31	0	0	31	
	4	1	0	0	1	
	165	0	113	52		
942 - Sibley SP	1	51	0	39	12	50
	2	36	0	0	36	
	3	2	0	0	2	
	89	0	39	50		
943 - Myre-Big Island SP	1	51	0	48	3	40
	2	36	0	0	36	
	3	2	0	0	2	
	89	0	48	41		
944 - Vermilion Highlands WMA	1	29	0	28	1	25
	2	23	0	0	23	
	3	1	0	0	1	
	53	0	28	25		
945 - Big Stone Lake SP	1	11	0	11	0	10
	2	11	0	4	7	
	3	3	0	0	3	
	25	0	15	10		
946 - Murphy-Hanrehan Park Reserve	1	165	0	104	61	90
	2	28	0	0	28	
	3	3	0	0	3	
	196	0	104	92		

Table 22. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
947 - Itasca State Park	1	51	0	0	51	125
	2	7	0	0	7	
		58	0	0	58	
TOTAL		1,268	0	734	534	625
GRAND TOTAL		27,884	18	12,106	14,991	18,134

2011 MINNESOTA ELK HARVEST REPORT

Erik Thorson, Acting Big Game Program Coordinator
Joel Huener, Assistant Wildlife Area Manager
Christine Reisz, Acting Area Wildlife Supervisor

INTRODUCTION

A limited number of licenses are offered to Minnesota residents to hunt elk. In 2011, there were 2 established zones; 1) near Grygla, Minnesota, and 2) Kittson County (Figures 1 and 2). Within those 2 zones, there were two regular hunts in each. The early hunt is structured so that it falls within the breeding season when bull elk are most vulnerable and elk can be located by vocalizations. The late season is primarily used as a mechanism to harvest antlerless elk because patterns are more predictable, elk are in larger groups, and snow cover, when present, can aid in locating and tracking animals. In 2011, unsuccessful hunters from the September and December seasons were authorized to hunt in a special January 14-22, 2012 antlerless-only extended season in the Kittson County zone.

METHODS

All elk hunters are required to attend a mandatory orientation and if successful, they must register their animal through the local DNR office. Kill locations are mapped and various data are collected, including age/sex as well as biological samples for disease testing and other monitoring projects.

RESULTS

A total of 13 licenses were available and 687 individuals or parties applied for the opportunity to hunt elk (Table 1). As the number of either-sex licenses is limited, DNR receives an application for the area only. After winners are selected, the time period and license type is distributed through a second random drawing. In 2011, a total of 9 elk were harvested in the both zones (Table 2). Long-term elk harvest for the 2 zones is depicted in Table 3 on pages 3 and 4.

Table 1. License allocation and applications numbers for 2 Minnesota elk hunting zones, 2011.

Zone	Either-Sex	Antlerless	Total	Total Applicants
10 – Grygla	3	2	5	433
20 – Kittson County	2	6	8	254
Total	5	8	13	687

Table 2. Distribution of the 2011 Minnesota elk harvest. License allocation totals represent the actual number sold, not the number authorized through rule.

Grygla Hunt Zone

Season	Either-Sex Licenses	Antlerless Licenses	Bulls taken	Antlerless taken	Total elk taken
September 17 - 25	2	0	1 (6x7)	0	1
December 3 - 11	1	2	1 (7x8)	0	1
Total	3	2	2	0	2

Kittson County Hunt Zone

Season	Either-Sex Licenses	Antlerless Licenses	Bulls taken	Antlerless taken	Total elk taken
September 17 – 25	1	3	1 (7x7)	2	3
December 3- 11	1	3	1 (6x7)	0	1
January 14-22 (extended season)	0	5*	1 (calf)	2	3
Total	2	11	3	4	7

*7 hunters were invited back for a special extended season hunt, 4 with unfilled tags from previous Kittson County hunts and 3 were hunters with unfilled tags from September & December from the Grygla hunt zone, however only 5 parties actually participated in this hunt, of which two were from Grygla and three were from Kittson County.

Table 3. Grygla and Kittson County elk harvests, 1987-2011.

Grygla

Year	Bulls (or Either-Sex)		Antlerless	
	Permits	Harvest	Permits	Harvest
1987	2	1	2	1
1996	2	2	7 (1 alternate)	6
1997	5 (2 alternate)	1	5 (2 alternate)	2
1998	4 (2 alternate)	2	0	0
2004	1	1	4	2
2005	1	0	4	0
2006	2	2	6	2
2007	0	0	6	6
2008	2	2	10	6
2009	2	3*	12	11
2010	2	1	5	3
2011	3	2	2	0
Total	26	17	63	39

*One bull was a sub-legal spike and was legally tagged as an antlerless animal.

Kittson County (Combined)

Year	Bulls (or Either-Sex)		Antlerless	
	Permits	Harvest	Permits	Harvest
2008	1	1	10	10
2009	12	9*	4	5
2010	1	1	3	3
2011	2	3**	8***	4
Total	16	14*	25	22

*One additional bull (6x7) was wounded but not retrieved in 2009. It was found dead later and is counted in the total.

**One bull was a male calf and was legally tagged as an antlerless animal.

***3 unsuccessful hunters from the Grygla zone were invited to participate in the January extended season in Kittson County, however only 2 participated and were included in the number of antlerless permits issued.

Figure 1. Grygla Hunt Zone.

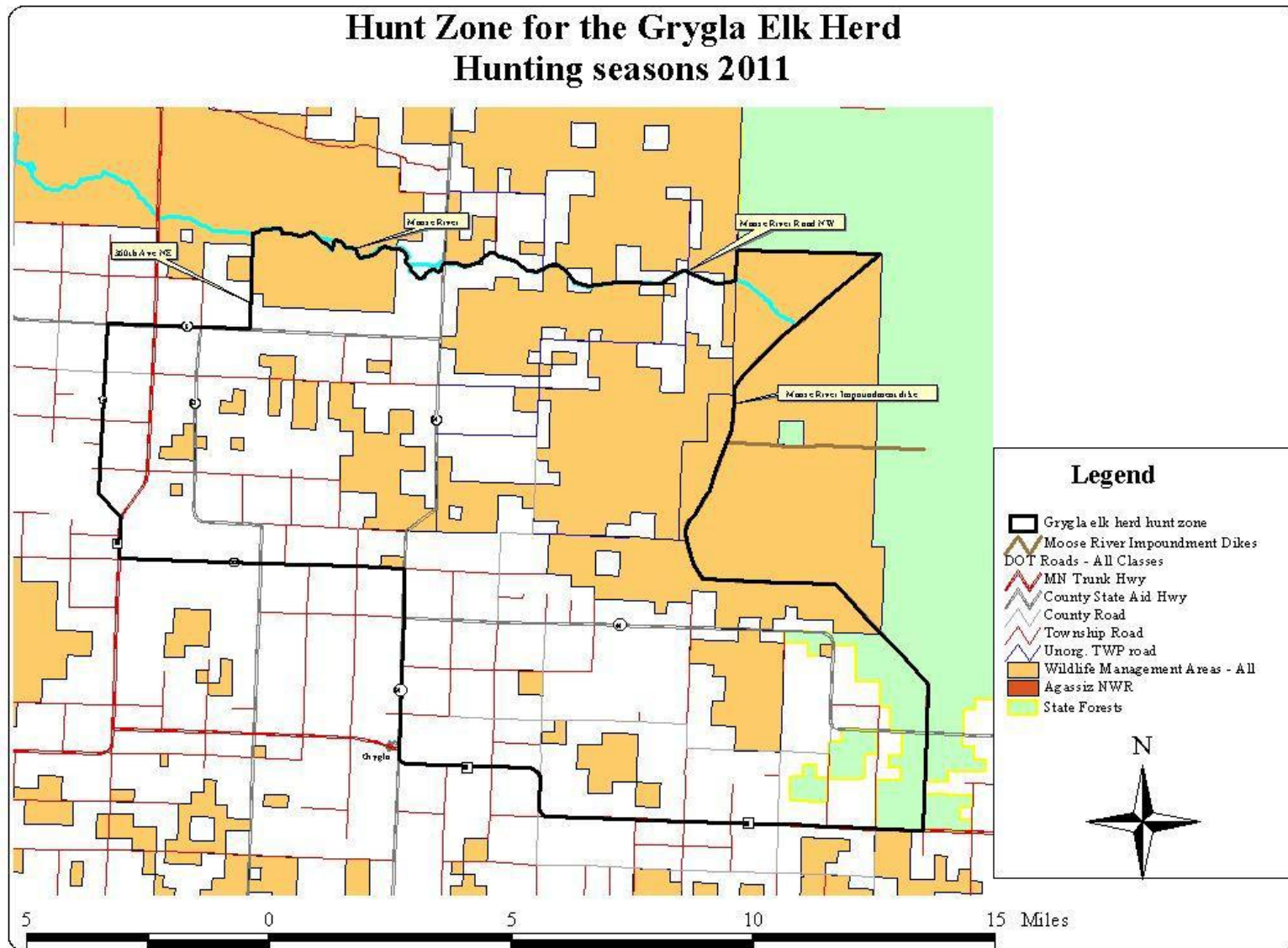
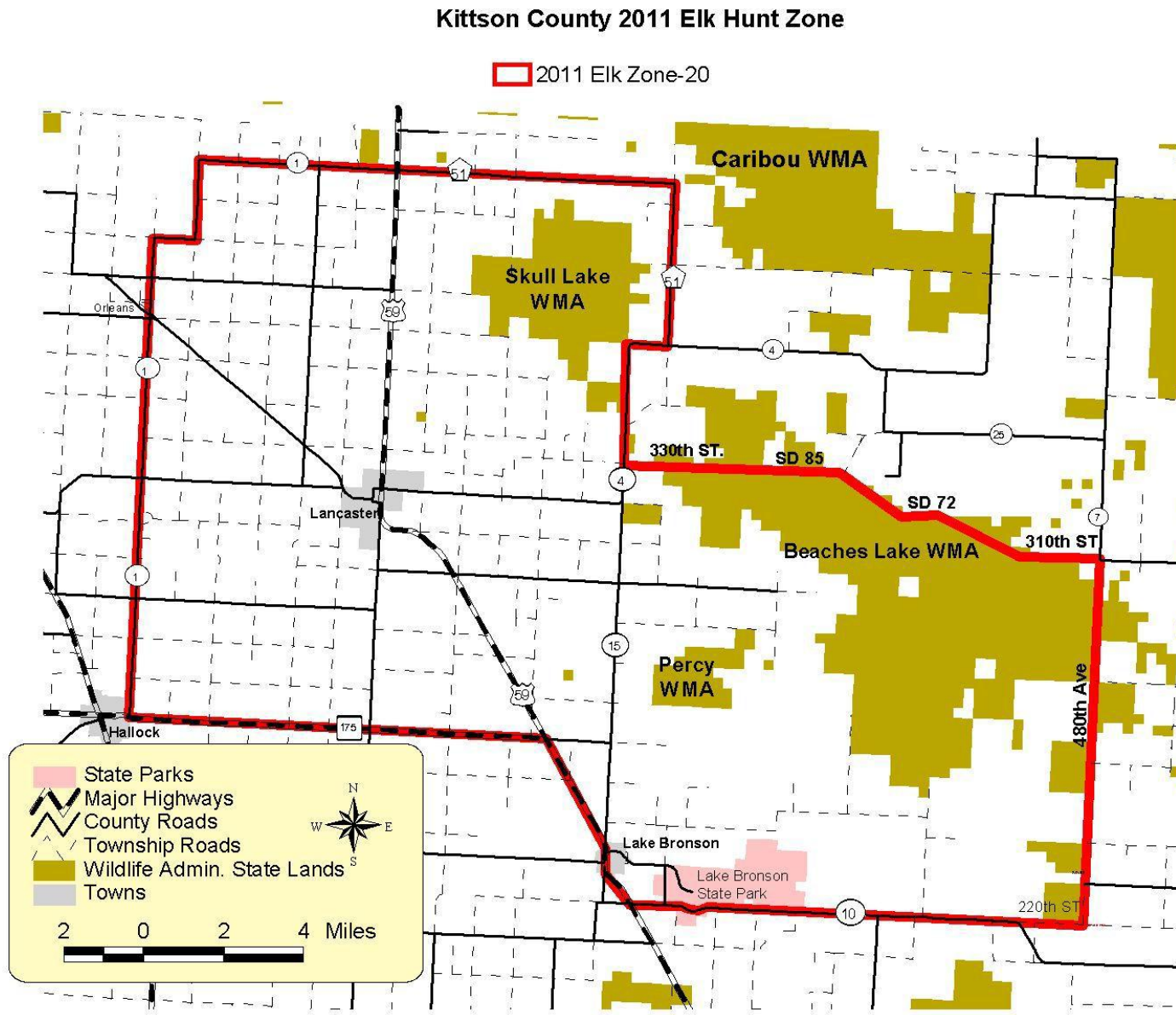


Figure 2. Kittson County Hunt Zone.



2011 MINNESOTA MOOSE HARVEST

Mark S. Lenarz, Forest Wildlife Populations and Research Group

INTRODUCTION

Each year, a limited number of permits are issued that allow Minnesota residents to hunt moose. The following report is intended to document the number of hunters applying for permits, the number of permits issued, a hunting party's chance of receiving a permit, hunter success rate, and a breakdown of the harvest by hunting zone. Information on permit numbers and moose harvested by members of the 1854 Treaty Authority or Fond du Lac band of Lake Superior Chippewa within the 1854 Ceded Territory is also provided.

METHODS

All successful State hunters are required to register their moose at one of 9 registration stations and provide information on the location where they killed their moose and date of kill. Hunters are also requested to collect biological samples from the moose harvested and these are submitted at the registration station.

RESULTS

In 2011, State hunters harvested 53 moose in northeastern Minnesota (Figure 1). No season was held in northwestern Minnesota. Of the 1,963 parties that applied for this year's moose hunt, 105 (5%) were drawn, and 103 purchased licenses (Table 1). Access to portions of hunting zones 20, 22, 23, 24, 25, 26, 61, 62, 63, 64, 77 and 80 were restricted beginning in September because of an ongoing wild fire (Pagami Creek fire) and hunters in these zones were offered the option of returning their license for a refund. Subsequently, 11 hunting parties returned their license. Table 1 also lists the number of permits offered by hunting zone, chance of being selected for a permit, and hunter success. The 1854 Treaty Authority issued 59 permits and band members killed 10 moose (10 bulls and 0 cows). The Fond du Lac band issued 65 permits and the preliminary harvest (as of 10/28/2011) was 17 moose (13 bulls and 4 cows). The Fond du Lac season closes 12/31/2011.

DISCUSSION

The success rate of State hunters in 2011 was 58%, an increase of 7% over 2010 (Tables 1 and 2). This was the fifth year of hunting for bulls only. The success rate for members of the 1854 Treaty Authority was 17%, down 4% from last year. The preliminary success rate for the Fond du Lac band was 26%, as of 10/26/2011, down 6%.

Table 1. Moose harvested, licenses offered and sold, application rate, and party success, in 2011 moose hunt by State hunters in northeastern Minnesota

Zone	Bulls	Licenses Offered	Licenses Sold*	Party Applications**	Chances for Permit	% Success [‡]
20	1	4	2	50	8%	50%
21	2	3	3	64	5%	67%
22	0	2	1	22	9%	0%
23	0	1	1	15	7%	0%
24	1	2	1	86	2%	100%
25	1	2	1	103	2%	100%
26	1	2	2	18	11%	50%
27	3	4	4	24	17%	75%
28	0	2	2	31	6%	0%
29	4	4	4	109	4%	100%
30	3	5	5	131	4%	60%
31	3	6	6	283	2%	50%
32	2	4	4	18	22%	50%
33	1	2	2	41	5%	50%
34	0	2	2	38	5%	0%
36	2	5	5	24	21%	40%
37	2	2	2	11	18%	100%
60	2	3	3	28	11%	67%
61	2	5	5	57	9%	40%
62	3	10	5	176	6%	60%
63	2	4	4	31	13%	50%
64	1	8	5	50	16%	20%
70	4	4	4	104	4%	100%
72	4	4	4	111	4%	100%
73	1	2	2	44	5%	50%
74	1	2	2	55	4%	50%
76	1	3	3	63	5%	33%
77	2	2	2	51	4%	100%
79	2	2	2	31	6%	100%
80	2	4	4	94	4%	50%
Total	53	105	92	1963	5%	58%

* 11 Parties returned their license prior to the hunt because of access restrictions caused by Pagami Creek fire.

** Number of 2, 3, or 4 person parties minus rejected applications.

[‡] Success based on licenses sold.

Table 2. Applicants, permit numbers, moose harvested, and success rates of State moose hunters in northeastern Minnesota since 1993.

Year	Party Applicants*	Permits	Licenses Purchased**	Moose Harvested	Party Success
1993	2,934	315	315	264	84%
1994	3,022	189	189	155	82%
1995	3,181	188	188	156	83%
1996	3,830	207	207	156	75%
1997	3,958	198	198	152	77%
1998	4,157	182	182	125	69%
1999	3,919	189	189	136	72%
2000			No Season		
2001	3,164	182	176	125	71%
2002	2,580	208	202	141	70%
2003	2,328	224	217	144	66%
2004	3,062	246	240	151	63%
2005	3,060	284	276	164	59%
2006	2,952	279	269	161	60%
2007	2,566	233	229	115	50%
2008	2,706	247	245	110	45%
2009	2,746	225	223	103	46%
2010	2,415	213	212	109	51%
2011	1,963	105	92	53	58%

* Number of 2, 3, or 4 person parties minus rejected applications.

** In 2011 - 11 parties returned their licenses because access to portions of their hunting zone was restricted.

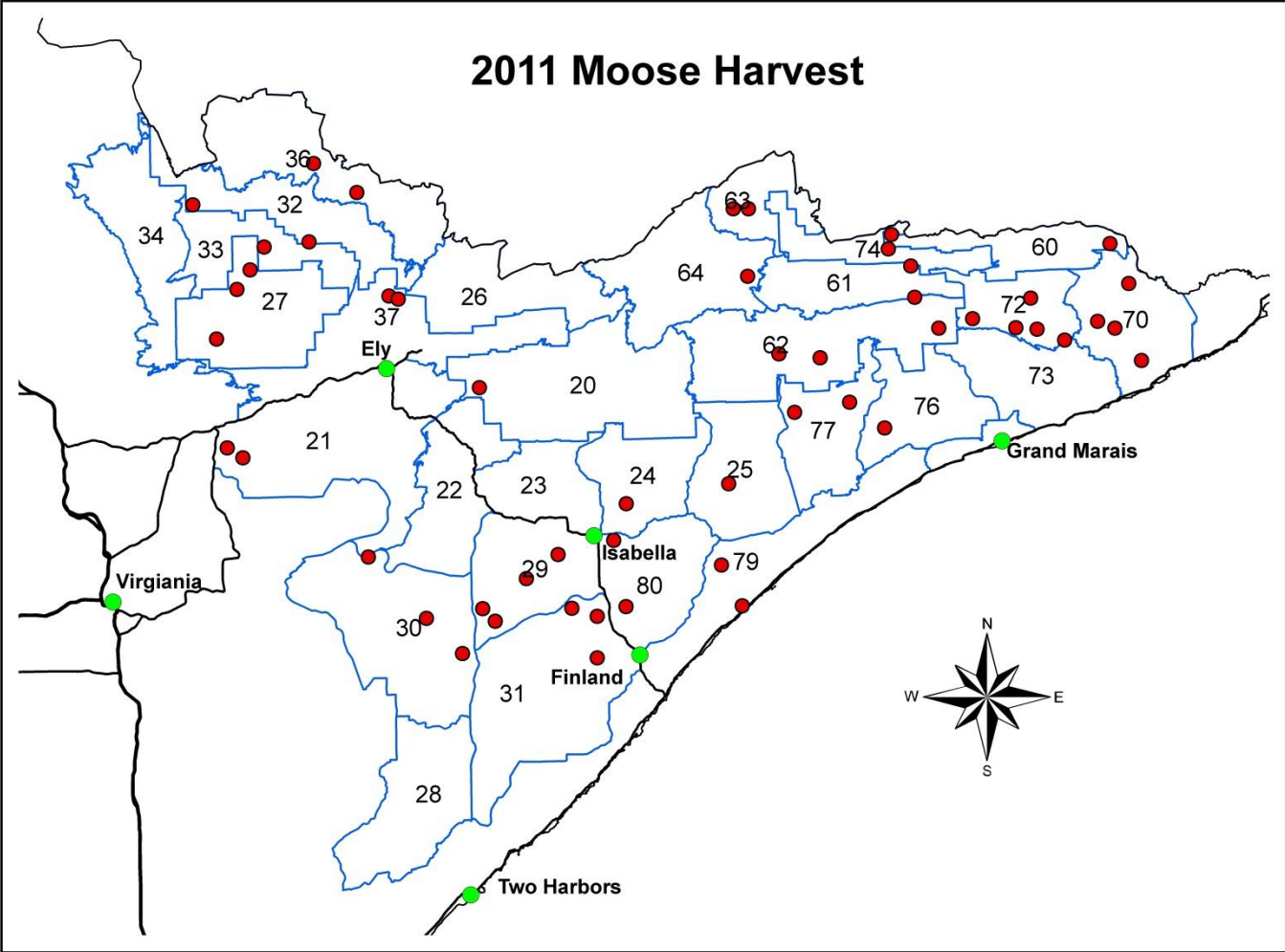


Figure 1. Moose harvest by permit area, 2011

MINNESOTA SANDHILL CRANE HARVEST REPORT, 2011

Margaret Dexter, Wildlife Research Unit

Two distinct populations of sandhill cranes (*Grus Canadensis*) occur in Minnesota. Sandhill cranes that breed and stage during fall in NW Minnesota are part of the Mid-continent population whereas sandhill cranes in the remainder of the state are part of the Eastern population. The Mid-continent population, including cranes in NW Minnesota is managed via a cooperative management plan with the U.S. Fish and Wildlife Service, Mississippi, Central, and Pacific Flyway Councils.

A limited season for Mid-continent sandhill cranes was opened in Minnesota's Northwest Goose Zone (Figure 1) beginning in 2010. The season was open from the first Saturday in September through the second Sunday in October (4 Sep – 10 Oct 2010 and 3 Sep – 9 Oct 2011). The bag limit was 2 per day and 4 in possession. Hunters were required to purchase a \$3.00 sandhill crane permit. A sample of sandhill crane permit holders were selected to receive a harvest survey from the U.S. Fish and Wildlife Service after the season. This survey is used to monitor harvest levels and hunting activity (Table 1).

LITERATURE CITED

- Central Flyway Webless Migratory Bird Technical Committee. 2006. Management Guidelines for the Mid-Continent Population of Sandhill Cranes. Special Report in files of the Central Flyway Representative. Denver, Colorado.
- Kruse, K.L., J.A. Dubovsky, and T.R. Cooper. 2012. Status and harvests of sandhill cranes:Mid-Continent, Rocky Mountain, Lower Colorado River Valley and Eastern Populations. Administrative Report, U.S. Fish and Wildlife Service, Denver, Colorado. 14pp.)
<http://www.fws.gov/migratorybirds/NewReportsPublications/PopulationStatus.html>

Table 1. Sandhill crane permit sales, estimated number of active hunters and harvest for NW Minnesota, 2010-2011. (Kruse, K.L. et al. 2012).

Year	Number of Permits	Active Hunters	Harvest
2010	1,962	964	830
2011	1,342	643	765

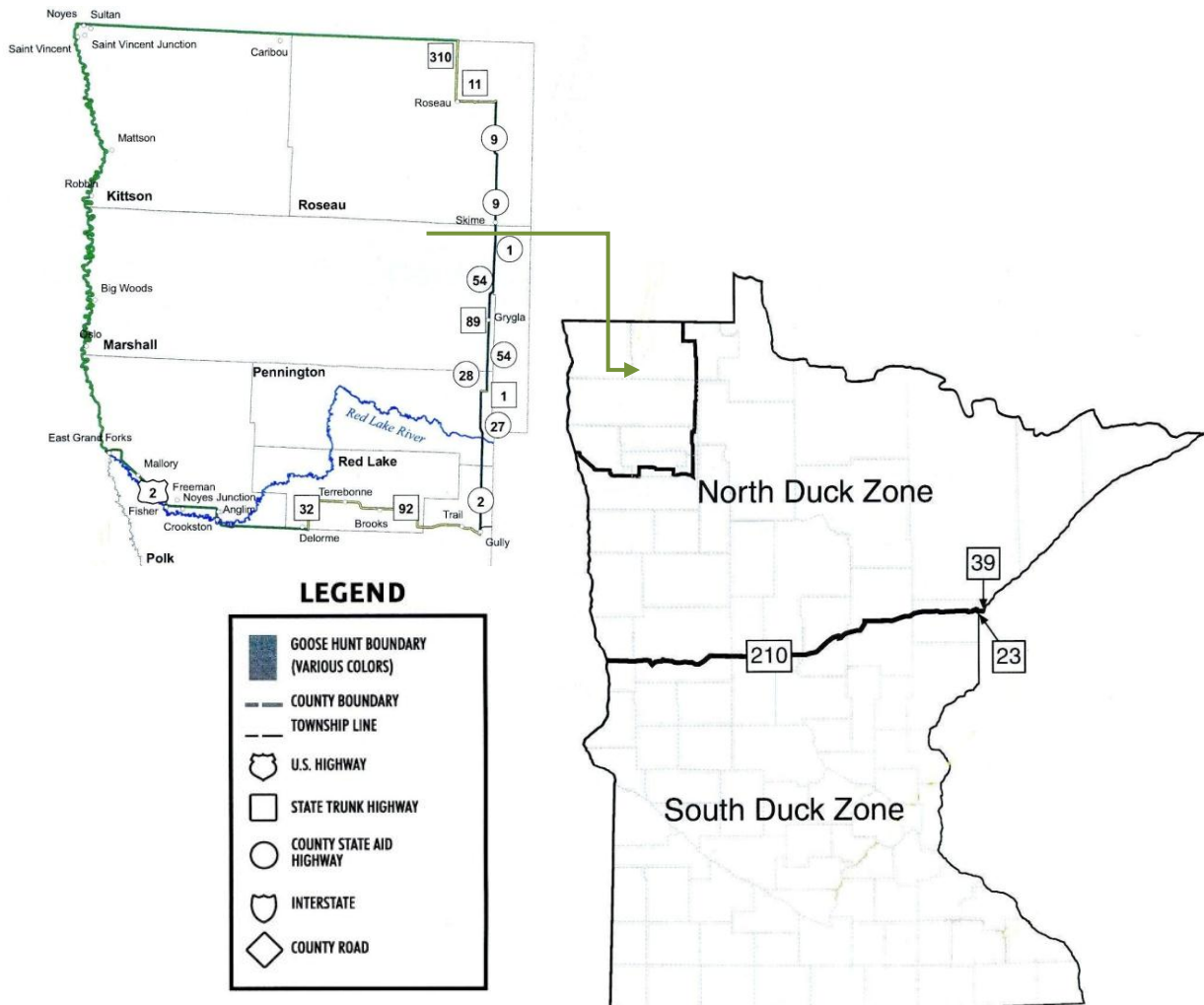


Figure 1. Sandhill crane hunting zone in Minnesota, 2010-2011.