HUNTING HARVEST STATISTICS

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2012 SMALL GAME HUNTER MAIL SURVEY

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INTRODUCTION

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

METHODS

A postcard survey (Figure 1) was mailed in early March and respondents who returned it within three weeks were eliminated from follow-up mailings. In past years there were up to 4 mailings (initial and up to 3 follow-up mailings to non-respondents). After examination of mailing responses over the years it was determined that the majority of responses were received during the first two mailings. Therefore, the number of mailings was reduced to one initial and one follow-up to non-respondents this year. The size of the initial mailing was increased to maintain overall sample size.

The sampling frame consisted of individuals who purchased a small game hunting license (any type) for the 2012 small game hunting season (N= 294,837). A stratified random sample, allocated proportionally by license type (n= 7,000; 2.3%) was drawn from the Minnesota DNR electronic database. License type was used as strata and included the following small game license types: Resident Senior Citizen, Resident Youth, Resident Adult, Resident Individual Sport, Resident Combination Sport, Resident Lifetime, Resident Lifetime Sport, Nonresident Youth, and Nonresident Adult. For analysis, license types were pooled into "Resident" (N= 288,712) and "Nonresident" (N= 6,456) (Figure 2).

Recipients were asked if they hunted small game during the 2012-13 season and if not, they were instructed to return the survey. Respondents who hunted were asked, (1) if they used a Walk-In Access area, (2) the total number of days they hunted small game, (3) the number bagged by species, (4) the number of days hunted by species and (5) the county in which they hunted most for each species listed (Figure 1).

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

RESULTS

Of the 7,000 mailed surveys, 109 were undeliverable; 3,520 were returned for an adjusted response rate of 51%. This mail survey was initiated in 1976 as a means to gather small game harvest information. The response rate was initially very high (average 87% in first 5 years) but has been in a long term decline since the mid-1980s. That trend has been especially apparent

since 2004 and this year's survey marks the lowest response rate ever recorded (Figure 3). This may have been due to the reduced number of mailings (two instead of 4) although typically 80% of returns come during the first two mailings. Response rate is highest among license holders 50 to 70 years old and non-response is highest among the 18-35 year olds (Figure 3). However, the number of license holders who reported they actually hunted has remained steady (Table 1).

Estimated number of hunters showed a mild to moderate increase for ducks, woodcock, ring-necked pheasants, mourning doves and coyotes (Table 2). Success rates for all species were fairly similar to last year as was estimated take per hunter (Tables 3 and 4). License sales increased from the previous year as did pheasant stamp sales and duck stamp sales (Figure 2, Table 5). Total estimated harvest for the top-four small game species in Minnesota is presented in Figure 4. Total estimated harvest for all small game species is presented in Table 5. Duck harvest appears to be the highest since 2003-04 and coyote harvest was the highest ever recorded. Survey results for selected species taken by Non-resident hunters are presented in Table 6.

The Walk-In Access (WIA) program started in 2011 as a 2-year pilot program funded by the U.S. Department of Agriculture Voluntary Public Access Program. The goal of WIA is to provide new hunting opportunities on private land that is already enrolled in existing conservation programs or lands with high quality wildlife cover. In order to estimate use of WIA areas, respondents were asked if they hunted a Minnesota WIA area. Twenty five percent of respondents indicated they used Walk-In Access areas (Figure 5), which when expanded indicates that an estimated 62,500 small game hunters took advantage of Walk-In Access areas

Note that all estimates were based on a survey of approximately 2% of all small game license holders.

2012 Small Game Hunter Report

1. Did you hunt small game, listed below, in Minnesota this year (March 2012 - Feb 2013)? ☐No ☐Yes (Please check box)
2. Did you hunt a Minnesota Walk-In Access area? ☐No ☐Yes
3. Indicate the **total number of days** spent hunting small game of all species listed below, in Minnesota. _____
4. For the species you hunted indicate your harvest, number of days hunted, and county in which you hunted most for each species, even if **None** were bagged. Report only game **you personally** bagged and retrieved in Minnesota. **Do not** include birds taken on shooting preserves or game farms.

		Number You bagged	Days Hunted	County
Ducks (all species)	01			
Coots (mud hens)	50			
Canada geese	40			
Other geese	41			
Snipe (jacksnipe)	51			
Rails and gallinules	52			
Crows	53			
Woodcock	60			
Mourning Dove	65			
Pheasants	70			
Ruffed grouse (Forest partridge)	71			
Spruce grouse	72			
Sharp-tailed grouse	73			
Hungarian (Gray) partridge	74			
Fox squirrel	89			
Gray squirrel	90			
Cottontail rabbit	91			
Jackrabbit	92			
Snowshoe hare	93			
Badger	35			
Coyote (brush wolf)	97			
Gray fox	96			
Raccoon	94			
Red fox	95			

Dear Small Game Hunter:

You have been selected at random from among Minnesota's small game hunting license buyers to assist us in evaluating the 2012-2013 small game hunting season **(March 2012-February 2013)**. We need information to estimate the season's harvest and to help set future small game seasons. Answer only for your Minnesota 2012 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 1. Sample of Small Game Hunter survey card.

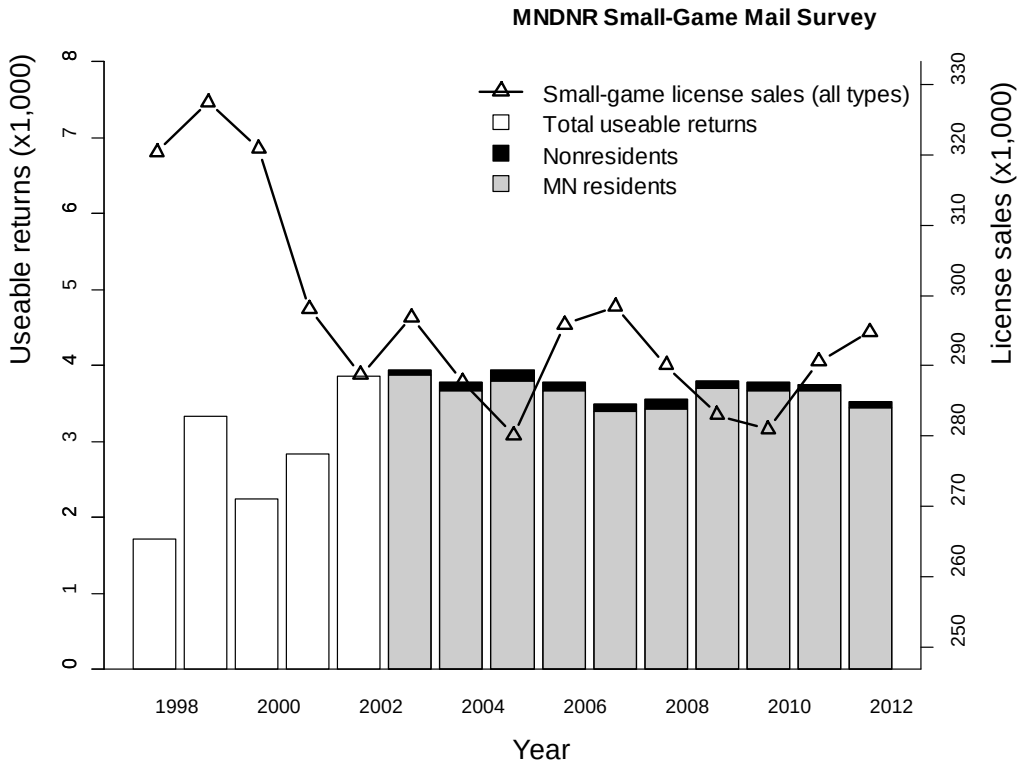
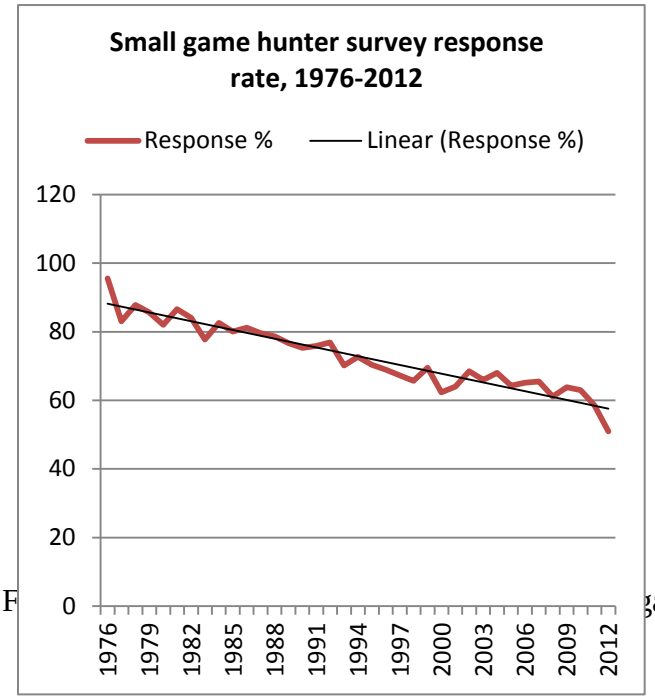
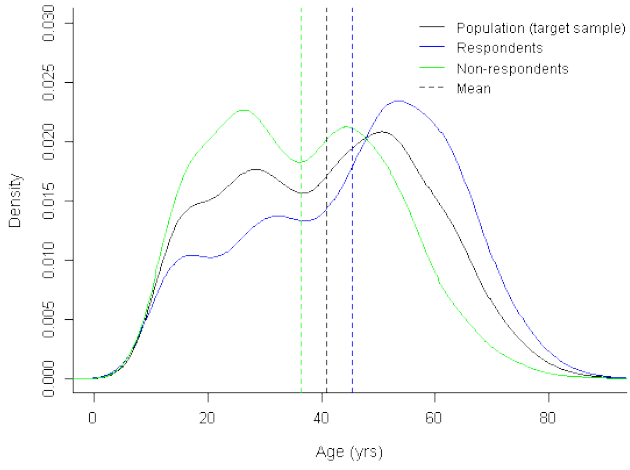


Figure 2. Number of Minnesota small game license sold and usable returned surveys, 1998-2012. Includes resident and non-resident licenses, and excludes duplicate licenses





F ame survey 2012.

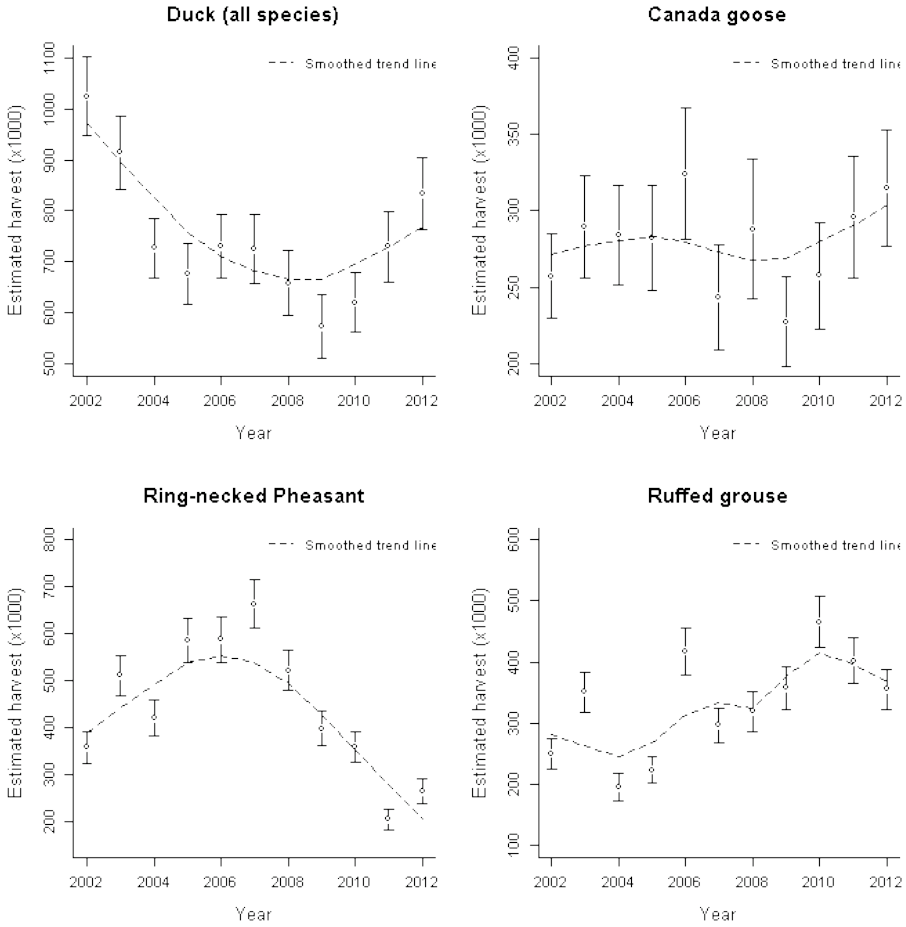


Figure 4. Summary of top four small game species harvested in Minnesota 2002-2012.

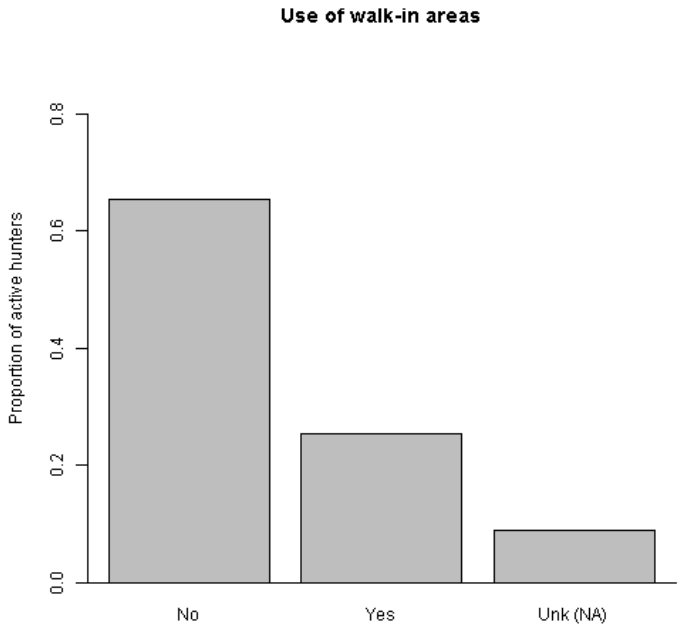


Figure 5. Propoı ıs in Minnesota, 2012.

Table 1. Percent of respondents who hunted small game, 2003-04 through 2012-2013 [a].

		Returns from mail survey	Projections from license sales
2003-04	Hunted	3,085 (78.2%)	232,206
	Did not hunt	862 (21.8%)	64,733
		3,947 (100.0%)	296,939
2004-05	Hunted	2,934 (77.6%)	223,275
	Did not hunt	847 (22.4%)	64,450
		3,781 (100.0%)	287,725
2005-06	Hunted	3,035 (77.1%)	216,000
	Did not hunt	900 (22.9%)	64,156
		3,935 (100.0%)	280,156
2006-07	Hunted	2,994 (79.0%)	233,759
	Did not hunt	795 (21.0%)	62,139
		3,789 (100.0%)	295,898
2007-08	Hunted	2,894 (77.9%)	232,505
	Did not hunt	822 (22.1%)	65,961
		3,716 (100.0%)	298,467
2008-09	Hunted	2,678 (75.4%)	218,753
	Did not hunt	873 (24.6%)	71,311
		3,551 (100.0%)	290,064
2009-10	Hunted	2,850 (75.0%)	212,126
	Did not hunt	952 (25.0%)	70,857
		3,802 (100.0%)	282,983
2010-11	Hunted	2,824 (74.8%)	210,129
	Did not hunt	953 (25.2%)	70,911
		3,777 (100.0%)	281,040
2011-12	Hunted	2,761 (73.7%)	214,137
	Did not hunt	987 (26.3%)	76,549
		3,748 (100.0%)	290,686
2012-13	Hunted	2,669 (76%)	223,808
	Did not hunt	851 (24%)	71,360
		3,520 (100%)	295,168

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

Table 2. Estimated number of statewide hunters by species, 2000-01 through 2012-13.

	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Ducks	109,008	109,241	111,619	101,487	104,634	92,634	87,075	87,468	81,358	77,705	72,772	83,450	90,400
Canada goose	76,518	76,322	78,574	74,855	74,728	69,416	66,224	62,649	59,222	55,599	53,426	61,190	64,990
Other geese	6,834	6,502	5,981	7,373	5,327	4,628	4,529	3,695	4,411	3,275	3,647	3,020	4,110
American coot	3,809	3,901	4,411	3,912	5,099	4,129	4,529	3,454	4,166	4,094	4,614	4,580	4,700
Common snipe	2,241	1,382	2,243	1,429	1,902	1,210	2,187	1,928	1,797	1,340	1,340	1,240	1,260
Rails / gallinules	336	406	673	150	228	0	547	482	408	372	224	230	590
Crow *	14,004	11,542	12,859	12,263	12,404	11,890	10,777	8,514	10,047	10,643	9,376	11,170	12,660
American woodcock	15,909	11,542	11,962	12,789	12,023	11,035	13,510	10,843	12,171	11,834	10,790	10,080	14,000
Mourning dove γ					15,524	11,107	12,886	13,172	11,599	10,495	10,641	10,000	10,730
Ring-necked pheasant	100,045	84,694	91,284	105,023	104,406	110,852	118,703	118,311	106,763	99,811	89,142	77,640	84,270
Ruffed grouse	120,547	101,194	90,686	93,513	79,141	76,037	91,682	90,600	86,505	87,530	92,490	93,840	97,190
Spruce grouse	9,411	8,778	7,327	8,727	7,305	7,048	9,840	10,602	8,332	9,825	8,855	10,860	8,300
Sharp-tailed grouse	9,747	8,372	6,355	6,921	6,164	4,913	6,560	6,827	6,616	5,582	7,144	6,590	7,300
Gray partridge	7,842	6,828	6,579	7,975	5,327	6,265	6,013	6,667	4,411	4,243	3,721	2,480	3,270
Gray squirrel	26,664	26,010	25,494	29,190	23,438	24,563	25,459	25,863	22,382	22,255	23,737	26,680	29,350
Fox squirrel	16,693	15,281	14,878	19,936	15,372	15,094	15,619	14,779	13,233	13,174	15,626	13,810	16,770
Eastern cottontail	19,830	17,150	15,700	21,441	18,644	20,148	20,070	19,598	17,644	16,300	15,031	13,730	18,620
White-tailed jackrabbit	2,465	3,251	2,467	3,009	3,044	2,065	2,577	2,891	2,451	1,786	2,233	2,640	2,520
Snowshoe hare	5,154	6,502	5,682	5,567	4,338	3,346	5,545	4,257	4,574	3,498	3,795	3,650	5,450
Raccoon (Sept - Feb)	6,498	6,340	5,981	5,868	6,316	4,841	8,747	9,558	7,433	7,294	8,260	8,920	9,730
Raccoon‡ (March -Aug)	4,593	4,145	3,589	4,589	3,348	2,705							
Red fox (Sept -Feb)	10,083	5,608	7,476	7,222	5,783	5,980	6,248	5,783	5,800	7,815	7,218	6,130	6,460
Red fox‡ (March -Aug)	1,905	2,682	2,243	2,182	1,370	1,282							
Gray fox	1,344	1,544	1,271	1,505	1,674	997	2,030	1,928	1,879	1,786	1,637	1,400	2,010
Coyote	15,797	10,648	12,261	15,122	16,133	18,653	17,024	16,064	19,278	19,426	19,421	19,240	22,470
Badger	672	406	748	451	533	783	859	482	490	372	596	390	340

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

Table 3. Estimated harvest per hunter, for respondents reporting that they hunted a particular species, 2000-01 through 2012-13.

	Estimated take per hunter												
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Ducks	8.9	9.1	9.2	9.0	6.9	7.3	8.4	8.1	8.1	7.4	8.5	8.8	9.2
Canada geese	3.9	4.0	3.3	3.9	3.8	4.1	4.9	3.9	4.9	4.1	4.8	4.8	4.9
Other geese	2.2	1.2	1.9	1.7	1.5	1.9	1.5	2.1	3.2	1.9	1.1	2.2	2.2
American coot	2.7	4.5	4.6	2.8	4.0	3.9	5.6	4.6	5.7	3.6	5.7	3.2	3.8
Common snipe	1.3	1.3	1.5	1.8	1.1	4.4	1.9	2.0	1.2	1.1	1.4	1.2	1.1
Rails/gallinules	3.7	0.6	2.6	0.5	0.3	0	2.4	5.3	0.4	0.8	0.3	1.7	0.3
Crow *	6.9	7.7	5.6	6.7	5.8	7.8	6.4	6.4	5.2	5.3	6.1	7.4	7.5
American woodcock	2.8	2.3	2.4	2.4	3.5	2.5	3.2	2.6	2.4	3.0	2.8	2.6	2.3
Mourning dove [γ]					6.2	7	6.7	7.7	11.4	10.5	9.4	7.8	9.0
Ring-necked pheasant	3.7	3.2	3.9	4.9	4.0	5.3	4.9	5.5	4.9	4.0	4.0	2.6	3.1
Ruffed grouse	5.1	3.3	2.8	3.8	2.5	2.9	4.5	3.2	3.7	4.1	5.0	4.3	3.7
Spruce grouse	2.5	1.1	1.6	2.1	1.3	1.4	2.7	1.7	2.0	1.9	1.7	1.8	1.5
Sharp-tailed grouse	1.6	1.2	1.3	1.7	1.7	1.3	1.8	2.0	2.1	1.7	2.4	1.8	1.6
Gray partridge	2.1	1.5	1.7	2.8	2.4	2.6	1.9	1.6	2.2	1.9	2.5	1.7	1.8
Gray squirrel	5.3	5.6	5.2	6.0	5.7	5.0	5.5	5.2	5.4	4.9	5.9	4.9	4.7
Fox squirrel	3.9	4.1	4.5	4.2	4.1	4.1	4.2	3.2	3.9	4.1	3.9	3.7	3.4
Eastern cottontail	3.9	3.6	3.3	4.3	4.6	4.5	3.9	4.0	4.5	3.5	3.6	2.8	3.6
White-tailed jackrabbit	2.8	2.6	1.6	2.4	2.3	2.7	1.6	3.3	2.6	1.5	3.2	2.1	1.1
Snowshoe hare	5.2	3.3	1.9	2.2	1.8	3.1	3.0	1.4	2.5	1.5	1.8	2.7	3.2
Raccoon (Sept - Feb)	7.6	9.4	10.0	8.5	9.0	6.0	7.2	4.9	9.7	9.1	9.4	6.0	5.3
Raccoon[‡] (March -Aug)	7.8	4.4	5.4	4.7	6.1	2.7							
Red fox (Sept -Feb)	1.9	1.2	1.5	1.8	1.1	1.7	1.3	1.1	0.8	1.3	1.2	1.2	1.3
Red fox[‡] (March -Aug)	0.9	1.5	1.7	0.6	0.6	0.9							
Gray fox	0.7	0.4	0.4	0.4	1.1	0.9	1.8	0.3	1.3	1.0	1.5	0.8	0.2
Coyote	1.8	1.1	1.2	1.3	1.1	2.1	1.2	2.1	2.4	2.4	2.3	1.8	2.4
Badger	0.8	0.6	1.7	0.7	1.0	1.2	1.3	0.3	1.0	2.0	1.0	0.8	1.0

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

Table 4. Mean harvest for successful hunters and hunter success rates (%), 2002-03 through 2012-13.

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
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)	10.6 (87)
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)	6.3 (77)
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)	4.2 (53)
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)	4.8 (80)
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)	2.1 (53)
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)	1.0 (29)
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)	8.4 (90)
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)	3.3 (68)
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)	11.6 (77)
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)	4.8 (66)
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)	5.2 (70)
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)	2.8 (54)
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)	3.3 (49)
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)	3.4 (54)
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)	6.0 (77)
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)	4.3 (79)
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)	5.2 (69)
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)	1.9 (60)
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)	4.7 (68)
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)	5.8 (92)
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)	2.6 (51)
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)	1.0 (21)
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)	4.9 (49)
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)	1.0 (100)

[‡] 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 5. Statewide (resident and non-resident) small game hunting license sales and estimated hunter harvest, 2001-02 through 2012-13.

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Small game license sales [a]	298,055	288,729	296,939	287,725	280,156	295,898	298,467	290,064	282,983	300,624	290,686	295,168
State duck stamp sales	118,590	119,677	118,757	114,003	102,143	101,792	100,134	95,675	89,942	88,069	89,681	90,052
Pheasant stamp sales	97,665	102,097	121,456	114,653	117,301	129,546	129,315	123,270	110,456	104,286	86,868	90,541
Estimated harvest [b]												
Ducks	989,723	1,024,662	914,398	727,206	676,741	730,559	708,491	658,186	576,571	619,604	730,370	834,950
Canada geese	308,341	256,937	289,689	284,714	281,829	324,498	243,705	288,411	229,068	257,532	296,040	315,380
Other geese	7,867	11,125	12,755	8,150	9,025	6,658	7,723	13,895	6,255	3,945	6,750	9,060
American coot	17,554	20,114	10,993	20,345	15,938	24,909	16,061	23,871	14,820	26,345	14,740	18,030
Common snipe	1,783	3,432	2,558	2,130	5,336	4,221	3,933	2,210	1,487	1,936	1,470	1,430
Rails / gallinules	244	1,723	75	75	0	1,329	2,569	163	298	75	390	170
Crow	84,412	71,753	82,285	71,943	92,742	69,188	54,319	51,742	56,301	57,298	82,990	95,430
American woodcock	26,662	28,230	30,438	41,479	27,919	39,907	27,866	29,210	35,384	29,766	25,980	31,610
Mourning dove [d]				96,559	77,749	85,950	101,161	132,577	109,988	100,234	77,790	96,520
Ring-necked pheasant	266,786	357,833	511,462	419,712	585,299	587,580	655,443	522,071	400,242	359,396	204,440	264,310
Ruffed grouse	331,916	249,386	350,674	194,687	224,309	417,153	293,544	318,338	357,998	465,576	401,280	355,130
Spruce grouse	9,480	11,943	18,327	9,204	10,079	26,568	17,705	16,997	19,159	14,957	19,470	12,240
Sharp-tailed grouse	9,795	8,516	11,835	10,417	6,387	11,939	13,790	13,695	9,545	16,819	12,020	11,820
Gray partridge	10,174	10,921	22,250	12,572	16,289	11,545	11,000	9,660	8,019	9,154	4,110	6,040
Gray squirrel	145,916	133,589	174,848	132,659	122,078	140,788	133,194	121,534	109,717	138,925	129,600	137,280
Fox squirrel	62,958	67,100	84,529	62,410	62,187	66,068	47,736	51,079	54,013	61,686	51,580	56,850
Eastern cottontail	62,426	51,967	93,054	86,508	90,062	77,872	78,588	79,927	57,702	53,874	38,780	67,000
White-tailed jack rabbit	8,453	4,046	7,161	6,940	5,493	4,149	9,482	6,446	2,608	7,221	5,430	2,850
Snowshoe hare	21,717	10,909	11,969	7,895	10,406	16,801	5,789	11,343	5,352	6,772	9,700	17,280
Raccoon (Sept -Feb)	59,279	60,049	49,878	56,970	29,191	62,891	46,739	72,026	66,667	77,689	53,910	51,660
Raccoon [c] (Mar –Aug)	18,362	19,524	21,752	20,456	7,331							
Red fox (Sept –Feb)	6,842	11,438	13,000	6,072	10,166	7,872	6,188	4,408	10,238	8,781	7,140	8,470
Red fox [c] (Mar –Aug)	4,077	3,746	1,287	836	1,141							
Gray fox	571	521	602	1,758	927	3,593	559	2,443	1,857	2,382	1,160	420
Coyote	12,032	14,223	19,961	18,230	38,612	20,769	34,377	45,689	46,234	44,051	33,820	53,750
Badger	244	1,272	302	533	924	1,091	159	490	744	596	310	340

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

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Nonresident licenses issued [a]	5,843	5,852	6,291	6,385	5,897	7,356	7,858	7,114	6,934	6,695	6,312	6,456
Questionnaires:												
Number mailed	124	130	123	182	210	185	185	226	196	163	169	166
Number not delivered	9	9	17	13	10	11	11	15	10	6	11	11
Number (percent) returned	77 (67)	75 (66)	68 (64)	114 (67)	134 (67)	115 (62)	101 (58)	89 (42)	105 (54)	107 (66)	91 (54)	71 (43)
Estimated nonresidents and (percent) of all licensed nonresidents hunting:												
Ducks	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)	2,360 (36.6)
Canada goose	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)	1,360 (21.1)
Ruffed grouse	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)	2,820 (43.7)
Ring-necked pheasant	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)	1,910 (29.6)
Raccoon	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)	0 (0)
Estimated nonresident take:												
Ducks	42,225	17,556	17,855	19,269	12,149	12,173	22,718	15,463	11,755	17,055	13,840	20,380
Canada goose	13,400	5,852	5,736	6,214	3,946	3,580	3,501	5,762	3,698	6,334	4,050	2,270
Ruffed grouse	6,622	9,207	9,437	7,924	6,429	11,522	7,236	6,938	8,651	12,600	8,980	10,090
Ring-necked pheasant	3,740	7,647	9,344	11,174	13,656	16,079	17,661	10,642	6,274	8,076	4,860	6,820
Raccoon [b]	0	0	0	0	887	0	3,268	0	0	593	0	0

[a] Excludes duplicate licenses and nonresident shooting preserve licenses.

[b] In 2001, 2002, 2003, 2004, 2006, 2008, 2009, 2011 and 2012 no non-residents reported hunting/harvesting raccoons.

Raccoon take per hunter			
Year	Resident	Non-resident	Number of Non-resident raccoon licenses
2000	8	13	51
2001[b]	10	0	48
2002[b]	11	0	46
2003[b]	10	0	44
2004[b]	8	0	46
2005	6	20	44
2006[b]	8	0	53
2007	5	42	45
2008[b]	10	0	40
2009[b]	10	0	33
2010	9.4	9.4	42
2011[b]	6.7	0	34
2012[b]	5.8	0	52

The following information has been excerpted from: U.S. Fish and Wildlife Service. Migratory bird hunting activity and harvest during the 2011 and 2012 and 2012-13 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, 2011 and 2012. (from: Raftovich, R.V., K.A. Wilkins. 2013. Migratory Bird Hunting activity and harvest during the 2011-12 and 2012-13 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland. USA July 2013. 64 pp).

	Minnesota Harvest					**Mississippi Flyway Harvest**		
Species	2011	% of Harvest	2012	% of Harvest	Percent change in Harvest 11-12	2011	2012	Percent change Harvest 11-12
Mallard	180,515	29.07	197,316	26.33	9	2,240,248	1,882,553	-19
Domestic mallard	0	0	0	0	0	3,398	647	-425
American black duck	491	0.08	587	0.08	16	21,992	20,688	-6
Black x mallard	491	0.08	587	0.08	16	5,068	2,074	-144
Gadwall	8,339	1.34	18,792	2.51	56	1,474,405	1,240,234	-19
American wigeon	5,396	0.87	9,983	1.33	46	136,779	137,133	0
Green-winged teal	36,790	5.92	56,376	7.52	35	1,001,902	932,461	-7
Blue-winged /cinnamon teal	89,767	14.45	123,322	16.46	27	704,647	932,096	+24
Northern shoveler	15,697	2.53	15,856	2.12	1	375,918	391,133	+4
Northern pintail	7,848	1.26	5,285	0.71	-48	212,499	156,593	-36
Wood duck	150,593	24.25	184,396	24.61	18	928,178	780,024	-19
Redhead	18,640	3.00	22,315	2.98	16	155,227	99,179	-57
Canvasback	9,811	1.58	4,111	0.55	-66	68,358	52,081	-31
Greater scaup	1,962	0.32	2,936	0.39	33	33,680	40,968	+18
Lesser scaup	5,396	0.87	17,617	2.35	69	114,903	307,579	+63
Ring-necked duck	63,278	10.19	75,755	10.11	16	260,061	324,658	+20
Goldeneye	9,320	1.50	4,111	0.55	-127	39,306	26,055	-51
Bufflehead	7,358	1.18	3,523	0.47	-109	78,145	67,418	-16
Ruddy duck	1,962	0.32	2,349	0.31	16	21,717	20,443	-6
Scoters	0	0	0	0	0	6,014	3,989	-51
Hooded merganser	6,377	1.03	4,111	0.55	-55	53,766	45,886	-17
Other mergansers	981	0.16	0	0	0	13,368	7,214	-85
Total Duck Harvest (retrieved kill)	621,000 ±11%		749,300 ±13%		+ 17	8,000,100 ±6%	7,522,700 ±5%	-6

[d] Sum of all species does not equal total because of rounding error.

Table 2. Top 10 states in number of **adult duck hunters**, 2012, and number of hunter-days and retrieved duck kill, . (from: Raftovich, R.V., K.A. Wilkins. 2013. Migratory Bird Hunting activity and harvest during the 2011-12 and 2012-13 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland. USA July 2013. 64 pp).

State	Number of active duck hunters	Duck hunter days afield	Total duck harvest	Seasonal duck harvest per hunter
Louisiana	103,600 ± 5%	916,300 ± 8%	2,762,700 ± 8%	26.7 ± 10%
Minnesota	77,700 ± 9%	503,200 ± 12%	749,300 ± 13%	9.6 ± 16%
Texas	74,700 ± 21%	513,800 ± 41%	1,491,600± 46%	20.0 ± 51%
Arkansas	57,300 ± 9%	472,000 ± 11%	1,328,700 ± 13%	23.2 ± 16%
California	51,900 ± 10%	554,000 ± 17%	1,587,500 ± 21%	30.6 ± 23%
Wisconsin	47,800 ± 12%	309,800 ± 15%	350,700 ± 11%	7.3 ± 17%
North Carolina	39,400 ± 15%	227,800 ± 21%	394,400 ± 18%	10.0 ± 24%
Michigan	37,200 ± 11%	229,900 ± 16%	320,200 ± 15%	8.6 ± 18%
Missouri	35,400 ± 13%	213,600 ± 19%	445,000 ± 24%	12.6 ± 27%
North Dakota	31,400 ± 6%	160,200 ± 9%	459,300 ± 9%	14.6 ± 11%
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**, 2012, and number of hunter-days and retrieved goose kill, in . (from: Raftovich, R.V., K.A. Wilkins. 2013. Migratory Bird Hunting activity and harvest during the 2011-12 and 2012-13 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland. USA July 2013. 64 pp).

State	Number of active goose hunters	Goose hunter days afield	Total goose harvest	Seasonal goose harvest per hunter
Minnesota	58,900 ± 10%	355,400 ± 14%	236,700 ± 16%	4.0 ± 19%
Wisconsin	36,700 ± 13%	240,300 ± 19%	83,800 ± 17%	2.3 ± 21%
California	32,100 ± 12%	263,300 ± 19%	151,000 ± 18%	4.7 ± 21%
Michigan	31,900 ± 11%	183,300 ± 15%	144,700 ± 18%	4.5 ± 21%
Texas	31,300 ± 25%	83,900 ± 42%	208,400 ± 65%	6.7 ± 70%
Maryland	26,300 ± 7%	166,900 ± 11%	191,400 ± 14%	7.2 ± 16%
Pennsylvania	26,300 ± 16%	119,500 ± 17%	115,700 ± 19%	4.4 ± 25%
North Dakota	25,200 ± 7%	113,200 ± 9%	184,900 ± 16%	7.3 ± 18%
Arkansas	20,300 ± 15%	116,100 ± 20%	116,000 ± 25%	5.7 ± 29%
Illinois	19,600 ± 13%	179,000 ± 21%	100,300 ± 28%	5.1 ± 31%
Mississippi Flyway		1,520,900 ± 7%	1,020,700 ± 7%	
United States [b]		3,458,000 ± 4%	3,191,200 ± 6%	

[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 2012 CANADA GOOSE HUNT IN MINNESOTA

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The September Canada goose season in Minnesota was 1 - 21 September, 2012 (21 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). This season extension is now 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 2012 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, and to determine their willingness to participate in, and regulations preferences for, an August Canada goose season in Minnesota.

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 34,311 Special Canada Goose Season permits were sold prior to 22 September, 2012. Response rate to the survey was 51%. Among those respondents, 75% indicated that they hunted during the September season. Active hunters were afield an average of 4.1 days and retrieved 4.2 geese per hunter. Overall, the success rate for active hunters was 67% (Table 1). The number and percentage of hunters that hunted in each county in Minnesota is presented in Appendix B.

The survey estimates that 25,900 active hunters shot and retrieved 108,300 Canada geese during the 2012 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 2012 retrieved harvest of 91,800 geese.

We asked hunters how many days they hunted overwater and how many days they hunted away from water. A total of 40% of hunters statewide hunted over water, and 31% of all days spent hunting during the September season was overwater. The survey indicates that 26% (SE = 0.19) of the geese harvested in the early season (23,600 total geese) were harvested by hunters overwater.

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. Fourteen percent of September goose hunters reported bagging a limit of geese $\geq$1 time during the September season. Seventy-four percent of hunters reported a zero harvest on at least one day during the September season.

Thirty-eight percent of all geese in the September season were harvested in the first week of the season, followed by 36% in the second week, and 26% harvested the third.

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 5.1, geese bagged 3.9, number of geese seen 4.4, and regulations 5.1.

Landowners and managers in the west central portion of Minnesota are still reporting numerous goose depredation issues. To determine support for, and obtain input concerning possible regulations , we asked a series of questions about an August portion of the early season that is proposed for 2013. Sixty-nine percent of respondents indicated that they would hunt during an August season if one is offered, while 15% indicated they would not hunt. We then asked hunters their preference for an opening date, and 40% preferred to open August 17th, versus 31% that favored an August 3rd opener, and 31% that had no preference.

Twenty-six percent of hunters favored a 5 day split between the end of an August season and the start of the September season, while 31% favored no split, and 43% had no preference.

Thirty-nine percent of hunters preferred that the bag limit during an August season remain at 5, while 16% favored an 8 bird bag, 14% a 10 bird bag, and 8% favored a 15 bird bag. Twenty-four percent of hunters had no preference as to daily bag limit during the August season.

Most hunters indicated that they would not hunt in the August season if it was not held in their local area. The mean distance that hunters indicated that they would be willing to travel to hunt geese in August was 36 miles. However, some respondents indicated they would be willing to travel as far as 250 miles to hunt August geese.

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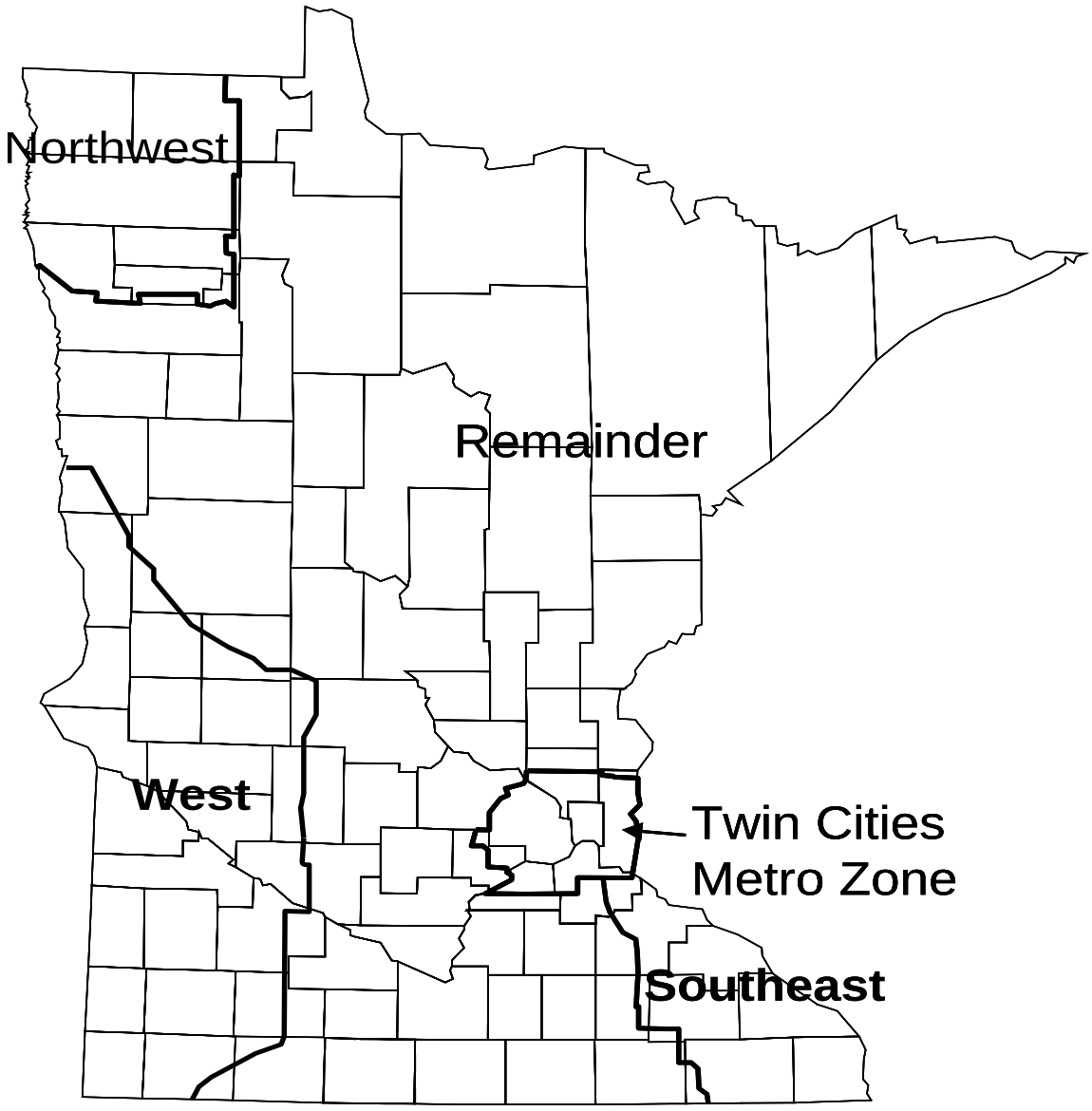

Figure 1. Traditional September season Goose Zones in Minnesota. The West, Twin Cities Metro and Southeast zones are now included in the Remainder zone during the September season.

Table 1. Permit sales, hunter activity, and harvest[a] during the September Canada Goose season (1 – 21 September) in Minnesota, 2012.

Parameter	Total
Total permits sold	34,311
Questionnaires delivered	3,100
Useable questionnaires returned	1,563
% responding	51.2
Active hunters	1,179
% active hunters	75.0
% hunters that were successful	67.0
Days hunted per active hunter	4.1
Geese shot and retrieved per active hunter	4.2
Unretrieved harvest per active hunter	0.47
% unretrieved harvest	0.099
EXPANDED:	
Active hunters	25,900
Hunter days	106,900
Retrieved harvest	**108,300**
Est. unretrieved harvest	12,200
Total harvest	122,900

[a]Harvest 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, 2010-2012.

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
2012						**108,300**	25,900	0.98	4.20

Appendix A. Questions asked on the 2012 September Special Canada Goose Season Hunter Survey.

1. Did you hunt during the September 1-21, 2012 September Canada goose season?
__ Yes __ No (Please check one.)

If NO, please proceed to Question 7.

2. Please indicate the number of days hunted, total harvest of geese, and the County you hunted most during the 2012 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 2012 Canada goose season?
_____Yes
_____No (If No, please proceed to Question 4.)

If Yes:
How many days did you personally hunt overwater? _____
How many geese did you personally shoot while hunting overwater? _____

4. During the 2012 September Canada goose season, about how many days that you hunted geese….
…..did you shoot your daily bag limit of five geese? _____
…..did you shoot 0 geese? _____

5. During the 2012 September Canada goose season, how many geese did you personally harvest during each of the following periods:

First week (Saturday, Sept. 1 – Friday, Sept. 7)? _____
Second week (Saturday, Sept. 8 – Friday, Sept. 14)? _____
Last week (Saturday, Sept. 15 – Friday, Sept. 21)? _____

6. During the 2012 September Canada goose season, how satisfied or dissatisfied were you with the following? (*Please circle one response for each.*)

	Very dissatisfied	Moderately dissatisfied	Slightly Dissatisfied	Neither	Slightly Satisfied	Moderately satisfied	Very satisfied
Goose hunting experience	1	2	3	4	5	6	7
Goose hunting harvest	1	2	3	4	5	6	7
Goose hunting regulations	1	2	3	4	5	6	7
Number of geese seen	1	2	3	4	5	6	7

Proposed August Canada Goose Season

In 2013, the DNR may offer an August Canada goose season in all or portions of the State. This season would be in addition to our current September Canada goose season.

7. Would you hunt Canada geese in August if the season were open? (Please check one):

Yes _____ No _____ Don't know _____

If you checked yes, what season dates would you prefer (Please check one):

1) Saturday, August 3 to late August _____
2) Saturday, August 17 to late August _____

8. If an August Canada goose season is offered, would you prefer a 5 day split between the end of the August season and the opening of the September Canada goose season?

___Yes ___No ___No preference (Please check one.)

9. In 2013, the bag limit in early goose seasons (proposed August and September) will likely increase. Which bag limit would you prefer?

___8 birds/day ___10 birds/day ___15 birds/day ___No preference (Please check one.)

10. If the August Canada goose season was <u>not</u> opened in your area, how far would you travel to hunt Canada Geese in August?

_____ would only hunt in local area.

_____ up to 50 miles

_____ up to 100 miles

_____ more than 100 miles

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, 2012.

	Hunters			Hunters			Hunters	
					%		N	%
County	N	%	County	N		County		
AITKIN	10	0.009	LOW	10	0.009	TODD	28	0.025
ANOKA	33	0.029	LE SUEUR	27	0.024	TRAVERSE	4	0.004
BECKER	19	0.017	LINCOLN	7	0.006	WABASHA	7	0.006
BELTRAMI	23	0.02	LYON	4	0.004	WADENA	3	0.003
BENTON	11	0.01	MAHNOMEN	4	0.004	WASECA	13	0.011
BIG STONE	15	0.013	MARSHALL	13	0.011	WASHINGTON	26	0.023
BLUE EARTH	12	0.011	MARTIN	7	0.006	WATONWAN	1	0.001
BROWN	14	0.012	McLEOD	25	0.022	WILKIN	2	0.002
CARLTON	7	0.006	MEEKER	25	0.022	WINONA	4	0.004
CARVER	18	0.016	MILLE LACS	7	0.006	WRIGHT	56	0.049
CASS	18	0.016	MORRISON	29	0.025	YELLOW MEDICINE	1	0.001
CHIPPEWA	4	0.004	MOWER	7	0.006			
CHISAGO	18	0.016	MURRAY	6	0.005			
CLAY	5	0.004	NICOLLET	12	0.011			
CLEARWATER	7	0.006	NOBLES	4	0.004			
COOK	0	0	NORMAN	3	0.003			
COTTONWOOD	10	0.009	OLMSTEAD	4	0.004			
CROW WING	15	0.013	OTTERTAIL	59	0.052			
DAKOTA	25	0.022	PENNINGTON	7	0.006			
DODGE	3	0.003	PINE	20	0.018			
DOUGLAS	37	0.032	PIPESTONE	2	0.002			
FARIBAULT	8	0.007	POLK	12	0.011			
FILLMORE	1	0.001	POPE	37	0.032			
FREEBORN	10	0.009	RAMSEY	2	0.002			
GOODHUE	3	0.003	RED LAKE	3	0.003			
GRANT	6	0.005	REDWOOD	3	0.003			
HENNEPIN	22	0.019	RENVILLE	8	0.007			
HOUSTON	2	0.002	RICE	33	0.029			
HUBBARD	4	0.004	ROCK	3	0.003			
ISANTI	19	0.017	ROSEAU	5	0.004			
ITASCA	19	0.017	SCOTT	32	0.028			
JACKSON	10	0.009	SHERBURNE	17	0.015			
KANABEC	13	0.011	SIBLEY	9	0.008			
KANDIYOHI	36	0.032	ST. LOUIS	18	0.016			
KITTSON	2	0.002	STEARNS	45	0.039			
KOOCHICHING	3	0.003	STEELE	6	0.005			
LAC QUI PARLE	6	0.005	STEVENS	9	0.008			
LAKE	1	0.001	SWIFT	4	0.004			

2013 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 2013 Light Goose Conservation Order hunter mail questionnaire survey.

METHODS

Minnesota held a light goose Conservation Order harvest from 1 March - 30 April 2013. 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 1,405 permits was issued and 810 responses (58 %) to the questionnaire were obtained (Table 1). In calculating harvest estimates, we assumed that the 595 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). Harvest was again concentrated in the southwest portion of the state with some also being taken in west-central Minnesota. Seven hundred seventy people attempted to take light geese during the 61-day conservation order period. Active participants pursued light geese for 3,070 days and 2,430 light geese were shot and retrieved. This was an average retrieved take of 3.2 geese per active participant. Another 370 light geese were estimated wounded and not retrieved.

Unplugged shotguns were used by 380 (49.4 %) individuals to take 1,670 (68.7%) geese, of which 620 (25.5%) were taken with the 4^{th}, 5^{th}, or 6^{th} shell. Electronic calls were used by 190 (24.5%) participants to take 1,020 (41.9%) light geese. During the 1/2 hour after sunset period, 260 (10.7%) geese were harvested by 260 (33.7%) active hunters.

The method used for hunting white geese was 32.6% over decoys, 38.6% pass shooting, and 28.9 % sneaking geese.

ACKNOWLEDGMENTS

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

MINNESOTA 2013 LIGHT GOOSE HARVEST SURVEY

For the Period of March 1 - April 30, 2013 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, 2013. 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 2013 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, 2013? 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, 2013? _____
3. In what county did you hunt light geese most often during March 1 - April 30, 2013? _____
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 4^{th}, 5^{th}, or 6^{th} 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 ½ hour after sunset period? Yes / No
12. If yes, how many light geese did you shoot and retrieve during the ½ hour after sunset period? _____
13. What method of hunting did you use most often? Check one
    □. hunt over decoys. □ pass shoot. □. Sneak

Figure 1. Light Goose Conservation Order hunter mail questionnaire, 2013.

Table 1. Summary of Light Goose Conservation Order harvest in Minnesota, 2002 - 2013

	Year											
Statistic	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total permits sold	1,997	1,438	1,424	1,383	1,363	1,292	1,406	1,670	952	994	1,048	1,405
Useable returns	1,375	1,071	1,095	998	955	921	910	1,057	671	659	675	810
Response rate (%)	69.0	74.0	77.0	72.0	70.0	71.0	65.0	63.0	72.3	67.1	65.3	58.3
Active hunters (%)	60.5	38.5	48.5	44.7	37.3	39.8	54.9	66.0	40.8	45.7	56.9	54.9
Estimated total hunters	1,209	553	690	618	516	514	773	1,103	389	455	600	770
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	3,070
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	4.0
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	2,430
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	3.2
Estimated crippling losses	637	253	315	150	163	172	302	640	70	145	210	370
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	49.4
Est. number hunters using uplugged guns	560	280	333	272	215	224	361	516	175	201	260	380
Est. number geese **shot** with unplugged guns	2,137	996	1,385	777	689	1,032	1,275	2,413	348	742	1,510	1,670
Est. harvest with shell 4-5-6	615	401	491	269	287	277	339	822	131	311	460	620
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	24.5
Est. number hunters using e-calls	142	87	133	110	73	88	148	260	101	97	130	190
Est. harvest while using e-calls	512	474	326	268	280	329	566	1,171	192	531	460	620
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	33.4
Est. number hunting after 1/2-hr sunset	550	228	265	264	223	197	326	475	154	180	250	260
Est. harvest 1/2-hr after sunset	841	267	311	242	246	209	511	713	87	238	240	260

MINNESOTA'S WILD TURKEY HARVEST - 2013

Marrett Grund, Farmland Wildlife Populations and Research Group

Minnesota offers fall and spring turkey hunting seasons. The fall turkey season was 30 days in length (October 1-30) and allowed for an unlimited number of hunters to take one wild turkey of either sex. Although there were an unlimited number of hunters, each hunter needed to select and could only hunt in 1 of the 12 permit areas (PAs; Figure 1). The spring turkey season regulated harvest and distributed hunting pressure by allocating permits across the 12 PAs and 8 time periods using a quota system for the first 4 time periods. During spring, adult hunters interested in pursuing turkeys for the first 4 time periods were required to apply for a permit through a lottery system but youth hunters were able purchase a permit over-the-counter during these time periods. Preference for this lottery system was determined by the number of years a valid but unsuccessful application had 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. Hunters could simply purchase a permit over-the-counter for the last 4 seasons. The goal of this system was to provide quality turkey hunting opportunities by minimizing hunter interference rates while allowing hunters to take the harvestable surplus of turkeys.

Fall 2012 Turkey Season – This was the first year that a quota system was not used to restrict hunter numbers during the fall season. Consequently, the number of permits issued to hunters doubled from 5,382 permits in 2011 to 10,779 permits in 2012 (Table 1, Figure 2). There were 1,753 turkeys harvested during Fall 2012, which was about 400 more turkeys than the record harvest in 2010. Hunter success rates ranged from 10-19% at the permit area level (Table 2) and averaged 16% at the statewide level, which was slightly below the 5-year average (22%). These lower hunter success rates may be related to hunters interested in harvesting a turkey opportunistically while pursuing other species and therefore were expending less effort; and/or allowing more casual turkey hunters who may not have as much experience with turkey hunting during the fall season. It is unlikely these reduced hunter success rates are related to fewer turkeys in the pre-hunt population because turkey population growth rates have been stable to slightly increasing throughout Minnesota (Giudice et al. 2011) and the 2011-12 winter was relatively mild, which would suggest above average survival and reproduction rates should have occurred the previous year. Weather conditions were favorable throughout the season and most crops were harvested in early- to mid-October.

Spring 2013 Turkey Season – There were 38,831 permits issued during the spring season, including 19,113 general/landowner permits, 5,539 youth permits, 4,550 archery permits, and 9,629 surplus permits (Table 2). Hunters registered 10,390 turkeys (Table 3), which was about 12% below the 5-year average (Figure 3). Hunter success rates averaged 30% at the statewide level, which was comparable to the 5-year average of 30% (Table 3). The winter of 2012-13 was relatively mild through February, but then measurable snow was on the ground through much of April in most of the range where turkeys were abundant in Minnesota. The impact of the delayed but extended winter weather on turkey populations is unknown, but it is reasonable to believe that the winter-like weather affected hunter effort and turkey movement patterns. This

likely explains much of the reduced harvest success rates and hunter participation rates, particularly during the first few hunting time periods. Wisconsin and Iowa both reported similar trends in spring 2013 wild turkey harvests as well.

LITERATURE CITED

GIUDICE, J. M., M. TRANEL, and K. HAROLDSON. 2011. Fall Wild turkey Population Survey, 2010. Minnesota Department of Natural Resources, St. Paul, MN, Agency Report.

Table 1. Permits available and issued, applicants, registered harvest, and hunter success rates for fall wild turkey seasons 1990 – 2012, 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
2012	Unlimited	N/A	10,779	1,753	16

[a] Success rates not adjusted for non-participation.

Table 2. Permits issued, registered harvest, and hunter success during the Fall 2012 and Spring 2013 Minnesota wild turkey seasons.

	Fall 2012			Spring 2013		
Permit Area	Permits Issued	Harvest	Success (%)[a]	Permits Issued[b]	Harvest	Success (%)[a]
501	1,750	316	18	9,050	2,639	29
502	175	24	14	610	169	28
503	1,717	282	16	3,961	1,255	32
504	401	39	10	930	278	30
505	788	126	16	3,150	908	29
506	466	75	16	1,334	317	24
507	2,690	515	19	8,107	2,628	32
508	1,425	197	14	3,868	1,170	30
509	128	19	15	246	102	41
510	1,144	147	13	2,788	886	32
511	71	10	14	133	27	20
512	24	3	13	38	11	29

[a] Success rates were not adjusted for non-participation.
[b] Permits issued for the Camp Ripley disabled veterans hunt and archery permits were not included.

Table 3. Permits available, permits issued, and registered harvest from 1978 – 2013 for all spring wild turkey hunting seasons in Minnesota.

	Permits				
Year	Available	Issued	Issued (%)	Registered harvest	Success (%)[a]
1978	420	411	97.9	94	23
1979	840	827	98.5	116	14
1980	1,200	1,191	99.3	98	8
1981	1,500	1,437	95.8	113	8
1982	2,000	1,992	99.6	106	5
1983	2,100	2,079	99.0	116	6
1984	3,000	2,837	94.6	178	6
1985	2,750	2,449	89.1	323	13
1986	2,500	2,251	90.0	333	15
1987	2,700	2,520	93.3	520	21
1988	3,000	2,994	99.8	674	23
1989	4,000	3,821	95.5	930	24
1990	6,600	6,126	92.8	1,709	28
1991	9,170	8,607	93.9	1,724	20
1992	9,310	9,051	97.2	1,691	19
1993	9,625	9,265	96.3	2,082	23
1994	9,940	9,479	95.4	1,975	21
1995	9,975	9,550	95.7	2,339	25
1996	12,131	10,983	90.5	2,841	26
1997	12,530	11,610	92.7	3,302	28
1998	14,035	13,229	94.3	4,361	33
1999	18,360	16,387	89.3	5,132	31
2000	20,160	18,661	92.6	6,154	33
2001	22,936	21,404	93.3	6,383	30
2002	24,136	22,607	93.7	6,516	29
2003	25,016	22,770	91.0	7,666	34
2004	27,600	25,261	91.5	8,434	33
2005	31,748	27,638	87.1	7,800	28
2006	32,624	27,876	85.4	8,241	30
2007[b]	33,976	28,320	83.4	9,412	33
2008[b]	37,992	31,942	84.1	10,994	34
2009[b]	42,328	36,193	85.5	12,210	34
2010[b]	55,982	46,548[c]	83.0	13,467	29
2011[b]	Unlimited	43,521[c]	N/A	10,055	23
2012[b]	Unlimited	38,906[c]	N/A	11,325	29
2013[b]	Unlimited	34,281[c]	N/A	10,390	30

[a] Success rates not adjusted for non-participation

[b] Youth hunt data included

[c] Permits issued to archery hunters were not included. There were 2,462, 3,911, and 4,550 permits issued to archers in 2011, 2012, and 2013, respectively

Table 4. Permits available and issued by license type (resident and non-resident) and time period for the spring 2013 wild turkey season, Minnesota.

		Permits issued			
Time period	Permits available	General lottery	Landowner	Surplus	Youth[b]
A	5,705	4,807	628	1	1,284
B	5,705	4,707	271	90	221
C	5,705	5,091	236	0	1,682
D	5,705	3,307	57	1,960	958
E	Unlimited	5	0	4,844	377
F	Unlimited	0	0	856	168
G	Unlimited	4	0	1,490	499
H	Unlimited	0	0	388	350
Total[a]	Unlimited	17,921	1,192	9,629	5,539

[a] Excludes archery permit sales.
[b] Total excludes youth archery permits.

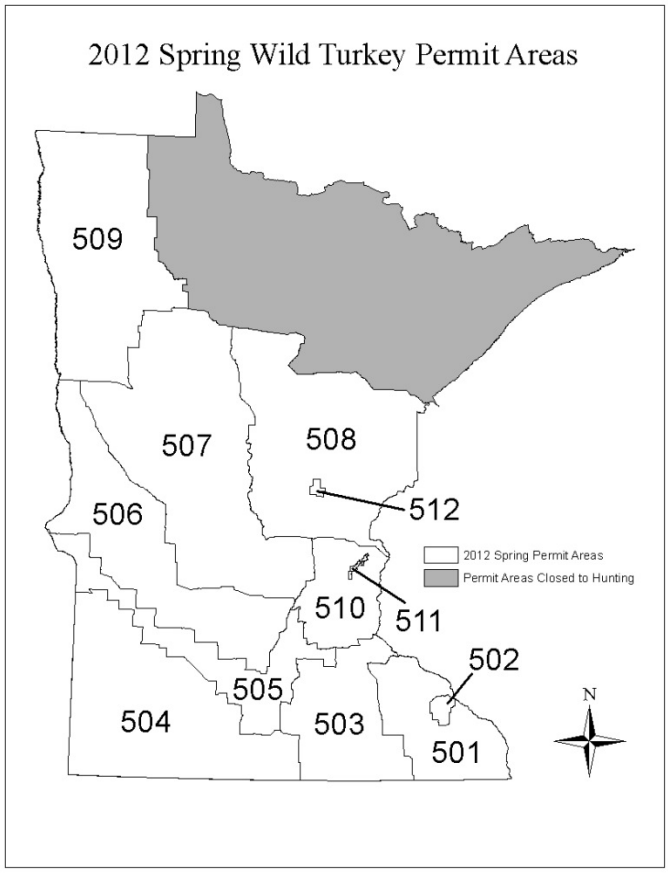

Figure 1. Permit areas open for hunting during the 2013 spring turkey hunting season, Minnesota.

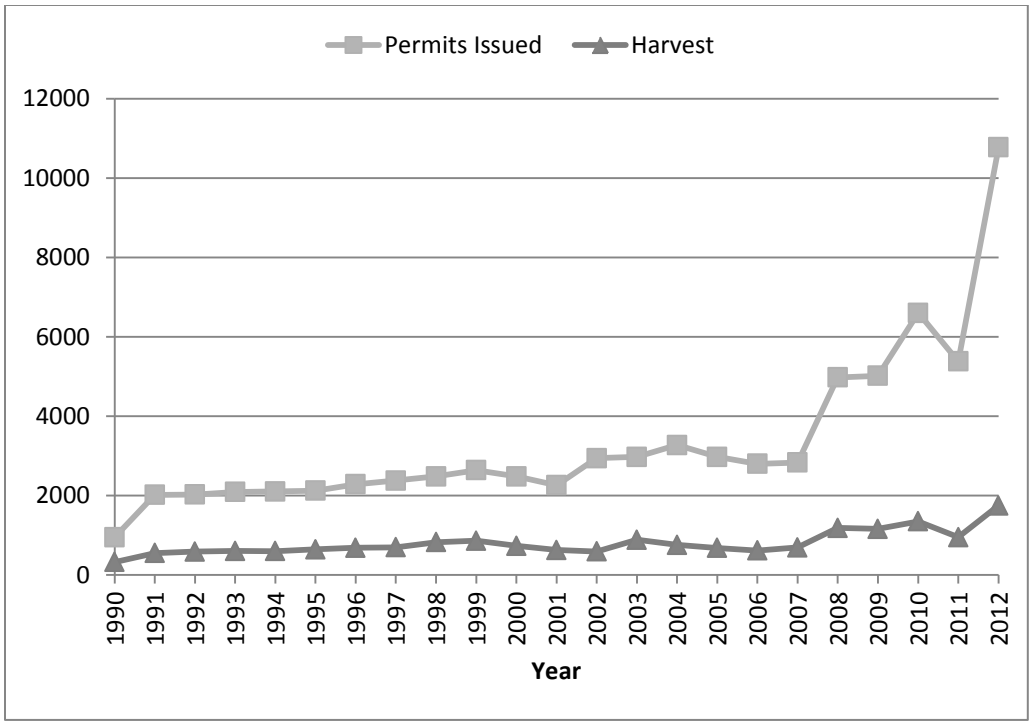

Figure 2. Permits issued and registered harvest for fall wild turkey seasons, 1990-2012, Minnesota.

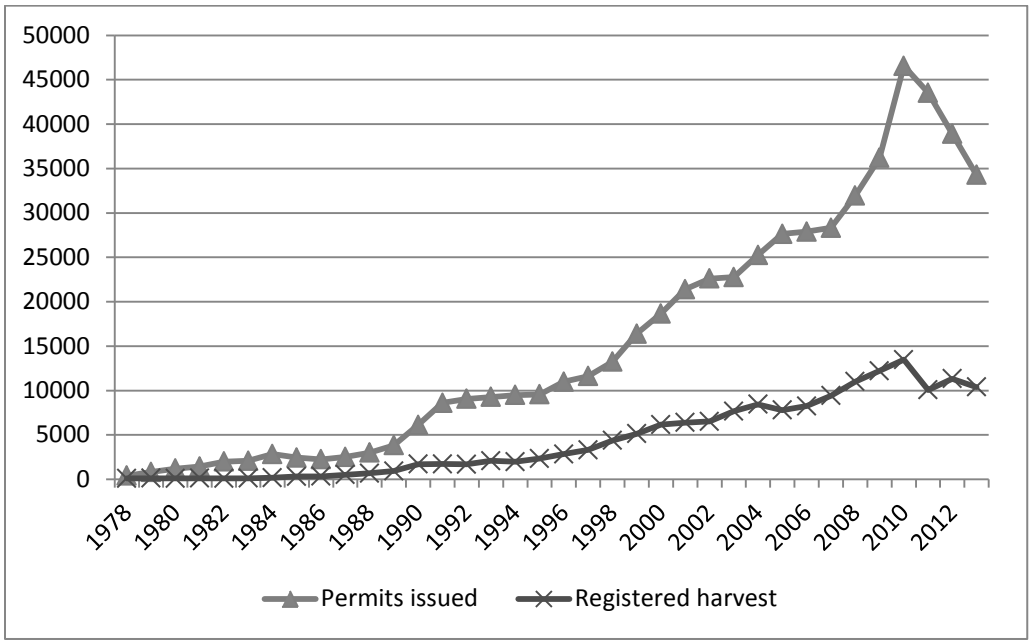

Figure 3. Permits issued and registered harvest for spring wild turkey seasons, 1978-2013, Minnesota.

PRAIRIE-CHICKEN HARVEST IN MINNESOTA DURING 2012

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. Inadvertently, however, I failed to send postcard surveys to people who purchased surplus permits for permit areas in which there were fewer lottery applicants than permits available. 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. To ensure that responses from people who replied to the first mailing were similar to responses from people who replied to the second mailing I compared averages visually but not with a statistical test. 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 calculated all estimates by permit area and summed across permit areas to estimate totals for the entire prairie-chicken range.

RESULTS & DISCUSSION

One hundred eighty-six prairie-chicken hunting permits were available during 2012. There were 179 lottery winners (Table 1), and 6 of them were landowners. There were fewer applicants than there were permits available in 3 of the 11 permit areas. One hundred fifty-one lottery winners purchased permits, and 11 others purchased surplus permits. Although there were 162 permit purchasers in 2012, inadvertently I did not send surveys to the purchasers of surplus permits. One hundred twenty-five purchasers who were surveyed (83%) responded to the first mailing of the survey, and 18 (12%) responded to the second mailing, so the response rate among those surveyed was 95% (i.e., 143 of 151).

Four purchasers who responded to the survey reported that they did not hunt (3%), and 139 respondents reported hunting. Given that 162 people purchased permits, there were an estimated 158 hunters (i.e., purchasers who went afield; Table 2). Hunters hunted an average of 2.4 days during the 5-day season (20–24 October 2012). Surveyed hunters reported harvesting 79 prairie-chickens, and the estimated total harvest was 86 prairie-chickens (Table 2). I estimated that 62 of the 158 hunters bagged at least 1 prairie-chicken (39%, Table 2). The average rating for hunter satisfaction on a 1–5 scale was 3.4 (median = 4), and 78% of the 140 respondents to this question reported a satisfaction level of 3 or greater.

The prairie-chicken harvest and hunter success rate during 2012 were less than during 2011 and 18–26% less than averages from sets of previous years (e.g., the modern hunting era = 2003–2011, years with >180 permits = 2006–2011; Table 3). This is consistent with a declining trend in spring survey counts since 2007. As I have reported in previous prairie-chicken harvest reports, 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 23 sharp-tailed grouse while hunting prairie-chickens during 2012, and the estimated total harvest of sharp-tailed grouse by prairie-chicken hunters was 25. The reported sharp-tailed grouse were harvested from permit areas 802A through 808A, with the most (i.e., 6 or 7) coming from 803A, 805A, and 806A and none coming from 807A (Figure 1).

ACKNOWLEDGEMENTS

I appreciated the help of Laura Gilbert in preparing and mailing the survey and in data entry, and comments from Charlotte Roy helped me improve 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 2012.

Permit area	Permits available	No. of applicants	Lottery winners		Permit purchasers[a]		Surplus purchasers[c]
			No.[b]	Proportion	No.	Proportion	
801A	10	8	8	1.00	7	0.88	0
802A	10	13	11	0.85	10	0.91	0
803A	10	9	9	1.00	8	0.89	1
804A	17	7	7	1.00	7	1.00	10
805A	20	54	20	0.37	19	0.95	0
806A	17	24	19	0.79	17	0.89	0
807A	25	53	25	0.47	25	1.00	0
808A	20	35	20	0.57	19	0.95	0
809A	20	33	22	0.67	12	0.55	0
810A	27	47	27	0.57	21	0.78	0
811A	10	15	11	0.73	6	0.55	0
All	186	298	179	0.60	151	0.84	11

[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 2012.

Permit area	No. of hunters[a]		Birds harvested		Birds per harvester[b]	Success rate[c]
	Self-reported	Estimated	Self-reported	Estimated		
801A	7	7	1	1	1.0	0.14
802A	10	10	4	4	1.3	0.30
803A	8	9[d]	3	3	1.5	0.22
804A	7	17[d]	0	0	NA	0.00
805A	18	19	10	11	1.4	0.42
806A	16	17	12	13	1.3	0.59
807A	21	22	13	14	1.8	0.36
808A	16	18	14	16	1.3	0.67
809A	11	12	11	12	1.5	0.67
810A	19	21	9	10	1.1	0.43
811A	6	6	2	2	2.0	0.17
All	139	158	79	86	1.4	0.39

[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.

[d] Purchasers of surplus permits in permit areas 803A (n = 1) and 804A (n = 10) were inadvertently not surveyed.

Table 3. Annual summary of prairie-chicken hunting results in Minnesota during 2003–2012.

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
2012	186	298	158	86	0.39	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 during 2010.

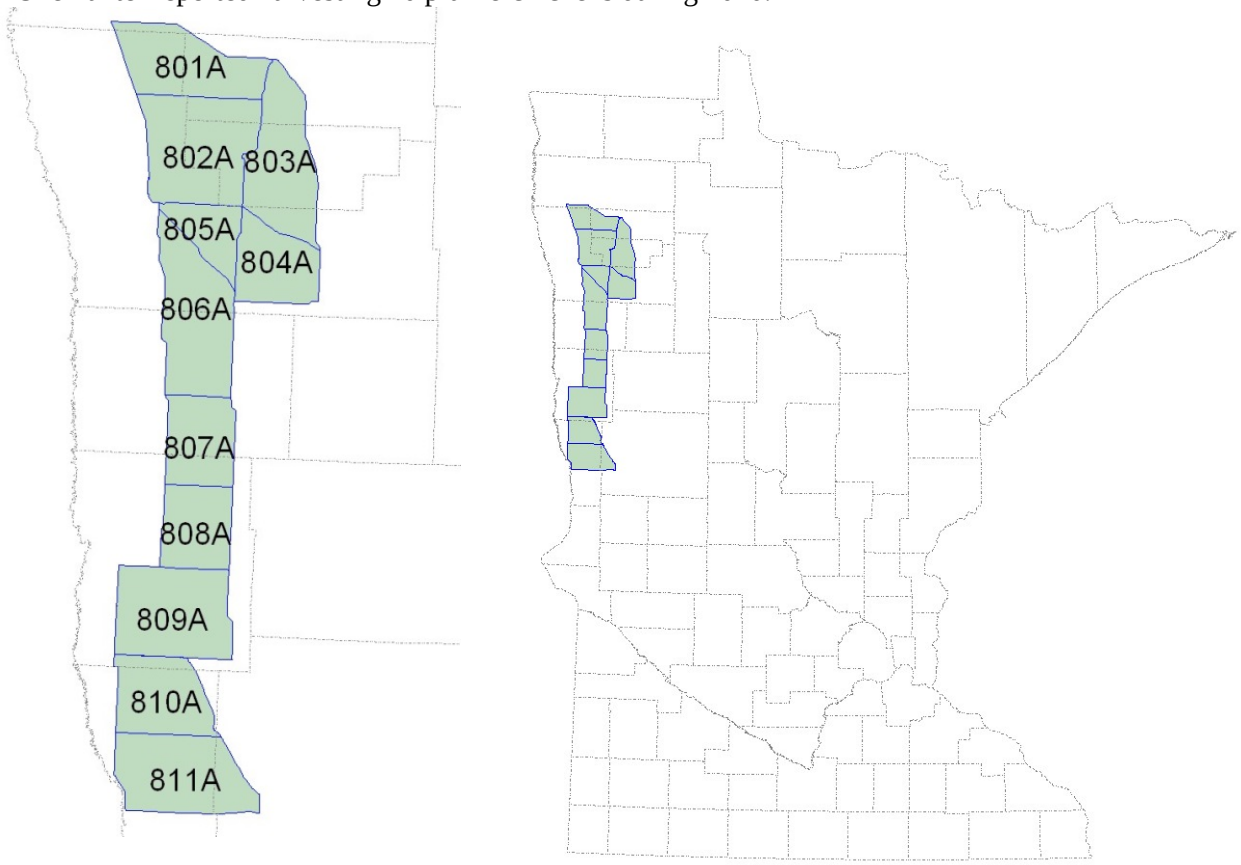

Figure 1. Map of permit areas for prairie-chicken hunting in Minnesota (left) and their location relative to counties within the state (right).

TATUS OF MINNESOTA BLACK BEARS

Final Report to Bear Committee
February 19, 2013

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

All data contained herein are subject to revision, due to updated information, improved analysis techniques, and/or regrouping of data for analysis.

INTRODUCTION

The Minnesota bear range is divided into 11 bear management units (BMUs; Figure. 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 ≈ 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 seem to have stabilized at a higher level during 2010-2012 than before, when permit availability was higher (Table 1, Figure 2). The reduced permit availability seems to have driven up sales of no-quota licenses, which were the highest on record in 2012. The estimated number of hunters in the field (8,600) was the lowest since 1993. However, the total harvest (2,604) was substantially higher than last year because success rate (30%) was up. Success rate may have increased in part due to reduced numbers of hunters (i.e., competition), and in part due to poorer fall foods.

This was the second year of a system whereby all available licenses for the quota area were sold (those not purchased by permittees selected in the lottery were purchased later as surplus). Number of available permits was reduced 15% from 2011 to 2012 (Tables 2 and 3). All BMUs except 22 were reduced. BMU 22 was the only BMU undersubscribed (Figure 1). As permit allocations were significantly reduced in all BMUs over the past 5 years, the percentage of 1st -year applicants drawn in the lottery diminished(Table 4). In 2008 and 2009, some 1st -year applicants (preference level 1) were drawn in all BMUs. By 2012, 1st – year

applicants were not drawn in most BMUs. Less than 50% of 2nd -year applicants were drawn in 3 BMUs (26, 44, 45).

Despite 5% fewer hunters statewide compared to 2011, the total harvest was 22% higher (Table 5). Most of the increased harvest occurred in the southern BMUs: 45, 51, and 52. BMU 52 had a record harvest, likely due both to a high number of hunters and poor natural foods. Northern BMUs 13 and 25 had especially low harvests (lowest since 1996).

Hunting success was the highest since 1995 in the quota area as a whole (Table 6), and notably high in BMUs 24, 26, 31, 51, and 45; it was a record high in BMU 45 (33%, versus previous high of 24% in 1995). The bear population in this BMU appears to be recovering. Also, hunter density was quite low in BMU 45 due to severely reduced permits over the past few years.

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. 2012 was normal in that respect, even though the season opened on a Saturday (Table 7).

The number of wildlife and enforcement personnel submitting bear nuisance tally forms each month was higher than in the past few years (Table 8), possibly because complaints were higher than normal. An unusually high number of complaints were registered shortly after bears emerged from dens in April, and remained high through the year (120-180 each month, May–August). The total number of complaints received in 2012 was the highest since 1999 (following a record low in 2011). However, only 16 nuisance bears were killed by private parties (excluding hunters) or DNR personnel, and for the first time, no bears were caught and moved. The number hit by cars was more than double that of 2011, but still half that of the 1990s (Table 9).

Wild fruit crops were, overall, the worst documented since the catastrophic food failure of 1995; composite bear food index was well below average in 4 of 5 regions (Table 10). Summer and fall berries produced poorly, due to erratic weather during May–July (Table 11). An early warm spring encouraged early and prolific flowering, so early species (e.g., Juneberry and sarsaparilla) produced some fruit, but they dried up early due to heat and lack of moisture in mid-summer. Species flowering slightly later (e.g. cherries, plums) were likely damaged by cool temperatures, wind, and rain during peak flowering that froze flowers and/or prevented effective insect pollination. Blueberries were almost non- existent across the state, except in the far northeast, where snow cover during winter 2011–2012 was adequate to protect buds. Only red oak acorns were abundant across most of the bear range, resulting in near-average fall food indices. Hazel nuts and dogwood berries, also important fall foods, did not produce well (Table 12, Figure 3).

Year-to-year variability in the abundance of wild bear foods was much greater during 1984–1996 than in the ensuing 15 years (Figure 4). This year, 2012, was an outlier in that regard. Food abundance was not only low, but was outside the normal range of year-to-year variation since 1997. The reason for lower fruit crop variability in recent years is unknown, but may be related to generally warmer winter and summer temperatures. 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 (Figure 5). Predictions of the number of bears killed by hunters, based solely on these 2 factors, have been particularly accurate since 2000 ($R^2 = 0.95$). Since then, actual bear harvest has only once differed from predicted harvest by >10%.

Sex ratios of harvested bears (Figure 6) reflect both the sex ratio of the living population (which varies with harvest pressure) as well as the relative vulnerability of the sexes to hunters (which varies with natural food conditions). In 2011, record high harvest sex ratios (%M)

occurred in BMUs 12 & 45. In 2012 BMU 12 continued to have the highest %M in the state (typical of this BMU), whereas BMU 45 had a near equal sex ratio.

Statewide, ages of harvested females (Figures 8, 9) declined dramatically during the past 3 decades, as evidenced by a declining median age and increasing proportion of the harvest composed of 1–2 year-olds. Median age of harvested females was 2.9 years old in 2012, closer to the age of harvested males (2.2 years) than in the past. This declining age structure coincided with both a period of population increase, and then a decline (Figure 10). Variation in median age within individual BMUs is too great to discern short- term trends (Figure 7). The greatest variation is in the northern BMUs. The southern no-quota area (BMU 52), which likely has the highest harvest pressure, has the most consistent female age structure; ages of harvested females in this area are equivalent to BMU 44 and older than BMU 45.

DISCUSSION

Ages of harvested bears (Figures 10, 11) accumulated over 33 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. 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 somewhat. Therefore, it was not possible to exactly match the curve from the reconstruction to all 4 tetracycline-based estimates, so several curves were scaled to differing degrees to intersect different sets of tetracycline-estimates. Both the tetracycline and age- reconstructed estimates showed a population decline of ~30% from 2001 to 2008. A light harvest in 2008 enabled the population to grow slightly, but it declined again after a heavier harvest in 2009. Reconstructed populations rely on several years of age data, so population estimates for 2011 and 2012 are not yet available.

Table 1. Bear permits, licenses, hunters, harvests, and success rates, 1992–2012.

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Permit applications	26428	27365	30127	29922	30405	27353	30245	29384	29275	26824	21886	16431	16466	16153	15725	16345	17362[a]	17571[a]	18647[a]	19184[a]	18103
Permits available	7920	8630	9400	11950	12030	11370	18210	20840	20710	20710	20610	20110	16450	15950	14850	13200	11850	10000	9500	7050[b]	6000
Licenses purchased (total)	8485	9224	9826	12448	12414	11440	16737	18355	19304	16510	14639	14409	13669	13199	13164	11936	10404	9892	9689	9555	8986
Quota area [c]	6845	7528	8125	10304	10592	9655	14941	16563	17021	13632	12350	9833	10063	9340	9169	8905	7842	7342	7086	5684	4951
Quota surplus/military [c]										235	209	2554	1356	1591	1561	526	233	77	83	1385	1070
No-quota area [c]	1640	1696	1701	2144	1822	1785	1796	1792	2283	2643	2080	2022	2238	2268	2434	2505	2329	2473	2520	2486	2965[h]
% Licenses bought																					
Of permits available [d]	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	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	82.7
Estimated no. hunters [e]	7900	8600	9100	11600	11500	10300	14500	15900	16800	15500	13800	13600	12900	12500	12500	11300	9900	9400	9200	9100	8600
Harvest	3175	3003	2329	4956	1874	3212	4110	3620	3898	4936	1915	3598	3391	3340	3290	3172	2135	2801	2699	2131	2604
Harvest sex ratio (%M) [f]	50	56	62	47	62	55	55	53	58	56	61	58	57	59	58	57	62	59	59	61	59
Success rate (%)																					
Total harvest/hunters [g]	40	35	26	43	16	31	28	23	23	29	14	26	26	26	26	28	21	30	29	23	30
Quota harvest/licenses	41	34	26	42	15	29	25	20	20	28	14	25	26	25	25	28	21	30	30	24	33

[a] Includes area 99, a designation to increase preference but not to obtain a license (2008 = 528, 2009 = 835; 2010 = 1194; 2011 = 1626; 2012 = 1907).

[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; 2012 = 67]). 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. 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 2011-12, 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 2011-12 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 2001–2012 were calculated as number of successful hunters/total hunters, rather than bears killed/total hunters, because hunters could take 2 bears. In 2012, 55 hunters took >1 bear (52 took 2 bears on NQ license, 2 hunters took 1 bear on NQ + 1 on quota license, 1 took 2 bears on NQ and 1 on quota license): thus, the 2604 bears were taken by 2548 different hunters, so success = 2548/8600 = 30%.

[h] Record high number of no-quota area licenses purchased (cannot distinguish where they hunted: BMUs 11, 11b, 52).

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.

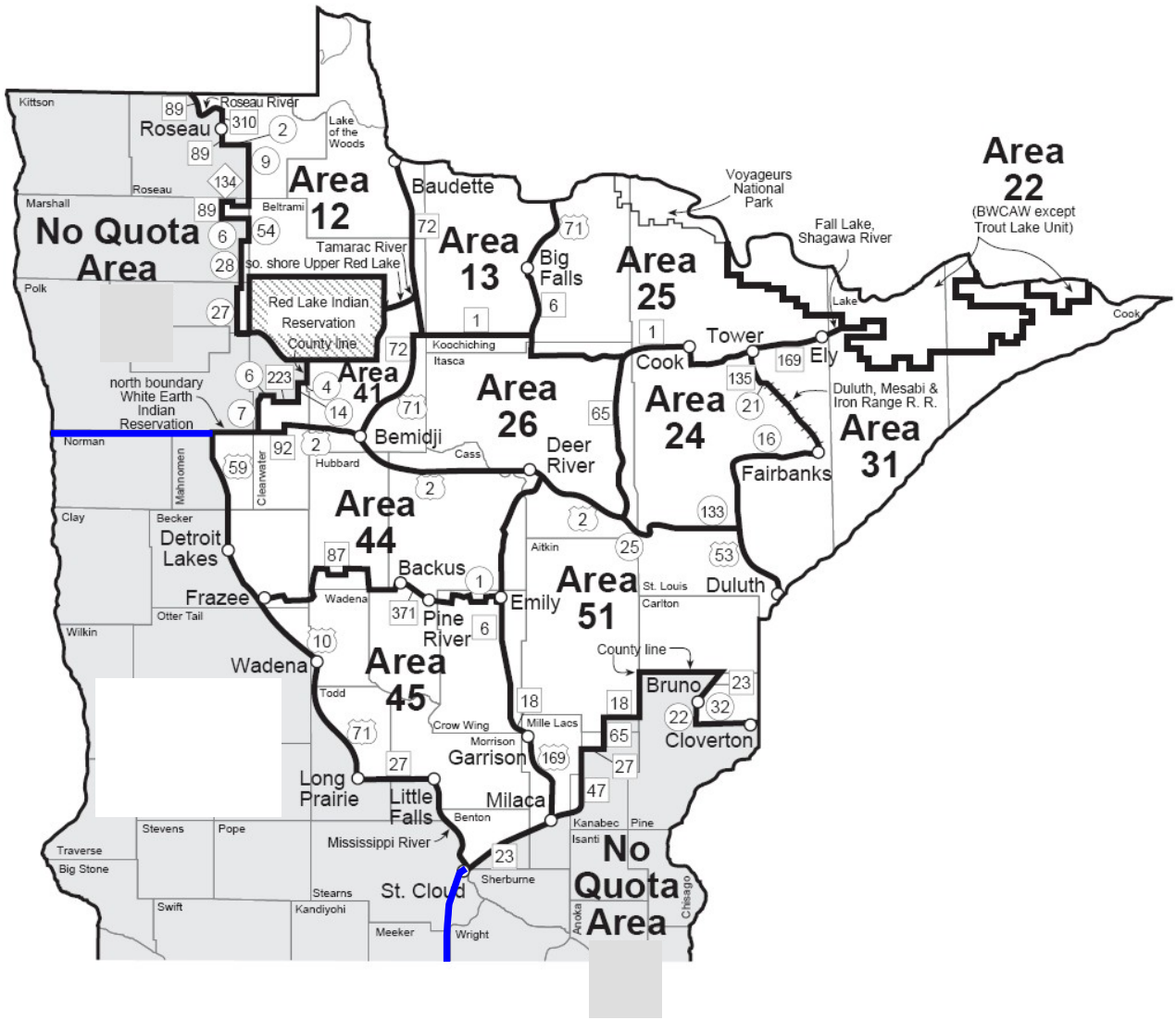

Figure 2. Relationship between licenses sold and hunting success (note inverted scale) in quota zone, 1987–2012 (non-quota zone first partitioned out in 1987). Number of licenses explains 31% of variation in hunting success during this period ($P = 0.003$). Large variation in hunting success is also attributable to food conditions.

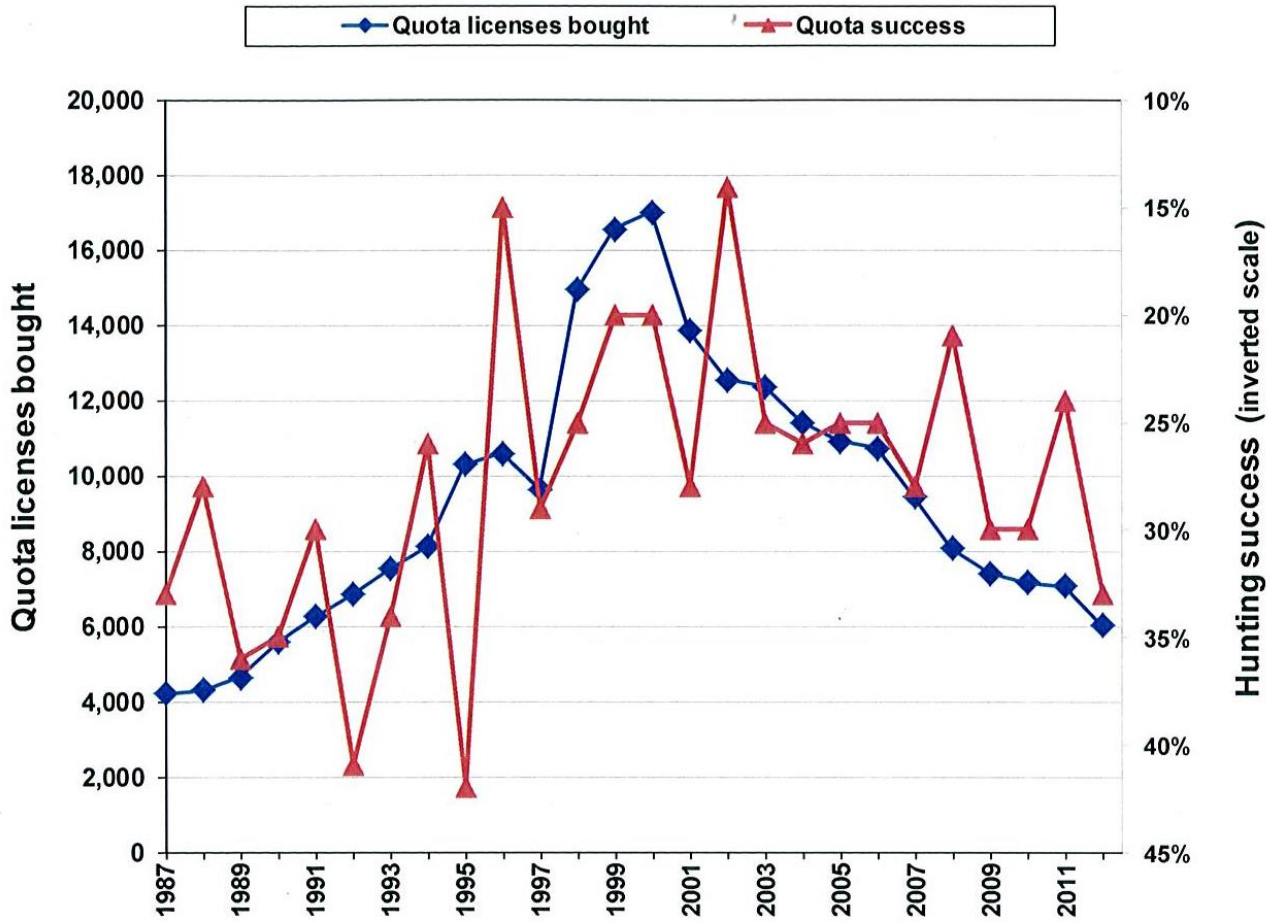

Table 2. Number of bear hunting quota area permits available, 2008–2012 (aligned with permit applications in Table 3 below; highlighted values show drop from previous year).

BMU	2012	2011		2010	2009	2008
		After reduct.[a]	Before reduct			
12	300	350	450	4500	450	450
13	400	450	600	600	600	650
22	100	100	125	100	150	150
24	300	350	500	550	650	750
25	850	900	1200	1200	1250	1550
26	550	950	900	900	1000	1150
31	900	1000	1300	1300	1300	1700
41	250	300	400	400	400	400
44	700	850	1100	1100	1100	1350
45	200	250	400	400	600	1000
51	1450	1850	2500	2500	2500	2700
Total[e]	6000	7050	9475	9500	10000	11850

[a] 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 ater this reduction. In 2012, permits were allocated based on what had been offered in 2011.

Table 3. Number of bear hunting permit applicants and surplus licenses bought, 2008–2012[a]. Shaded values indicate undersubscribed areas (applications < permits available).

BMU	2012			2011[b]			2010		2009		2008	
	Apps	Bought license	Surplus bought	Apps	Bought license	Surplus bought	Apps	Surplus	Apps	Surplus	Apps	Surplus
12	813	244	60	834	267	84	903	5[c]	876		857	
13	719	325	76	751	366	84	753		700		709	
22	83	56	43	90	71	31	114		91	0[d]	85	50
24	888	253	47	918	294	56	971		843		825	
25	1625	713	137	1763	712	190	1811	5[c]	1694		1793	4[c]
26	1666	458	92	1894	512	139	1959		1874		1999	2[c]
31	2406	758	146	2505	826	174	2414		2423		2388	3[c]
41	592	208	42	688	253	47	718		685		656	
44	2619	612	88	3010	697	154	2923		2787		2821	
45	1135	170	30	1019	208	42	937		941		873	128
51	3650	1154	296	4086	1478	372	3950	1[c]	3822		3828	
Total[e]	16196	4951	1057	17558	5684	1373	17453		16736		16834	178

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

[b] In 2011-12, all licenses not purchased by permittees were sold as "surplus". Surplus = Permits available (Table 2) minus Bought license (±4 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 applicants) who were drawn for a bear permit, 2008–2012. 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 lottery applicants is also shown.

BMU	2012		2011		2010		2009	2008
	Pref 1	Pref 2	Pref 1	Pref 2	Pref 1	Pref 2	Pref 1	Pref 1
12	0	80	2		23		29	37
13	33		51		77		84	92
22	100		100		88		100	100
24	0	75	14		49		75	91
25	28		35		60		72	86
26	0	49	0	77	15		32	43
31	0	84	11		35		43	68
41	0	86	6		31		37	47
44	0	28	0	55	0	90	3	26
45	0	29	0	67	24		61	100
51	1		25		52		58	67

Table 5. Minnesota bear harvest tally[a] for 2012 by Bear Management Unit (BMU) and sex compared to harvests during 2007–2011 and record high harvests.

	2012											
BMU	M	(%M)	F	U	Total	2011	2010	2009	2008	2007	5 year mean	Record high harvest (yr)
Quota												
12	58	(71)	24	0	82	106	95	140	101	124	113	263 (01)
13	68	(61)	44	0	112[f]	119	155	149	129	163	143	258 (95)
22	3	(38)	5	0	8	11	9	7	7	15	10	41 (89)
24	57	(53)	51	0	108	122	124	151	100	134	126	288 (95)
25	133	(52)	121	0	254[f]	317	307	344	298	369	327	584 (01)
26	148	(62)	90	0	238	167	232	228	137	315	216	513 (95)
31	220	(61)	143	0	363	358	363	384	248	398	350	697 (01)
41	42	(60)	28	0	70	54	71	104	77	104	82	201 (01)
44	102	(54)	86	0	188	130[d]	248	255	196	333	232	643 (95)
45	33	(49)	34	0	67	32[d]	58	42	72	113	63	178 (01)
51	284	(60)	187	0	471	288[e]	501	416	344	557	421	895 (01)
Total	1148	(59)	813	0	1961	1704[f]	2163	2220	1709	2625	2084	4288 (01)
11	155	(69)	69	0	224	219	178	315	172	324	242	351[h] (05)
11b	9	(64)	5	0	14	3	11	9	3	4	6	
52	218	(54)	187	0	405[c]	205[g]	347	257	251	219	256	400 (06)
Total	382	(59)	261	0	643	427	536	581	426	547	503	678 (95)
State	1530	(59)	1074	0	2604	2131	2699	2801	2135	3172	2588	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 $M_{(reg)} \rightarrow F_{(tooth)}$; 38 F→M; 2012: 1821 [98%] unchanged; 15 $M_{(reg)} \rightarrow F_{(tooth)}$; 28 F→M). Sex shown on table is the registered sex because only ~70% of tooth envelopes are submitted (2011: 1535 of 2131 = 72%; 2012: 1897 of 2604 = 73%). Also, some tooth envelopes had no corresponding registration data. These were added to the harvest tally. The number of missing registrations was greatly reduced in 2011 and 2012.

Year	Quota area	No-quota area
2007	27	9
2008	23	4
2009	19	14
2010	20	8
2011	11	2
2012	6	1

[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* = 27 in 2007, 14 in 2008, 3 in 2009, 14 in 2010, 14 in 2011, 8 in 2012). 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 harvest.

[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] Estimated registered harvest, including those in which registration data were lost and no tooth envelope was received.

Table 6. Bear hunting success (%) by BMU, measured as the registered harvest (excluding second bear) divided by the number of licenses sold[a], 2007–2012.

BMU	Max success (yr) (excl 2012)		Mean success 2007-2011	2012	2011	2010	2009	2008	2007
12	49	(95)	33	27	30	30	39	32	36
13	59	(95)	30	28	26	34[c]	32	28	31
22	21	(92)	13	8	11	14	16[c]	8	14
24	45	(92)	27	36[e]	35[e]	29	31[d]	20	20
25	47	(92)	33	30	35	34	36	28[f]	31
26	59	(95)	29	43[d]	26	34	31	17[f]	36
31	55	(92)	32	40[d]	36	36	38[c]	21[f]	28
41	50	(95)	28	28	18	25	34	27	35
44	43	(95)	25	27	15[f]	28	30	21	30
45	24	(95)	14	33[b]	13	21[d]	11[f]	11[f]	14
51	37	(95)	22	32[d]	16[f]	27	23	19	27
Quota	42	(95)	27	33[d]	24	30	30	21	28
No Quota[g]	35	(95)	19	20	15[f]	20	22	17[f]	19
Statewide	40	(95)	25	28	22	27	28[c]	20	26

[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] Highest success since establishment of this BMU in 1994
[c] Highest success since 1997 (until this year).
[d] Highest success since 1995 (until this year).
[e] Highest success since 1992 (until this year)
[f] Lowest success since 2002 (until this year).

[g] Success rates in different parts of the no-quota area (Figure 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, 1992–2012.

Year	Day of week for opener	Aug 22/23 – Aug 31	Sep 1 – Sep 7	Sep 1 – Sep 14	Sep 1 – Sep 30
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
2012	Sat		68	83	96

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

Table 8. Number of people participating in nuisance bear survey, 1992–2012.

	Apr	May	Jun	Jul	Aug	Sep	Oct
1992	74	79	81	85	83	74	62
1993	83	84	82	88	82	81	68
1994	77	88	82	86	83	68	61
1995	74	77	79	83	80	72	61
1996	71	83	84	77	75	67	54
1997	61	69	69	64	62	60	43
1998	34	67	71	63	55	41	33
1999	52	52	40	47	44	39	16
2000	60	58	50	54	42	37	33
2001 [a]	52	54	50	49	42	32	21
2002	50	44	43	46	35	29	19
2003	36	39	34	29	27	25	14
2004	28	33	34	32	32	24	13
2005	35	36	42	36	35	26	20
2006	28	39	46	43	30	29	24
2007	46	41	39	35	40	31	21
2008	31	35	37	33	23	20	17
2009	44	51	41	40	39	35	28
2010	36	40	33	27	28	23	16
2011	30	34	29	31	29	27	21
2012	56	52	47	40	38	32	23

[a] Electronic submission of monthly complaint tally beginning in 2001.

Table 9. Number of nuisance bear complaints registered by Conservation Officers and Wildlife Managers during 1992–2012, including number of nuisance bears killed and translocated, and bears killed in vehicular collisions.

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Number of personnel participating in survey [a]	85	88	88	83	84	69	71	52	60	54	50	39	34	42	46	46	37	51	40	34	56
Complaints examined on site	1562	1010	696	1568	337	661	226	189	105	122	75	81	75	61	57	63	59	65	70	37 [h]	113
Complaints handled by phone [b]					959	2196	743	987	618	660	550	424	507	451	426	380	452	535	514	396 [h]	722 [i]
Total complaints received					1296	2857	969	1176	723	782	625	505	582	512	483	443	511	600	584	433 [h]	835
% Handled by phone					74%	77%	77%	84%	85%	84%	88%	84%	87%	88%	88%	86%	88%	89%	88%	91%	86%
Bears killed by:																					
Private party or DNR	187	111	67	232	27	93	31	25	25	22	12	13	25	28	11	21	22	23	22	9 [h]	16
Hunter before season [c]																					
– from nuisance survey	38	21	28	81	6	32	23	5	7	4	0	3	3	6	2	18	3	4	3	3	11
– from registration file	52	30	25	138	18	35	31	24	43	20	11	8	4	13	6	25	5	15	10	5	12
Hunter during/after season [d]	19	8	3	13	0	4	3	0	1	1	0	0	0	1	0	0	0	0	0	0	0
Permittee [e]	28	6	3	57	4	7	11	7	2	6	4	6	1	5	4	5	1	3	5	0	0 [j]
Bears translocated	342	180	171	295	64	115	24	29	1	6	3	1	3	3	3	1	3	2	2	2	0
% bears translocated [f]	22	18	25	19	19	17	11	15	1	5	4	1	4	5	5	2	5	3	3	5	0
Bears killed by cars [g]	90	54	40	68	42	52	61	60	39	43	26	25	16	22	18	20	27	18	28	15 [h]	33

Table 9 footnotes:

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[a] Maximum number of people turning in a nuisance bear report each month (from Table 7). Monthly reports were required beginning in 1984.

[b] Tallies of complaints handled by phone were made only during the indicated years.

[c] The discrepancy between the number recorded on the nuisance survey and the number registered before the opening of the season indicates incomplete data. Similarity between the two values does not necessarily mean the same bears were reported.

[d] Data only from nuisance survey because registration data do not indicate whether bear was a nuisance.

[e] A permit for non-landowners to take a nuisance bear before the bear season was officially implemented in 1992, but some COs individually implemented this program in 1991. Data are based on records from the nuisance survey, not directly from permit receipts.

[f] Percent of on-site investigations resulting in a bear being captured and translocated.

[g] Car kill data were reported on the monthly nuisance form for the first time in 2005. In all previous years, car kill data were from confiscation records. Values shown for 2005-2011 are either from the forms or from the confiscation records, whichever was greater (they differed very little).

[h] Lowest since record-keeping began (1981 for on-site complaints, nuisance bears killed and car-kills). However, participation in this survey may have affected the results. In 2011, 2 known nuisance kills of radio-collared bears, which were handled by COs, were not tallied here because these 2 COs did not participate in this survey.

[i] 120-180 calls in each month, May–Aug.

[j] 12 permits issued, but no bears killed.

Table 10. Bear food index values for five survey areas (see map in lower right) in northern Minnesota's bear range, 1984–2012. Shaded boxes denote particularly low (<45; pink) and high (≥70; green) fruit abundance.

	Survey Area					
Year	NW	NC	NE	WC	EC	Entire Range[a]
1984	32.3	66.8	48.9	51.4	45.4	51.8
1985	43.0	37.5	35.3	43.5	55.5	42.7
1986	83.9	66.0	54.7	74.7	61.1	67.7
1987	62.7	57.3	46.8	67.4	69.0	61.8
1988	51.2	61.1	62.7	54.4	47.3	56.0
1989	55.4	58.8	48.1	47.8	52.9	51.6
1990	29.1	39.4	55.4	44.0	47.9	44.1
1991	59.7	71.2	64.8	72.1	78.9	68.4
1992	52.3	59.9	48.6	48.1	63.3	58.2
1993	59.8	87.8	75.0	73.9	76.8	74.3
1994	68.6	82.3	61.3	81.5	68.2	72.3
1995	33.8	46.5	43.9	42.0	50.9	44.4
1996	89.5	93.2	88.4	92.2	82.1	87.6
1997	58.2	55.5	58.8	62.0	70.1	63.9
1998	56.9	72.8	66.4	72.3	84.5	71.1
1999	63.7	59.9	61.1	63.2	60.6	62.0
2000	57.7	68.0	54.7	69.2	67.4	62.3
2001	40.6	48.7	55.6	62.2	66.0	55.8
2002	53.1	63.4	60.4	68.6	68.3	66.8
2003	59.1	57.5	55.2	58.6	49.7	58.8
2004	57.0	60.5	61.1	70.3	67.9	64.4
2005	53.4	65.9	61.4	59.9	72.6	62.3
2006	51.0	64.9	53.4	51.0	52.1	56.9
2007	68.4	79.0	67.3	67.6	70.0	69.4
2008	58.6	74.1	64.7	66.6	71.4	65.4
2009	59.9	67.8	63.2	69.2	69.5	66.5
2010	70.0	71.3	79.0	60.8	57.3	68.0
2011	61.4	59.6	57.9	66.7	63.5	62.5
2012	49.1	50.3	59.4	50.5	41.5	50.7

[a] Values represent the sums of mean statewide index values for 14 species surveyed. Means were calculated using all surveys completed in the state, not by averaging values from the 5 food survey areas.

Figure 1. Boundaries of Minnesota's 5 bear food areas.

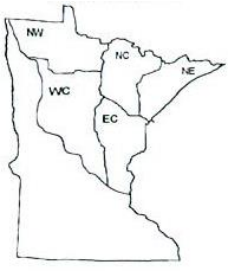


Table 11. Index values of bear food abundance[a] in 2012 compared to the previous 28-year mean (1985–2011) in 5 survey areas across Minnesota's bear range. Shaded values indicate particularly low (pink) and high (green) fruit abundance (≥1 point difference for individual foods; ≥5 points difference for composite scores).

	NW		NC		NE		WC		EC		Entire Range	
FRUIT	28yr mean	2012 *n* =20[b]	28yr mean	2012 *n* = 15	28yr mean	2012 *n* = 8	28yr mean	2012 *n* = 14	28yr mean	2012 *n* = 9	28yr mean	2012 *n* =45[b]
SUMMER												
Sarsaparilla	4.5	4.8	5.9	5.6	5.4	5.4	4.7	4.5	5.7	2.4	5.1	4.2
Pincherry	3.2	2.5	4.4	2.3	4.1	3.2	3.9	3.1	3.8	2.4	3.9	2.7
Chokecherry	5.5	4.2	5.3	3.1	4.4	3.5	5.5	3.3	4.7	2.9	5.2	3.7
Juneberry	4.9	4.6	4.7	6.0	4.8	7.0	3.8	3.8	4.0	2.6	4.4	4.3
Elderberry	1.4	1.2	3.2	1.5	3.6	4.5	3.2	1.4	3.4	0.8	3.0	2.1
Blueberry	5.0	1.2	5.4	1.7	4.9	2.6	3.7	1.8	3.7	2.3	4.4	1.8
Raspberry	6.6	6.4	8.1	7.1	8.0	6.0	7.1	5.4	7.1	5.0	7.3	5.9
Blackberry	1.3	1.5	2.3	2.5	1.0	1.3	3.5	3.1	4.3	4.0	2.9	2.9
FALL												
Wild Plum	2.1	2.0	1.8	1.3	1.0	1.0	2.6	1.8	2.4	2.3	2.1	1.7
HB Cranberry	5.2	3.0	4.4	2.6	3.6	4.6	3.7	2.7	3.6	2.2	4.0	2.9
Dogwood	6.0	3.3	5.8	3.6	5.0	5.2	5.8	3.9	6.0	1.3	5.7	3.5
Oak	3.4	6.4	2.9	5.0	1.6	3.0	5.8	7.1	5.8	6.7	4.3	6.2
Mountain Ash	1.5	1.4	2.6	1.1	4.6	4.7	1.8	1.2	2.2	1.6	2.6	2.1
Hazel	6.3	6.7	7.7	6.9	7.3	7.5	8.1	7.5	7.9	5.0	7.4	6.7
TOTAL	56.9	49.1	64.7	50.3	59.1	59.4	63.1	50.5	64.5	41.5	62.2	50.7

b *n* = Number of surveys used to calculate each area-specific mean index value for 2011.

C Sample size for the entire bear range does not equal the sum of the sample sizes of the 5 areas because some surveys were conducted on the border of 2 or more areas and were included in tabulations for each area.

Table 12. Regional productivity indices (summed) for oak, hazel, and dogwood, 1984– 2012. Shaded blocks indicate particularly low (≤5.0, yellow) or high (≥8.0, tan) fall food productivity.

	Survey Area					
Year	NW	NC	NE	WC	EC	Entire Range [a]
1984	4.2	7.6	7.0	6.2	7.0	6.5
1985	4.9	2.8	4.2	4.7	5.3	4.4
1986	7.2	5.0	4.0	7.0	6.2	6.2
1987	8.0	7.8	7.3	7.6	8.0	7.7
1988	5.5	7.2	7.3	6.8	6.1	6.7
1989	6.0	5.3	4.1	5.7	6.4	5.8
1990	3.3	4.2	6.4	5.7	6.4	5.2
1991	6.2	6.2	5.4	7.2	7.7	6.7
1992	4.7	5.0	4.4	4.4	6.8	5.1
1993	5.3	7.1	6.7	6.2	7.7	6.5
1994	7.1	7.8	5.8	7.8	7.1	7.2
1995	4.8	4.8	5.1	4.6	5.3	4.9
1996	8.7	8.6	8.1	9.2	8.5	8.6
1997	5.8	5.4	5.1	6.8	6.5	6.2
1998	5.8	6.0	6.3	7.1	7.8	6.7
1999	6.4	5.1	5.9	6.6	6.0	6.2
2000	5.8	7.7	7.2	7.5	8.5	7.0
2001	3.4	4.1	5.7	6.0	6.5	5.2
2002	8.7	7.1	6.6	8.8	8.2	8.1
2003	6.3	6.0	5.5	6.2	6.0	6.1
2004	6.1	5.4	5.4	6.4	6.1	6.0
2005	5.8	5.8	6.1	6.4	7.0	6.2
2006	6.7	6.1	6.0	6.7	5.8	6.3
2007	6.0	5.8	5.7	6.6	6.4	6.2
2008	6.6	7.3	6.2	7.0	8.9	7.1
2009	5.1	6.2	5.3	6.3	6.5	6.0
2010	7.7	6.4	6.5	6.2	5.4	6.6
2011	5.8	6.5	6.2	7.0	7.4	6.5
2012	6.2	6.3	6.3	6.5	4.8	6.1

[a] This value represents the sum of mean statewide productivity index values for hazel, oak, and dogwood. Means were calculated using all surveys completed in the state, not by averaging values from the 5 food survey areas.

Figure 3. Productivity of key fall bear foods in Minnesota's bear range, 2012.

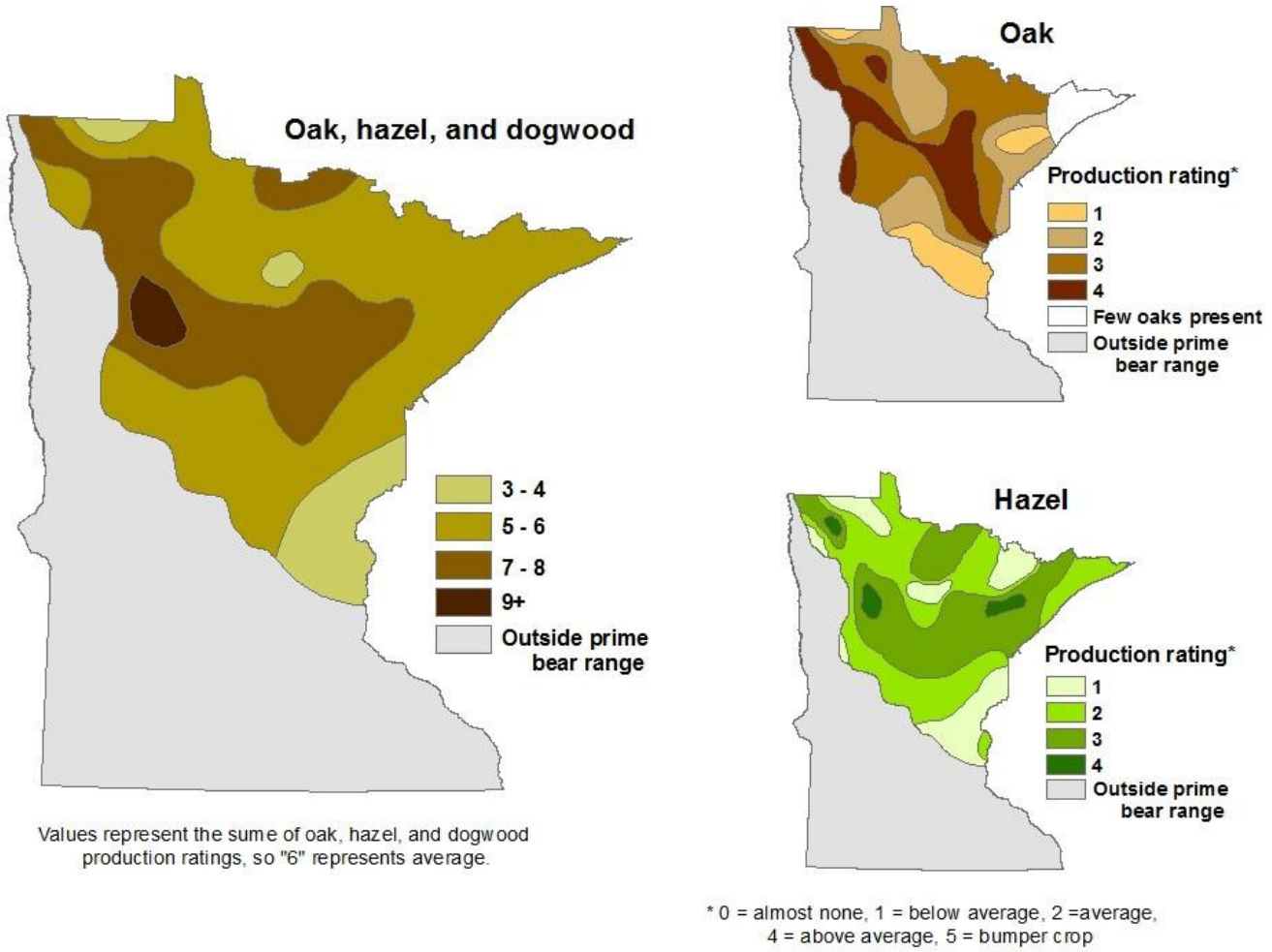


Figure 4. Summed bear food index (from Table 10) across Minnesota's bear range, comparing range of year-to-year variability during 1984–1996 versus 1997–2011, and 2012.

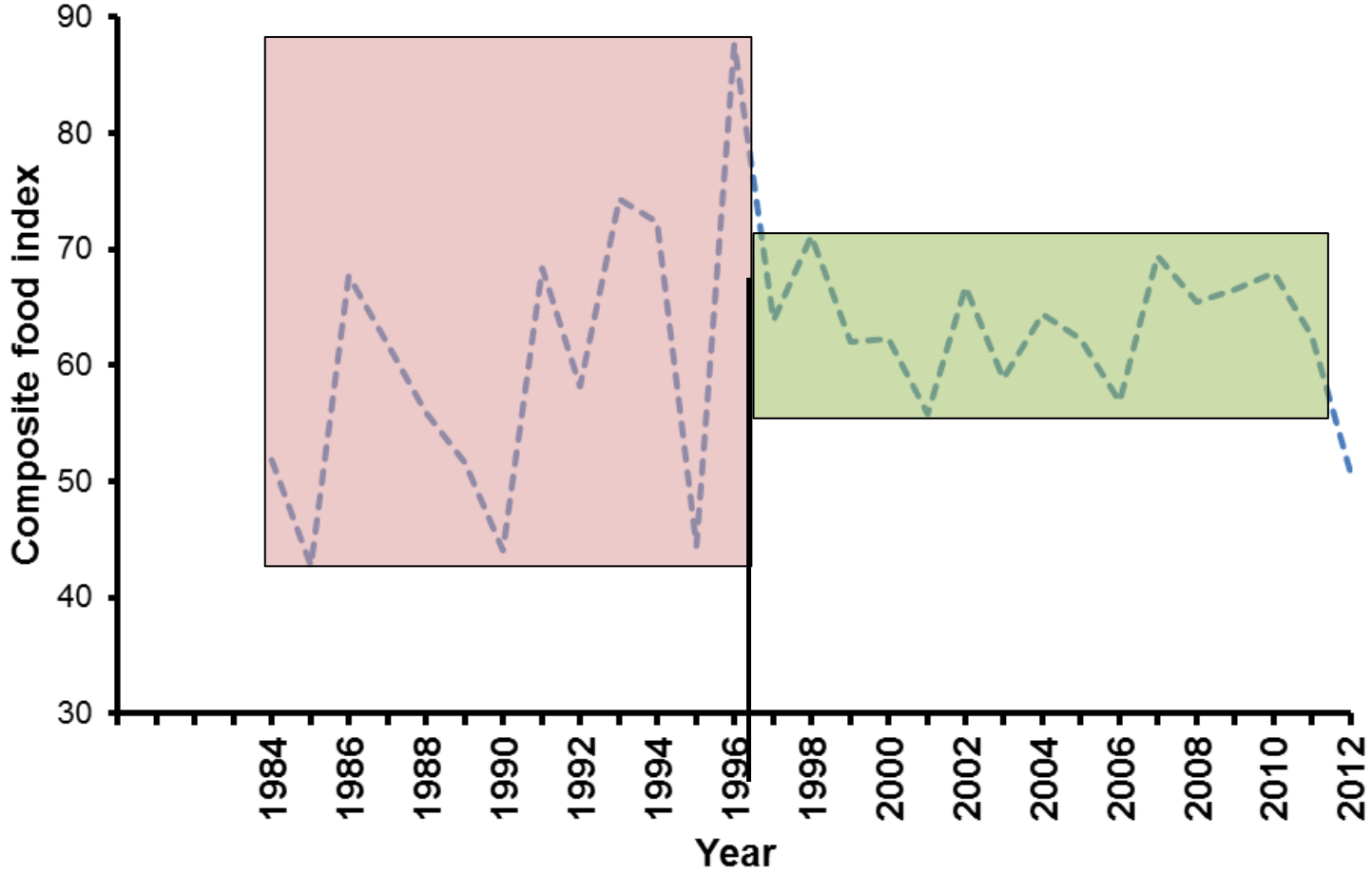
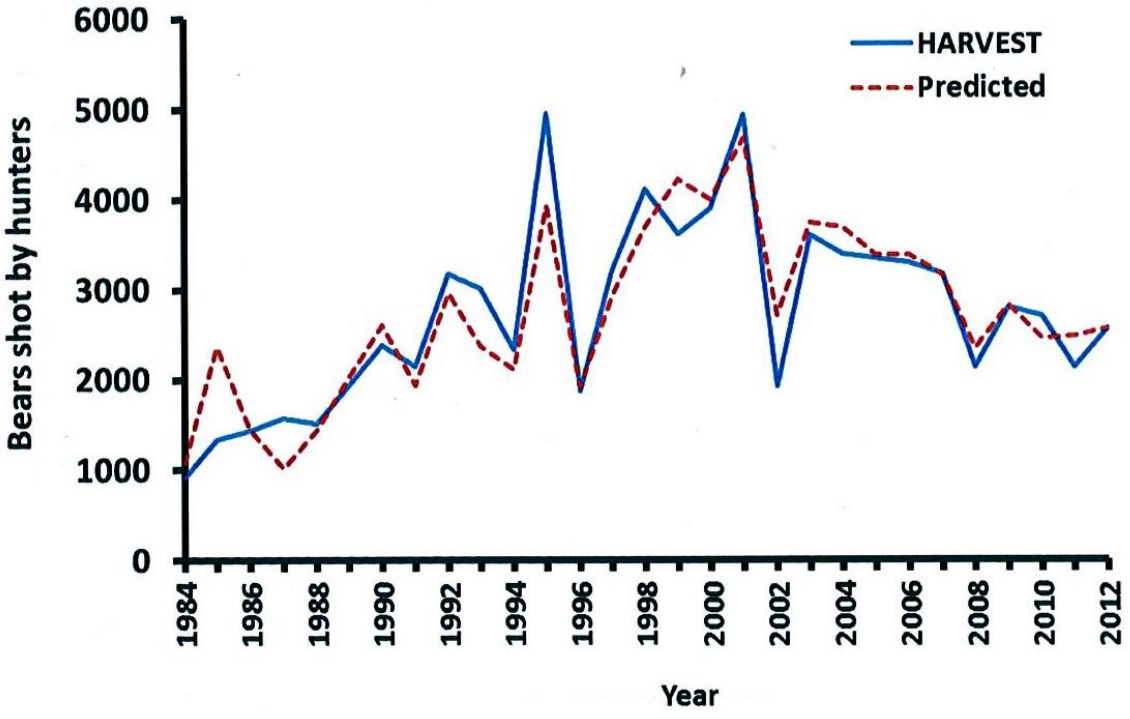


Figure 5. Number of bears harvested vs. number predicted based on fall food abundance and the number of hunters: (top graph) 1984-2012 (R^2=0.84); (bottom graph) 2000-2012 (R^2=0.95).



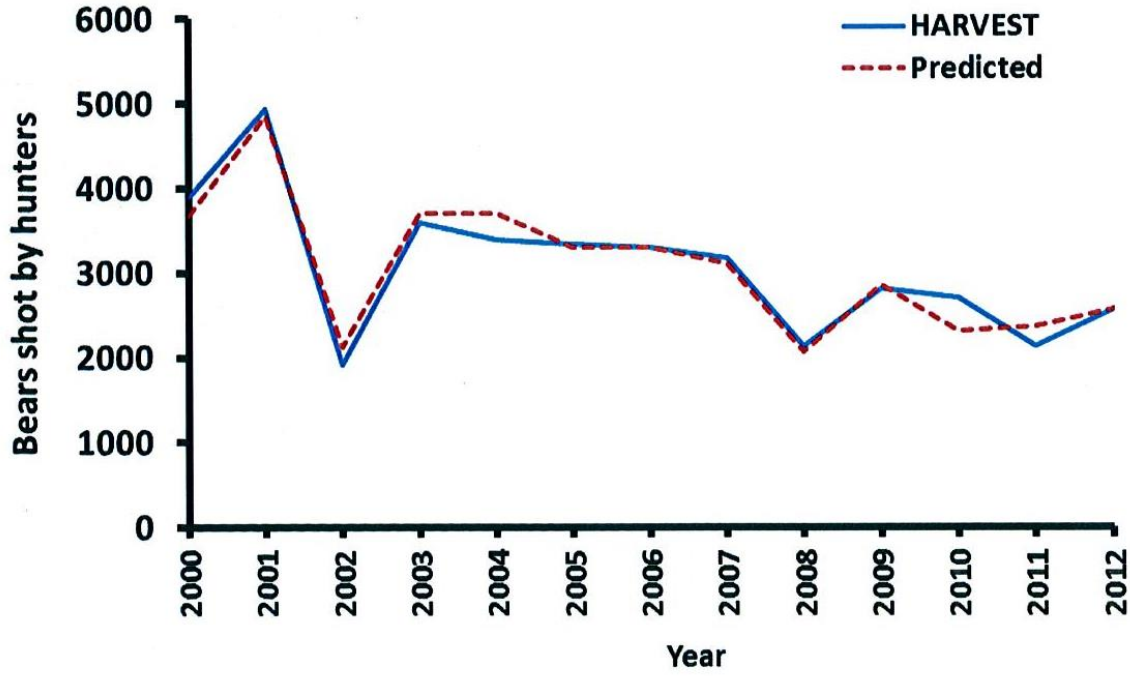


Figure 6. Sex ratios of harvested bears by BMU, 2006–2012.

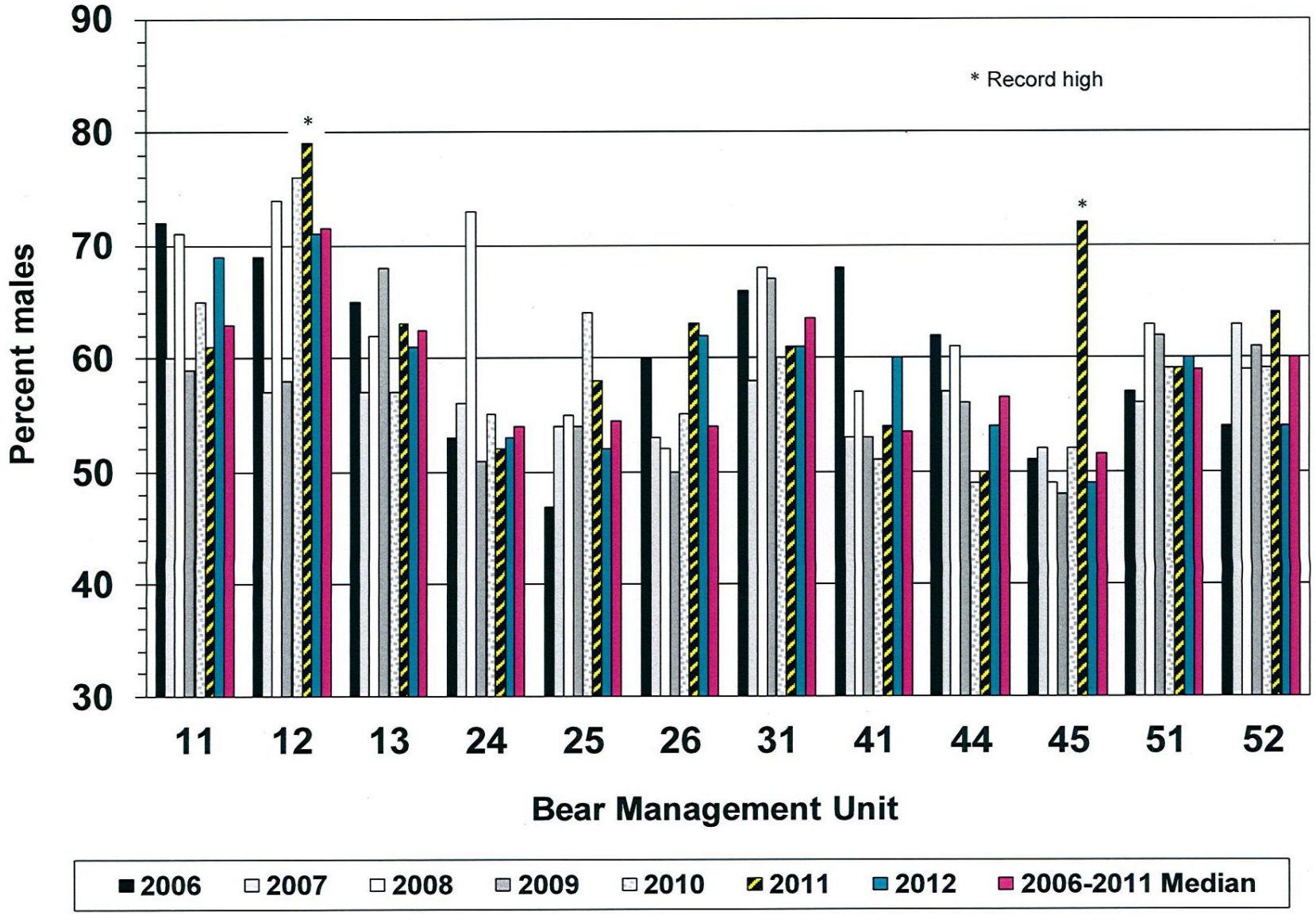


Figure 7. Median ages of harvested bears by BMU, 2006–2012.

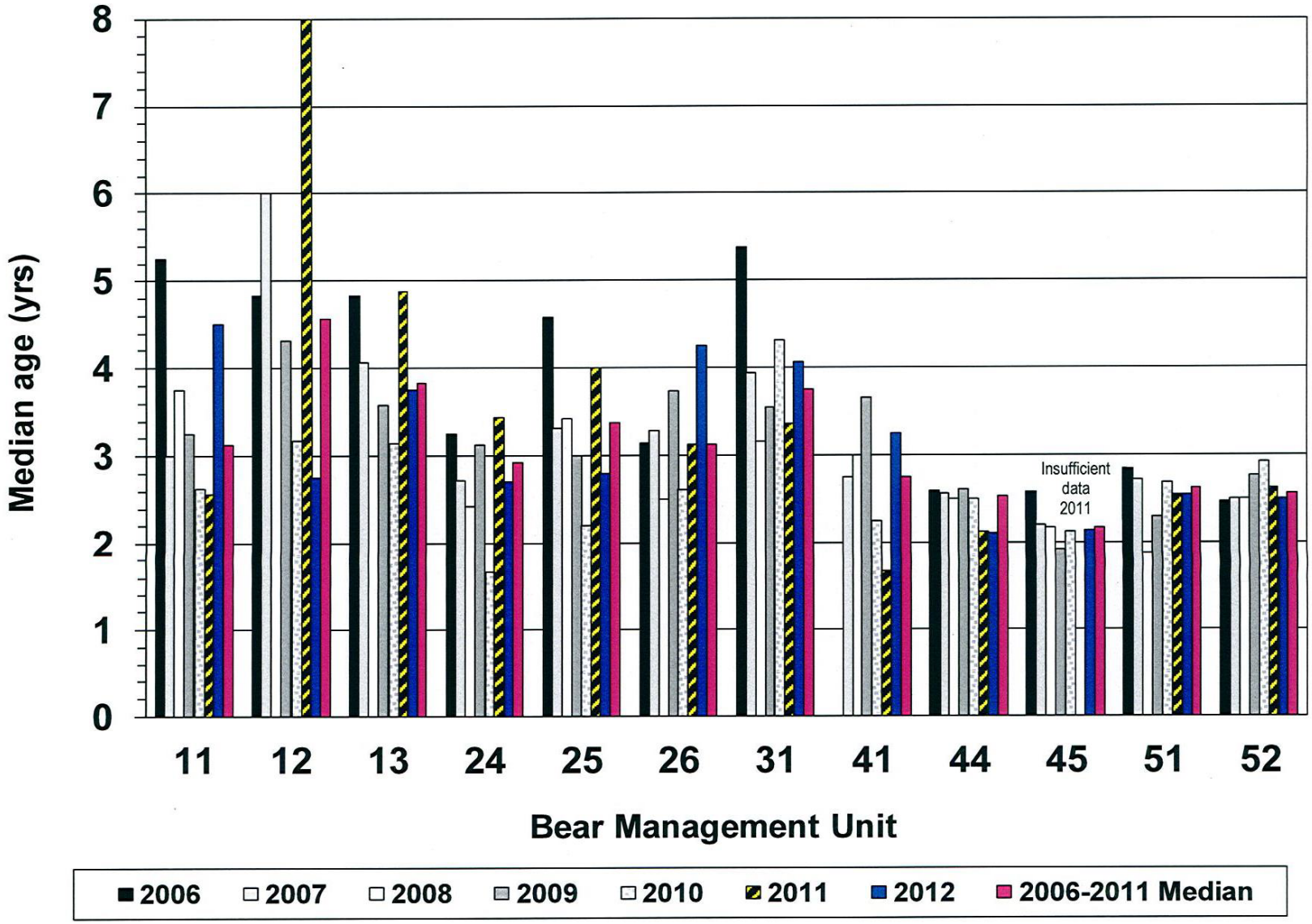


Figure 8. Statewide harvest structure: median ages (years) by sex, 1982–2012.

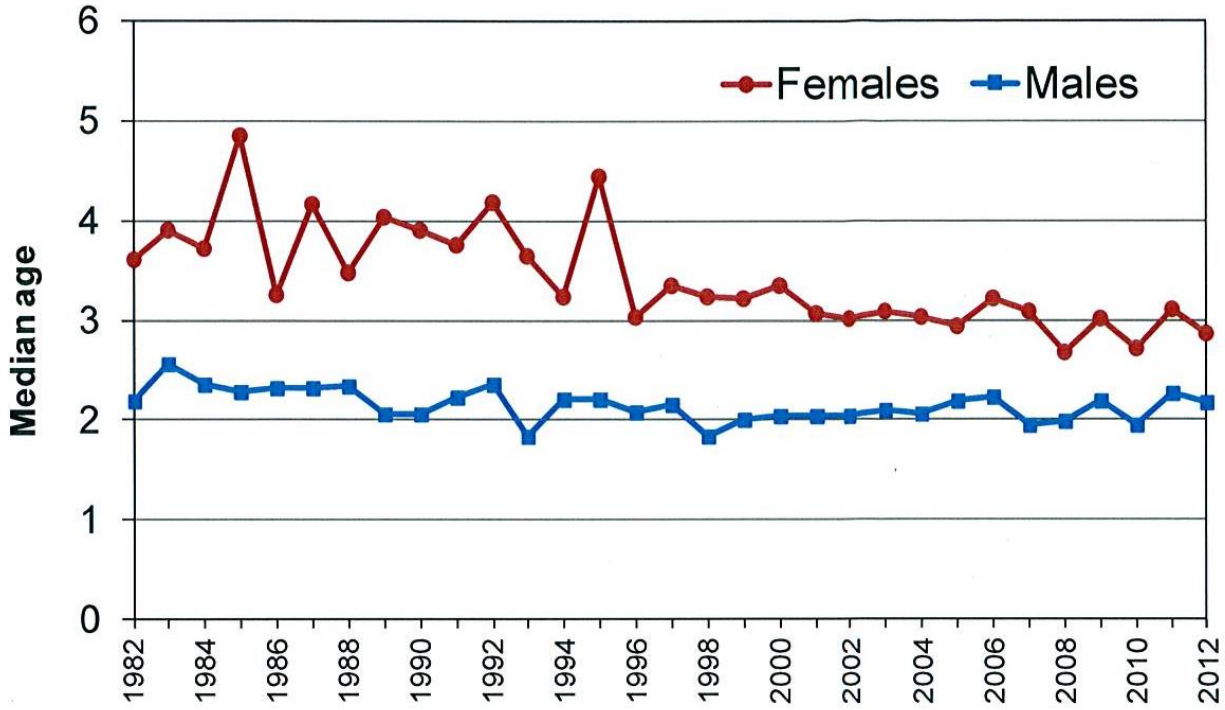


Figure 9. Statewide harvest structure: proportion of each sex in age category, 1982–2012. Trend lines are significant.

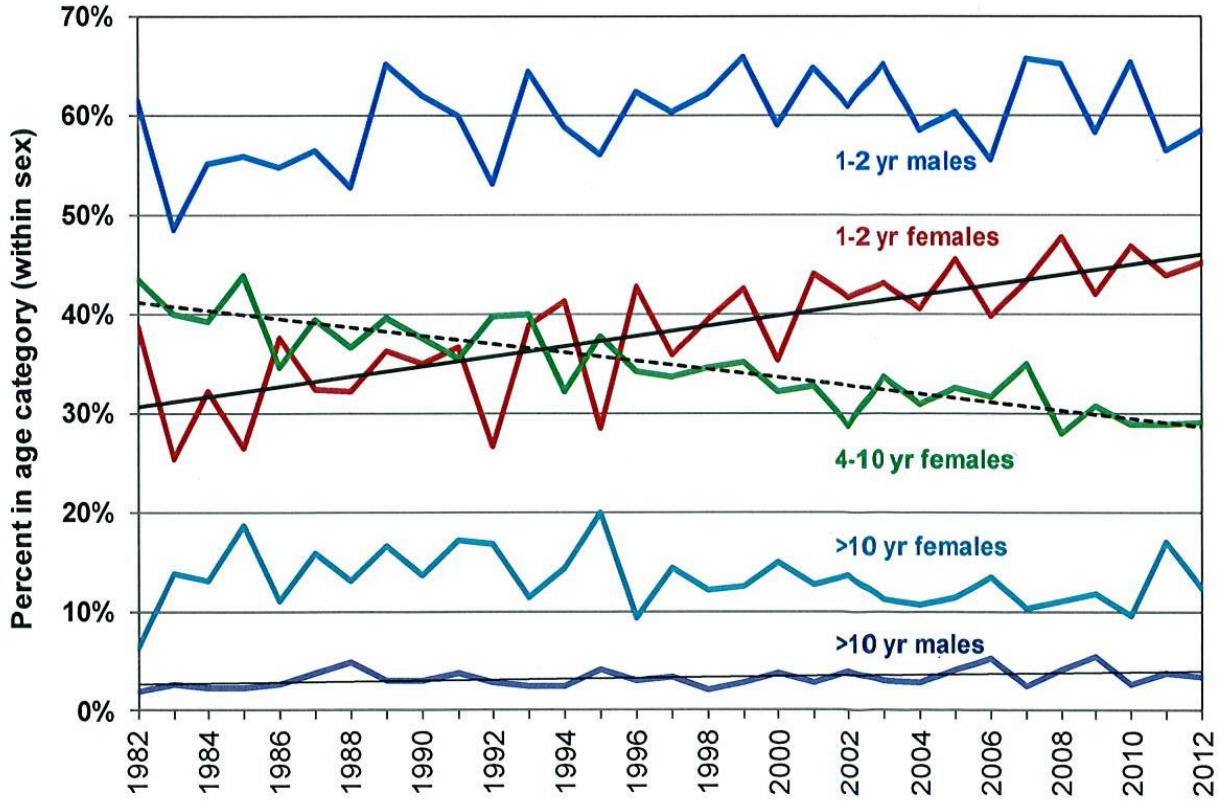


Figure 10. Statewide population trend derived from Downing reconstruction using the harvest age structures from 1980−2012. Curves were scaled (elevated) to various degrees to match the tetracycline-based mark–recapture estimates.

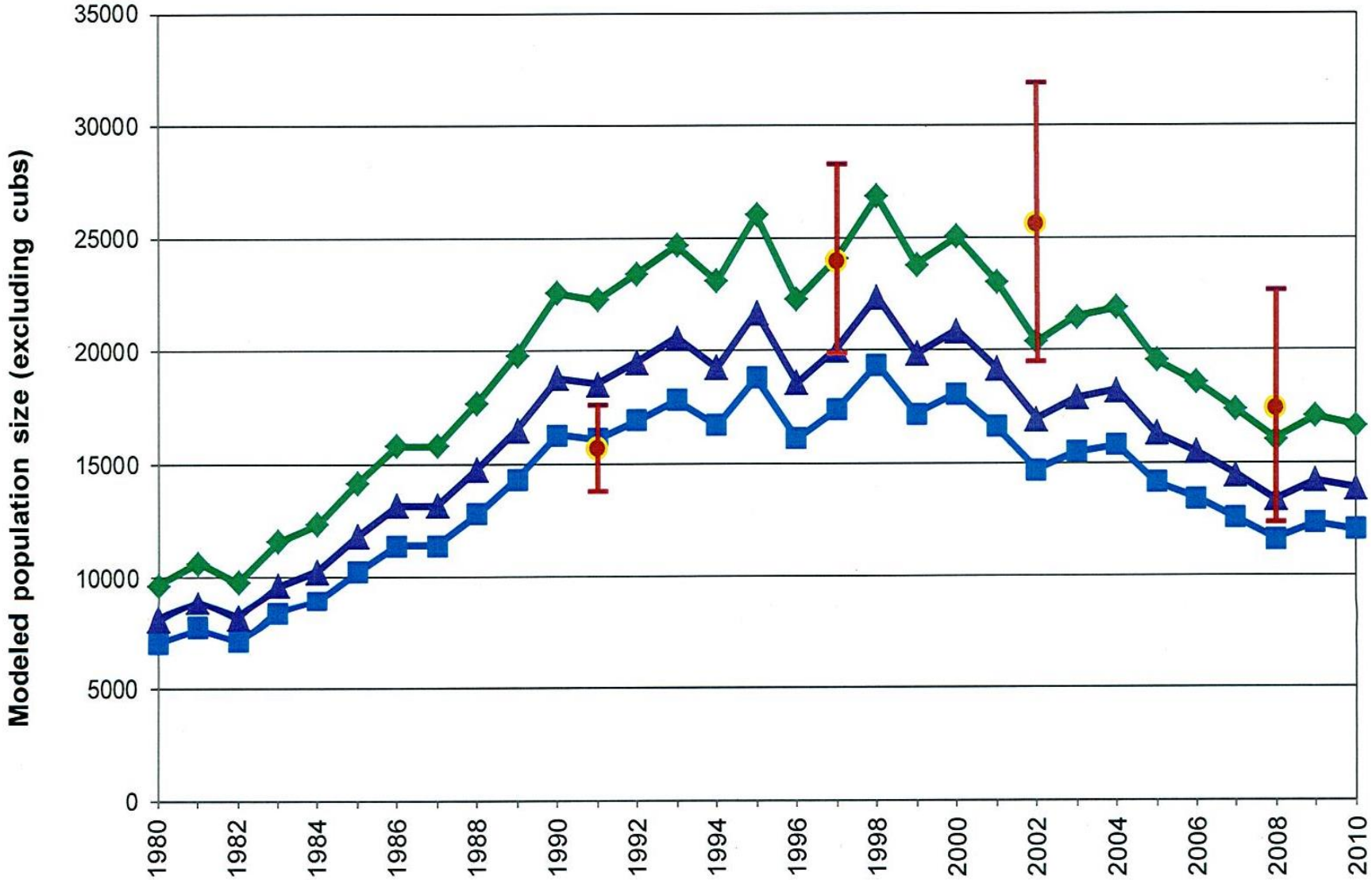
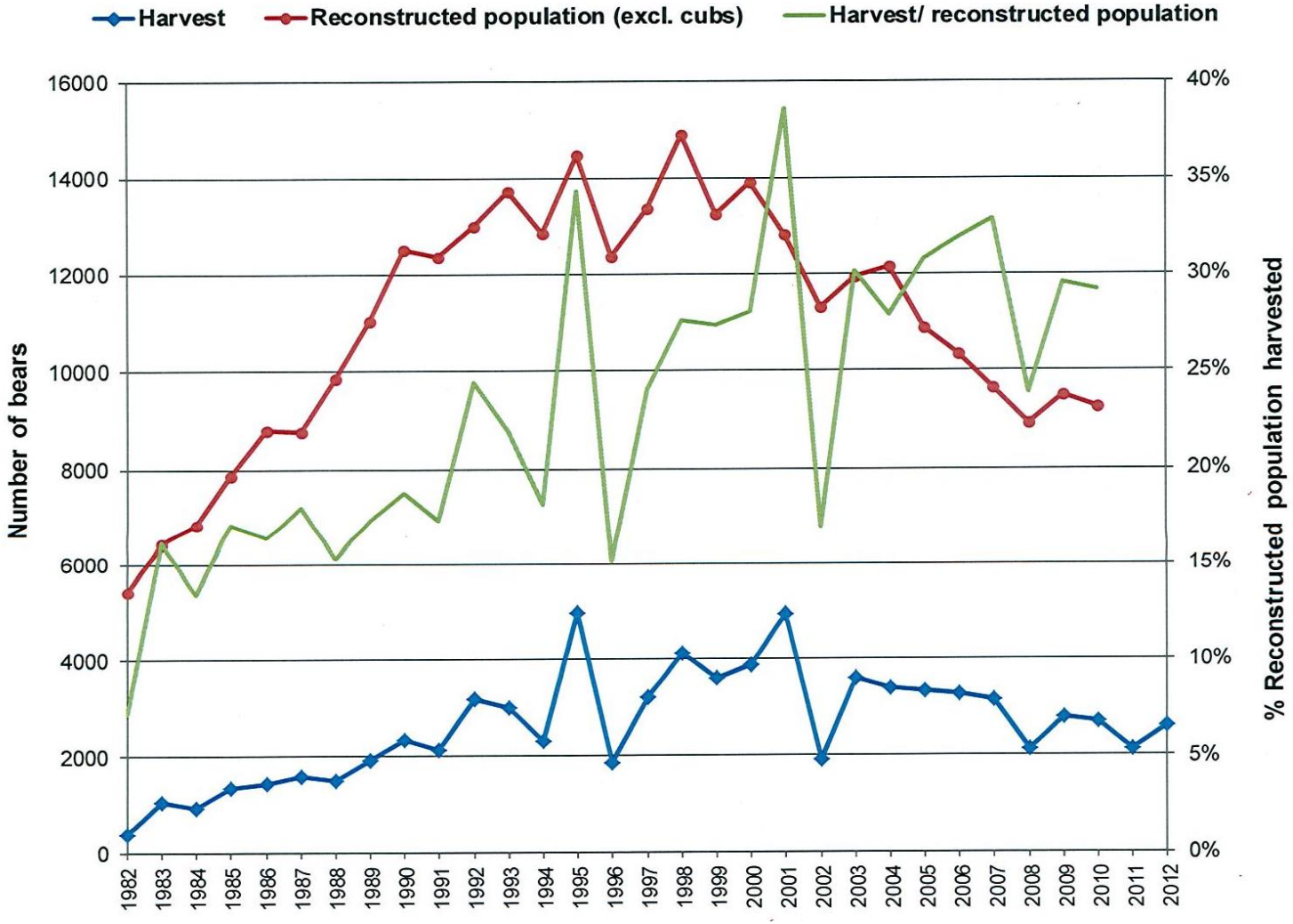


Figure 11. Statewide population trend derived from Downing reconstruction versus total harvest and harvest as a percent of reconstructed population size. The reconstructed population consists only of bears eventually harvested, not bears that died of other causes. Thus, the actual population size is larger than the reconstructed population.



2012 MINNESOTA DEER HARVEST REPORT

Leslie McInenly, Big Game Program Leader, Division of Fish and Wildlife

INTRODUCTION

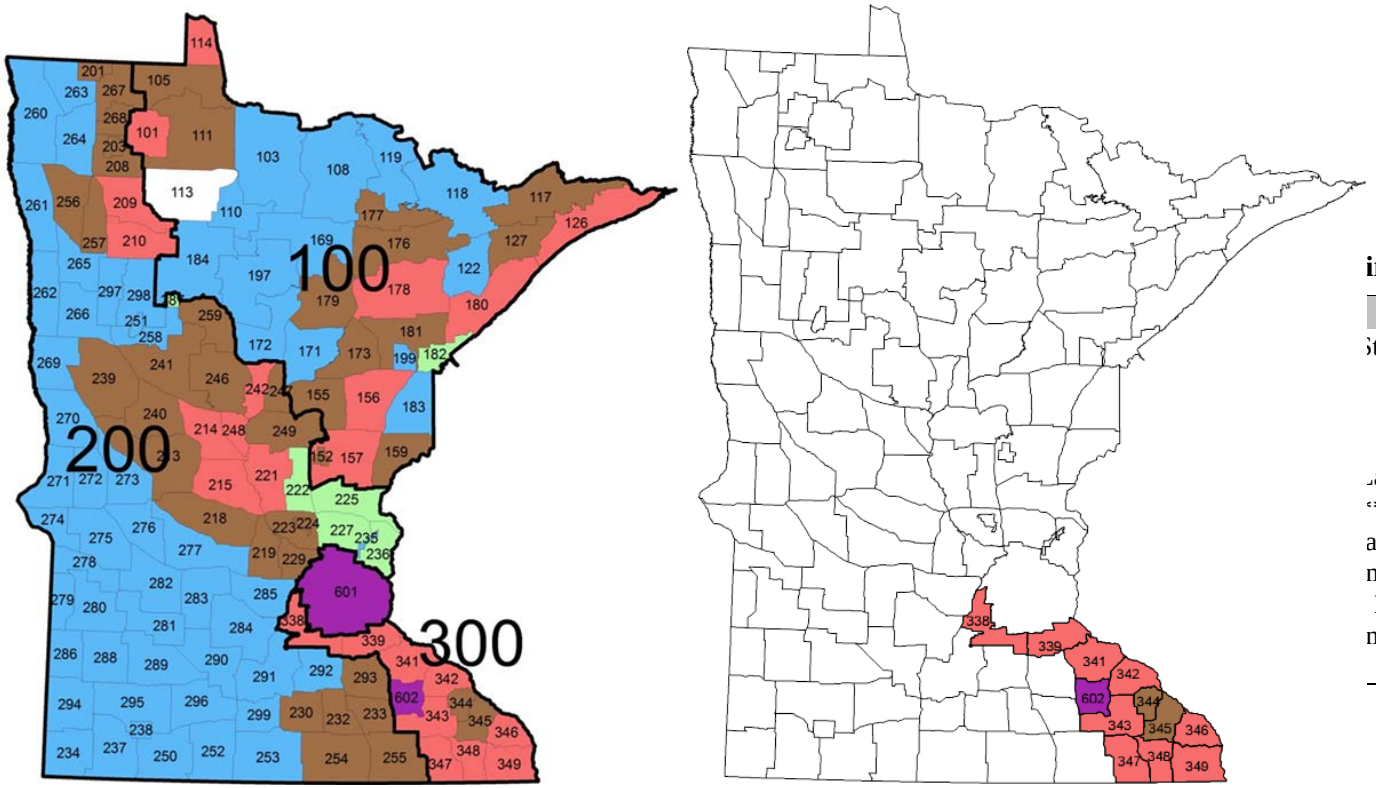
The white-tailed deer may be considered Minnesota's most popular wildlife species. Each year 500,000 hunters harvest close to 200,000 deer. In 2012, hunters registered 186,634 deer

METHODS

Every deer taken by hunting in Minnesota must be registered. In 2012, hunters were required to register deer 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 also be registered using the interest and telephone except in areas under Disease Management tag restrictions (PA 602) and in the 300-series areas while antler point restrictions were being tested (2010,2011,2012). 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

Outcomes of the 2012 deer harvest are presented in the following tables.



innesota Firearms Deer Seasons

	DATES
Statewide (A)*	
	Nov. 3-18
	Nov. 3-11
	Nov. 3-11
ate Southeast (B)**	Nov. 17-25
**	Nov. 24-Dec. 9
agement Area (601)***	
ms or muzzleloader.)	Nov. 3-25
Disease Area (602)***	
ms or muzzleloader.)	Nov. 3-25
	Oct. 18-21

Figure 1. 2012 Firearms and Archery Deer Seasons.

2012 Minnesota Archery Deer Season Dates: September 15-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, 2001-2012.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
REGULAR FIREARMS												
Resident License Sales	401,005	367,964	344,875	309,698	291,298	299,774	285,286	376,006	377,077	379,866	382,668	391,822
Non-Resident License Sales	10,972	10,835	11,334	12,036	12,523	12,520	12,520	11,883	11,759	11,908	11,955	12,483
Bonus Permit Sales	59,013	105,699	194,201	183,186	184,566	167,343	145,522	190,156	140,920	143,763	142,049	89,750
Multi-Zone Buck License Sales	41,921	35,658	32,929	32,359	28,233	15,984	15,051	N/A	N/A	N/A	N/A	N/A
Youth License Sales	4,011	2,884	34,463	51,347	50,501	49,599	49,242	50,397	56,678	59,726	60,943	62,949
All Season Deer License Sales	3,986	22,125	30,998	46,008	59,090	75,511	76,385	N/A	N/A	N/A	N/A	N/A
Total License Sales	519,601	545,165	648,800	634,634	626,211	620,731	584,006	628,442	586,434	595,263	597,615	557,004
Registered Buck Harvest[1]	98,894	101,333	110,440	116,612	95,594	95,695	97,528	85,646	83,820	88,027	76,003	84,729
Antlerless Permits Offered	286,540	365,667	31,625	30,760	28,830	18,925	18,830	32,325	60,100	60,083	15,252	33,340
Antlerless Permits Issued	196,603	192,907	25,386	24,111	25,656	18,925	18,830	32,325	60,100	60,083	60,083	33,340
Antlerless Permits App.	225,341	202,086	30,253	28,454	31,403	31,403	31,403	31,403	90,882	86,783	86,783	72,236
Registered AL Harvest[1]	98,169	102,280	147,420	123,278	119,363	135,981	118,860	98,147	78,525	78,525	88,197	71,140
Registered Total Harvest[1]	197,063	203,613	257,860	239,890	214,957	231,676	216,388	183,793	162,345	174,104	164,200	155,869
Registered % Successful[2]	37.9	37.3	39.7	37.8	34.3	37.3	37.1	35.1	32.1	35.6	32.9	32.0
ARCHERY												
Resident License Sales	69,608	57,532	59,339	50,601	50,293	49,595	52,780	87,872	88,707	91,156	90,252	95,259
Non-Resident License Sales	1,288	1,275	1,428	1,144	1,207	1,286	1,509	1,509	1,610	1,638	1,718	1,814
Youth Archery Sales	N/A	N/A	3,748	7,261	7,489	7,688	7,663	9,005	9,157	9,577	10,306	11,276
Mgmt Permit License Sales	22,141	18,126	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total License Sales	93,037	76,933	60,767	59,006	58,989	58,569	61,952	99,033	99,474	102,371	102,276	108,349
Total Harvest - All-Season License			2,356	3,489	4,563	8,284	6,900	N/A	N/A	N/A	N/A	N/A
Total Archery Harvest	15,884	14,744	21,691	20,726	23,538	25,360	24,161	22,632	20,629	22,057	20,444	21,605
Registered % Successful[2]	17.1	19.2	22.3	29.2	24.6	24.8	24.3	18.5	17.5	17.8	17.0	18.8
MUZZLELOADER												
Total Muzzleloader License Sales	13,043	11,764	9,142	10,512	9,226	10,781	9,867	64,673	63,282	55,640	59,384	58,363
Estimated All-Season Hunters	--	--	12,020	14,168	23,293	23,293	26,813	N/A	N/A	N/A	N/A	N/A
Total Muzzleloader Harvest	4,494	3,505	9,466	9,289	15,421	13,507	12,138	9,572	7,929	9,023	7,416	7,779
Registered % Successful[2]	34.5	29.8	44.7	37.6	47.4	39.6	28.2	13.4	11.3	16.2	12.4	12.4
Antlerless Permits Offered										5,792	1,997	1,635
Antlerless Permits App.										7,260	2,615	4,629
TOTAL Registered Harvest	217,452	222,050	290,525	260,604	255,736	270,778	260,434	221,837	194,186	207,313	192,331	186,634

[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, 2012.

Firearms/Zone	Hunters	Harvest			Overall Success
		Bucks	Antlerless	Total	
1	181,143	33,124	25,823	58,947	30.9%
2	238,964	44,345	35,611	79,956	31.8%
3A	25,210	4,578	4,235	8,813	31.2%
3B	13,099	1,256	3,566	4,822	32.4%
CWD	1,911	498	731	1,229	46.0%
Free Landowner[1]	4,773	0	1,499	1,499	31.5%
Muzzleloader[2]	59,384	3,251	4,528	7,779	12.4%
Archery[3]	102,276	8,663	12,942	21,605	18.8%
TOTAL[4]	**514,020**	**97,136**	**89,498**	**186,634**	**33.7%**

[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, 2012. Includes all firearm licenses.

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	238	53	167	43	501	496	0.48	0.53	1.01
103	1A	774	36	123	17	950	1,824	0.42	0.10	0.52
105	1A	743	110	438	86	1,377	932	0.80	0.68	1.48
108	1A	1086	27	168	38	1,319	1,701	0.64	0.14	0.78
110	1A	956	103	447	91	1,597	530	1.80	1.21	3.01
111	1A	434	64	236	42	776	1,440	0.30	0.24	0.54
114	1A	44	4	31	5	84	412	0.11	0.10	0.20
117	1A	48	4	8	4	64	1,129	0.04	0.01	0.06
118	1A	617	10	61	9	697	1,445	0.43	0.06	0.48
119	1A	753	13	81	12	859	946	0.80	0.11	0.91
122	1A	381	27	100	20	528	622	0.61	0.24	0.85
126	1A	404	38	192	26	660	979	0.41	0.26	0.67
127	1A	97	9	36	2	144	587	0.17	0.08	0.25
152	1A	98	17	65	10	190	62	1.59	1.49	3.08
155	1A	1582	305	1021	176	3,084	639	2.48	2.35	4.83
156	1A	1725	457	1485	322	3,989	834	2.07	2.71	4.78
157	1A	2504	614	1757	385	5,260	904	2.77	3.05	5.82
159	1A	1121	172	703	98	2,094	575	1.95	1.69	3.64
169	1A	1477	152	605	106	2,340	1,202	1.23	0.72	1.95
171	1A	1312	135	492	83	2,022	729	1.80	0.97	2.77
172	1A	1911	173	647	135	2,866	786	2.43	1.21	3.64
173	1A	809	174	651	117	1,751	617	1.31	1.53	2.84
176	1A	1576	196	865	159	2,796	1,150	1.37	1.06	2.43
177	1A	734	140	487	90	1,451	553	1.33	1.30	2.63
178	1A	2004	510	1783	352	4,649	1,325	1.51	2.00	3.51
179	1A	1726	332	1165	225	3,448	939	1.84	1.83	3.67
180	1A	1070	154	649	173	2,046	999	1.07	0.98	2.05
181	1A	1150	197	670	144	2,161	746	1.54	1.36	2.90
182	1A	441	95	393	93	1,022	280	1.58	2.08	3.65
183	1A	1304	147	537	70	2,058	675	1.93	1.12	3.05
184	1A	2888	302	1098	241	4,529	1,318	2.19	1.24	3.44
197	1A	1010	74	336	65	1,485	1,343	0.75	0.35	1.11
199	1A	107	2	38	3	150	152	0.70	0.28	0.98
201	2A	72	13	61	12	158	169	0.43	0.51	0.93
203	2A	74	5	25	7	111	132	0.56	0.28	0.84
208	2A	229	30	122	20	401	379	0.60	0.45	1.06
209	2A	516	105	398	115	1,134	641	0.80	0.96	1.77
210	2A	926	196	744	205	2,071	635	1.46	1.80	3.26
213	2A	1594	316	819	242	2,971	1,161	1.37	1.19	2.56
214	2A	1458	433	996	376	3,263	566	2.58	3.19	5.77
215	2A	1096	302	764	225	2,387	730	1.50	1.77	3.27
218	2A	883	189	520	132	1,724	912	0.97	0.92	1.89
219	2A	514	107	291	66	978	427	1.20	1.09	2.29
221	2A	959	320	667	263	2,209	647	1.48	1.93	3.41
222	2A	859	268	654	242	2,023	413	2.08	2.82	4.90
223	2A	505	95	224	76	900	385	1.31	1.03	2.34
224	2A	104	15	45	13	177	49	2.12	1.49	3.61
225	2A	1239	278	791	237	2,545	635	1.95	2.06	4.01
227	2A	793	230	469	156	1,648	491	1.61	1.74	3.35

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	196	28	107	22	353	313	0.63	0.50	1.13
230	2A	261	56	150	35	502	464	0.56	0.52	1.08
232	2A	247	51	117	15	430	380	0.65	0.48	1.13
233	2A	209	24	98	16	347	386	0.54	0.36	0.90
234	2A	202	8	87	15	312	637	0.32	0.17	0.49
235	2A	43	6	12	4	65	37	1.17	0.60	1.77
236	2A	628	150	382	90	1,250	404	1.56	1.54	3.10
237	2A	278	15	88	9	390	737	0.38	0.15	0.53
238	2A	88	11	25	1	125	98	0.90	0.38	1.28
239	2A	1374	316	827	206	2,723	1,110	1.24	1.22	2.45
240	2A	1579	277	829	207	2,892	694	2.28	1.89	4.17
241	2A	2901	664	1695	515	5,775	1,047	2.77	2.75	5.52
242	2A	501	167	481	132	1,281	307	1.63	2.54	4.17
246	2A	2142	480	1352	388	4,362	860	2.49	2.58	5.07
247	2A	642	166	466	120	1,394	263	2.44	2.86	5.29
248	2A	387	80	286	94	847	229	1.69	2.01	3.71
249	2A	1116	264	647	207	2,234	729	1.53	1.53	3.06
250	2A	335	18	91	10	454	730	0.46	0.16	0.62
251	2A	87	11	34	14	146	68	1.28	0.87	2.14
252	2A	318	22	88	12	440	735	0.43	0.17	0.60
253	2A	435	18	113	15	581	987	0.44	0.15	0.59
254	2A	494	72	237	29	832	946	0.52	0.36	0.88
255	2A	452	61	171	43	727	774	0.58	0.36	0.94
256	2A	391	60	260	53	764	654	0.60	0.57	1.17
257	2A	392	47	186	33	658	426	0.92	0.62	1.54
258	2A	888	134	375	120	1,517	381	2.33	1.65	3.98
259	2A	1615	344	971	241	3,171	546	2.96	2.85	5.81
260	2A	327	15	72	9	423	1,252	0.26	0.08	0.34
261	2A	160	6	35	3	204	796	0.20	0.06	0.26
262	2A	177	24	70	18	289	677	0.26	0.17	0.43
263	2A	345	21	80	17	463	513	0.67	0.23	0.90
264	2A	679	35	165	30	909	672	1.01	0.34	1.35
265	2A	420	45	180	27	672	495	0.85	0.51	1.36
266	2A	326	34	121	20	501	625	0.52	0.28	0.80
267	2A	169	28	95	12	304	472	0.36	0.29	0.64
268	2A	212	32	128	25	397	239	0.89	0.77	1.66
269	2A	194	14	77	21	306	652	0.30	0.17	0.47
270	2A	182	9	36	4	231	758	0.24	0.06	0.30
271	2A	242	15	77	9	343	646	0.37	0.16	0.53
272	2A	209	10	54	8	281	544	0.38	0.13	0.52
273	2A	446	62	170	37	715	634	0.70	0.42	1.13
274	2A	214	12	45	6	277	381	0.56	0.17	0.73
275	2A	400	13	106	16	535	777	0.52	0.17	0.69
276	2A	521	41	140	27	729	575	0.91	0.36	1.27
277	2A	1105	72	348	59	1,584	876	1.26	0.55	1.81
278	2A	389	25	123	13	550	422	0.92	0.38	1.30
279	2A	235	15	95	12	357	346	0.68	0.35	1.03

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	256	13	98	9	376	676	0.38	0.18	0.56
281	2A	427	25	113	18	583	579	0.74	0.27	1.01
282	2A	137	7	21	3	168	780	0.18	0.04	0.22
283	2A	315	14	64	9	402	640	0.49	0.14	0.63
284	2A	359	20	73	13	465	853	0.42	0.12	0.54
285	2A	370	36	130	28	564	580	0.64	0.33	0.97
286	2A	377	14	78	14	483	458	0.82	0.23	1.05
287	2A	117	51	174	45	387	51	2.31	5.33	7.64
288	2A	427	26	92	12	557	630	0.68	0.21	0.88
289	2A	224	15	33	5	277	820	0.27	0.06	0.34
290	2A	445	32	147	15	639	666	0.67	0.29	0.96
291	2A	657	79	221	33	990	832	0.79	0.40	1.19
292	2A	420	65	136	43	664	517	0.81	0.47	1.28
293	2A	546	75	253	45	919	512	1.07	0.73	1.79
294	2A	327	19	121	10	477	689	0.47	0.22	0.69
295	2A	479	20	125	17	641	855	0.56	0.19	0.75
296	2A	305	12	84	5	406	675	0.45	0.15	0.60
297	2A	176	8	37	11	232	449	0.39	0.12	0.52
298	2A	739	43	155	28	965	677	1.09	0.33	1.43
299	2A	268	25	113	13	419	389	0.69	0.39	1.08
338	3A	170	45	131	32	378	472	0.36	0.44	0.80
338	3B	41	24	67	19	151	472	0.09	0.23	0.32
339	3A	186	31	116	35	368	406	0.46	0.45	0.91
339	3B	47	16	72	20	155	406	0.12	0.27	0.38
341	3A	493	100	287	66	946	483	1.02	0.94	1.96
341	3B	152	71	236	66	525	483	0.31	0.77	1.09
342	3A	460	80	326	80	946	374	1.23	1.30	2.53
342	3B	121	83	266	78	548	374	0.32	1.14	1.47
343	3A	345	62	241	56	704	486	0.71	0.74	1.45
343	3B	104	45	143	33	325	486	0.21	0.45	0.67
344	3A	337	32	243	42	654	190	1.78	1.67	3.45
344	3B	53	25	160	28	266	190	0.28	1.12	1.40
345	3A	342	31	131	29	533	335	1.02	0.57	1.59
345	3B	114	51	211	30	406	335	0.34	0.87	1.21
346	3A	605	108	353	104	1,170	328	1.85	1.72	3.57
346	3B	176	90	344	75	685	328	0.54	1.55	2.09
347	3A	345	43	195	40	623	434	0.80	0.64	1.44
347	3B	93	53	186	39	371	434	0.21	0.64	0.86
348	3A	510	90	404	56	1,060	332	1.53	1.65	3.19
348	3B	93	60	229	41	423	332	0.28	0.99	1.27
349	3A	785	113	449	84	1,431	499	1.57	1.29	2.87
349	3B	262	108	493	104	967	499	0.53	1.41	1.94

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	659	143	412	78	1,292	1,756	0.38	0.36	0.74
602	CWD	498	180	424	127	1,229	304	1.64	2.40	4.04
901	Park	3	0	3	0	6				
902	Park	74	22	73	17	186				
903	Park	6	1	1	0	8				
904	Park	6	2	3	2	13				
905	Park	4	0	3	0	7				
906	Park	7	2	8	2	19				
907	Park	3	0	3	0	6				
908	Park	4	0	1	0	5				
909	Park	0	3	4	0	7				
910	Park	0	5	4	3	12				
911	Park	0	0	1	0	1				
913	Park	0	3	4	2	9				
914	Park	12	2	13	1	28				
915	Park	5	2	5	0	12				
916	Park	26	4	15	2	47				
917	Park	3	0	0	0	3				
918	Park	2	0	4	0	6				
919	Park	0	3	4	3	10				
920	Park	0	2	2	2	6				
921	Park	29	18	67	12	126				
922	Park	5	3	9	3	20				
923	Park	0	1	1	0	2				
924	Park	0	4	24	1	29				
925	Park	7	1	1	0	9				
926	Park	4	5	14	3	26				
927	Park	37	4	24	6	71				
928	Park	10	10	16	7	43				
929	Park	9	7	18	3	37				
930	Park	13	5	32	6	56				
Total		**84,729**	**14,218**	**46,261**	**10,661**	**155,869**	**83,265**	**1.02**	**0.85**	**1.87**

Table 4. Firearm Harvest using Bonus and Disease Management Permits, 2012.

Managed Permit Areas.

Permit Area	Zone	Fawn Male	Adult Female	Fawn Female	Total
101	1A	39	113	31	183
114	1A	0	19	1	20
126	1A	22	116	17	155
156	1A	225	799	178	1,202
157	1A	316	955	208	1,479
178	1A	265	1,008	188	1,461
180	1A	84	331	99	514
209	2A	60	257	73	390
210	2A	109	461	129	699
214	2A	210	495	180	885
215	2A	127	375	114	616
221	2A	163	371	147	681
242	2A	93	240	73	406
248	2A	37	122	47	206
338	3A	22	79	16	117
338	3B	11	25	8	44
339	3A	22	82	27	131
339	3B	8	38	15	61
341	3A	61	203	46	310
341	3B	36	114	30	180
342	3A	45	223	61	329
342	3B	42	145	46	233
343	3A	44	172	37	253
343	3B	21	70	12	103
346	3A	61	238	70	369
346	3B	42	158	46	246
347	3A	29	128	24	181
347	3B	19	87	17	123
348	3A	55	267	40	362
348	3B	27	106	29	162
349	3A	72	294	56	422
349	3B	47	263	66	376
Total		**2,414**	**8,354**	**2,131**	**12,899**

Intensive Permit Areas

Permit Area	Zone	Fawn Male	Adult Female	Fawn Female	Total
182	1A	59	255	69	383
222	2A	171	401	182	754
225	2A	179	491	162	832
227	2A	155	317	103	575
236	2A	96	253	60	409
287	2A	35	131	39	205
601	Metro	103	306	64	473
602	CWD	146	374	113	633
Total		**944**	**2,528**	**792**	**4,264**

Table 5. Summary of Firearms Special Hunts, 2012. Includes regular, youth, and bonus permits.

			Harvest				
Area	**Dates**	**Permits Issued**	**Adult Male**	**Fawn Male**	**Adult Female**	**Fawn Female**	**Total**
900 - Cascade River State Park[1]	11/3-11/18	NA*	0	0	0	0	0
901 - Rice Lake Nat. Wildlife Refuge	11/10-11/18	40#	5	0	4	0	9
902 - St. Croix State Park[1]	11/9-11/12	400*	74	22	73	17	186
903 - Savanna Portage State Park	11/10-11/12	20*	6	1	1	0	8
904 - Gooseberry Falls State Park[1]	11/3-11/18	40*	6	2	3	2	13
905 - Split Rock Lighthouse State Park[1]	11/3-11/18	30*	4	0	3	0	7
906 - Tettegouche State Park[1]	11/3-11/18	125*	7	2	8	2	19
907 - Scenic State Park[1]	11/3-11/18	30*	3	0	3	0	6
908 - Hayes Lake State Park	11/3-11/18	75*	4	0	1	0	5
909 - Lake Bemidji State Park[1]	11/3-11/6	30**	0	3	4	0	7
910 - Zippel Bay State Park[1]	11/3-11/18	55**	0	5	4	3	12
911 - Judge CR Magney SP[1]	11/3-11/18	N/A*	0	0	1	0	1
912 - Schoolcraft State Park	11/3-11/18	N/A*	0	0	0	0	0
913 - Lake Carlos State Park	11/3-11/6	20**	0	3	4	2	9
914 - William O'Brien State Park[1]	11/10-11/11	60*	12	2	13	1	28
915 - Lake Bronson State Park	11/3-11/11	30*	5	2	5	0	12
916 - Maplewood State Park	11/3-11/6	100*	26	4	15	2	47
917 - Old Mill State Park	11/3-11/6	10*	3	0	0	0	3
918 - Lake Alexander SNA[1]	11/3-11/11	40*	2	0	4	0	6
919 - Glacial Lakes State Park	11/8-11/11	30**	0	3	4	3	10
920 - Zumbro Falls Woods SNA - A[1]	11/3-11/11	12**	0	2	2	2	6
921 - Forestville/Mystery Cave State Park[1]	11/3-11/5	130#	29	18	67	12	126
922 - Lake Louise State Park[1]	11/10-11/11	25***	5	3	9	3	20
923 - Zumbro Falls Woods SNA -B[1]	11/17-11/25	12***	0	1	1	0	2
924 - Whitewater State Game Refuge	11/17-11/25	75**	0	4	24	1	29
925 - Vermillion Highlands WMA[1]	11/3-11/16	25*	7	1	1	0	9
926 - Baker Park Reserve[1]	11/24-11/25	70*	4	5	14	3	26
927 - Elm Creek Park Reserve[1]	11/17-11/18	155*	37	4	24	6	71
928 - Wild River State Park[1]	11/3-11/5	75***	10	10	16	7	43
929 - Frontenac State Park - B[1]	11/17-11/19	60#	9	7	18	3	37
930 - Mille Lacs Kathio State Park[1]	11/9-11/11	40***	13	5	32	6	56
Total			**271**	**109**	**358**	**75**	**813**

1 Bonus permits available *Either sex **Antlerless Only *** Earn-A-Buck

#Antler Point Restriction

Table 6. Free Landowner Firearms Harvest by Permit Area, 2012.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
101	0	3	1	4
105	5	13	2	20
111	2	3	0	5
155	1	3	1	5
156	5	12	0	17
157	5	38	8	51
159	1	6	1	8
173	1	3	0	4
176	1	5	2	8
177	5	11	0	16
178	4	7	1	12
179	2	8	4	14
180	1	2	1	4
181	2	5	1	8
182	0	1	0	1
201	1	1	0	2
208	1	6	0	7
209	2	11	3	16
210	5	18	6	29
213	15	43	11	69
214	25	68	25	118
215	16	18	4	38
218	0	6	3	9
219	1	2	0	3
221	1	20	5	26
222	0	12	0	12
223	1	1	1	3
225	4	10	6	20
227	2	3	1	6
229	0	5	0	5
230	0	2	0	2
232	0	2	0	2

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
233	3	0	0	3
236	5	6	2	13
239	10	32	10	52
240	20	53	11	84
241	25	94	27	146
246	3	25	5	33
247	0	2	0	2
248	1	4	0	5
249	3	33	13	49
254	0	4	1	5
255	0	6	3	9
256	1	8	1	10
257	3	19	2	24
259	3	7	1	11
267	2	5	0	7
268	3	6	1	10
293	2	7	0	9
338	0	5	1	6
339	0	3	0	3
341	4	17	8	29
342	4	25	4	33
343	3	8	4	15
344	3	11	1	15
345	4	24	3	31
346	4	38	9	51
347	0	8	2	10
348	1	17	2	20
349	6	47	11	64
602	2	2	1	5
Total	**183**	**644**	**157**	**1,295**

Table 7. Archery Harvest by Permit Area, 2012.
Includes Regular, Youth, and Bonus Permits.

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
101	5	2	8	3	18
103	7	0	13	0	20
105	11	5	10	0	26
108	24	4	33	5	66
110	17	2	21	3	43
111	8	0	8	2	18
114	6	0	3	0	9
117	1	0	0	0	1
118	12	1	20	0	33
119	7	1	8	0	16
122	10	0	6	0	16
126	14	4	25	4	47
127	2	1	1	0	4
152	3	4	2	1	10
155	71	6	52	2	131
156	82	24	191	27	324
157	122	38	198	32	390
159	67	5	48	2	122
169	33	1	50	2	86
171	35	6	36	3	80
172	81	19	64	3	167
173	19	7	26	3	55
176	48	3	37	4	92
177	15	3	24	0	42
178	95	22	228	25	370
179	93	17	89	9	208
180	81	30	138	20	269
181	78	5	52	7	142
182	259	138	649	131	1,177
183	38	6	41	3	88
184	138	15	89	10	252
197	28	6	26	3	63
199	5	0	2	0	7
201	5	0	2	0	7
208	6	0	2	1	9
209	28	11	64	9	112
210	48	9	87	12	156
213	188	13	92	7	300
214	101	26	196	27	350
215	151	35	249	39	474
218	156	21	74	18	269
219	124	9	69	8	210
221	101	32	150	31	314
222	88	59	269	53	469
223	146	18	97	15	276
224	20	3	10	3	36
225	144	70	277	48	539

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
236	203	80	309	71	663
237	38	5	14	2	59
238	17	2	5	0	24
239	87	11	47	5	150
240	85	10	50	4	149
241	150	21	128	15	314
242	115	53	233	36	437
246	81	8	65	12	166
247	76	11	65	7	159
248	51	16	91	13	171
249	68	15	39	6	128
250	59	0	33	2	94
251	1	0	2	1	4
252	57	6	39	1	103
253	66	10	52	8	136
254	99	10	44	5	158
255	89	10	65	7	171
256	23	2	16	3	44
257	11	4	15	1	31
258	35	2	23	4	64
259	83	8	68	8	167
260	16	0	5	1	22
261	14	2	5	1	22
262	23	1	16	2	42
263	15	0	3	0	18
264	21	0	11	0	32
265	25	0	11	0	36
266	22	1	17	1	41
267	4	0	2	0	6
268	5	0	2	0	7
269	26	0	7	1	34
270	28	3	6	5	42
271	34	0	11	2	47
272	21	0	2	4	27
273	48	4	27	0	79
274	19	0	12	3	34
275	38	6	29	2	75
276	53	3	41	4	101
277	170	14	146	10	340
278	50	4	41	4	99
279	16	6	18	2	42
280	28	1	25	1	55
281	60	7	52	1	120
282	20	0	16	2	38
283	41	4	27	1	73
284	62	5	28	4	99
285	89	7	38	3	137

Table 7. (Continued)

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
227	205	97	450	76	828
229	67	9	43	6	125
230	55	7	30	1	93
232	37	7	29	0	73
233	67	4	27	3	101
234	32	2	16	0	50
235	18	5	12	3	38
289	44	0	23	1	68
290	54	12	50	6	122
291	127	16	92	7	242
292	84	10	63	2	159
293	130	8	57	7	202
294	33	1	14	3	51
295	61	11	58	8	138
296	36	1	11	3	51
297	6	1	1	0	8
298	15	2	5	1	23
299	68	12	43	2	125

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
286	37	1	19	1	58
287	2	0	4	0	6
288	63	9	59	6	137
338	67	10	70	12	159
339	61	8	74	11	154
341	130	18	160	21	329
342	101	21	122	18	262
343	180	26	252	26	484
344	40	5	31	9	85
345	71	4	30	5	110
346	160	23	180	26	389
347	74	11	93	12	190
348	99	10	114	13	236
349	178	13	150	16	357
601	812	322	1226	248	2,608
602	83	37	143	37	300
970*	75	33	81	18	207
971**	95	17	86	25	223
Total	**8,663**	**1,796**	**9,685**	**1,461**	**21,605**

*Camp Ripley First Hunt
**Camp Ripley Second Hunt

Table 8. Archery Harvest using Bonus and Disease Management Permits by Permit Area, 2012.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
101	2	7	2	11
105	0	1	0	1
111	0	1	0	1
114	0	2	0	2
126	2	13	4	19
152	3	1	1	5
155	1	4	0	5
156	13	139	18	170
157	24	141	23	188
159	1	10	0	11
173	0	1	0	1
176	1	4	0	5
177	0	1	0	1
178	14	142	13	169
179	0	2	0	2
180	19	102	13	134
181	4	25	6	35
182	130	580	121	831
201	0	1	0	1
209	8	49	7	64
210	8	66	9	83
213	0	3	0	3
214	18	154	24	196
215	25	197	28	250
218	0	2	4	6
219	2	0	0	2
221	24	116	24	164
222	49	247	47	343
223	0	10	2	12
224	0	2	1	3
225	58	239	43	340
227	86	397	69	552
229	0	3	2	5
230	1	1	1	3
232	0	1	0	1
236	66	270	68	404
239	0	1	0	1
240	1	1	0	2
241	2	3	1	6
242	36	181	25	242
246	3	3	2	8
247	1	6	0	7
248	12	70	10	92
249	0	2	0	2
254	0	2	0	2
255	1	1	2	4
256	1	2	1	4
257	1	1	0	2
259	0	3	0	3
287	0	4	0	4
293	1	8	1	10
338	8	55	10	73
339	8	63	10	81
341	14	135	21	170
342	18	105	18	141
343	21	223	24	268
344	0	3	0	3
345	2	5	2	9
346	19	150	21	190
347	10	77	11	98
348	9	96	8	113
349	10	119	13	142
601	287	1098	232	1617
602	34	130	35	199
TOTAL	**1,058**	**5,481**	**977**	**7,516**

Table 9. Summary of Archery Special Hunts, 2012. 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	75	81	33	18	207
971 - Camp Ripley	10/29 - 10/30	2,500	95	86	17	25	223
972 - Crow-Hassan Park Reserve	11/11- 11/13	130	0	1	0	0	1
973 - Murphy-Hanrehan Park Reserve	11/11- 11/13	180	1	0	0	0	1
974 - Cleary Lake Regional Park	11/11 - 11/13	55	0	0	0	0	0
975 - Vermillion Highlands WMA	9/17-10/30	60	1	3	2	1	7
976 - City of New Ulm	10/15 - 12/31	50	0	7	2	4	13
977 - City of Red Wing	9/17 - 12/31	Unl.	10	24	4	10	48
978 - City of Sandstone	9/17 - 12/31	Unl.	0	0	0	0	0
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	0	0	0	0
982 - City of Granite Falls	9/17 - 12/31	10	0	0	0	0	0
983 - City of Ortonville	9/17 - 12/31	30	0	11	4	0	15
984 - City of Canby	9/17 - 12/31	20	0	2	1	0	3
985 - City of Bemidji	9/17 - 12/31	40	1	11	2	2	16
987 - Greenleaf State SRA	9/17 - 12/31	Unl.	0	0	0	0	0
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 - 12/30	9	0	0	0	0	0
991 - East Minnesota River Refuge	9/17 - 12/31	10	0	3	1	1	5
Total			**183**	**229**	**66**	**61**	**539**

*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, 2012.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total		Permit Area	Fawn Male	Adult Female	Fawn Female	Total
155	0	1	0	1		247	0	1	0	1
156	0	1	0	1		248	0	2	0	2
157	2	1	0	3		249	1	1	0	2
159	0	1	0	1		257	0	1	0	1
173	0	1	0	1		259	0	1	0	1
177	0	1	0	1		341	0	1	0	1
178	0	1	0	1		342	0	2	0	2
179	1	0	0	1		343	1	2	0	3
213	1	5	1	7		344	0	1	0	1
214	1	2	0	3		345	0	3	1	4
215	0	4	0	4		346	0	1	2	3
218	1	0	0	1		347	0	1	0	1
221	0	3	1	4		348	1	0	0	1
239	4	2	0	6		349	0	3	0	3
240	0	2	0	2		601	0	1	0	1
241	1	11	0	12		**Total**	**14**	**57**	**5**	**76**

Table 11. Muzzleloader Harvest by Permit Area, 2012.
Includes Regular, Muzzleloader, Youth, and Bonus permits. Does not include Park hunts.

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
101	7	0	12	2	21
103	8	1	3	4	16
105	23	0	12	1	36
108	13	0	3	0	16
110	12	1	13	1	27
111	6	0	10	2	18
114	1	0	1	0	2
118	26	0	2	1	29
119	10	0	1	0	11
122	10	2	3	3	18
126	14	3	27	2	46
127	1	0	2	0	3
152	2	0	0	0	2
155	10	6	38	2	56
156	23	7	42	4	76
157	17	8	57	7	89
159	11	6	16	1	34
169	12	3	13	1	29
171	6	0	5	0	11
172	18	0	5	1	24
173	7	3	14	3	27
176	14	7	29	6	56
177	4	3	16	2	25
178	32	11	74	13	130
179	25	6	16	4	51
180	17	5	36	6	64
181	17	3	23	4	47
182	11	6	27	3	47
183	14	2	12	2	30
184	47	4	48	5	104
197	8	0	6	0	14
199	3	0	0	0	3
201	7	0	10	0	17
203	6	0	3	0	9
208	17	2	13	1	33
209	28	4	37	4	73
210	30	8	48	5	91
213	85	22	75	9	191
214	35	15	82	15	147
215	64	27	82	21	194
218	64	16	65	10	155
219	49	10	48	12	119
221	28	27	63	12	130
222	20	25	67	15	127

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
229	24	5	10	2	41
230	21	9	16	1	47
232	29	9	21	3	62
233	36	9	33	3	81
234	25	0	6	0	31
235	4	0	0	0	4
236	30	16	60	10	116
237	33	0	5	0	38
238	5	0	3	1	9
239	58	18	55	5	136
240	34	14	60	10	118
241	60	23	130	15	228
242	18	10	48	15	91
246	50	14	64	11	139
247	22	6	25	6	59
248	16	3	31	3	53
249	27	6	26	5	64
250	39	0	11	0	50
251	3	0	0	0	3
252	32	1	15	2	50
253	37	1	20	2	60
254	48	14	53	8	123
255	36	12	34	2	84
256	21	3	16	4	44
257	12	1	8	1	22
258	21	4	17	3	45
259	42	20	43	14	119
260	25	0	3	0	28
261	11	0	1	0	12
262	13	3	3	0	19
263	24	0	7	2	33
264	35	1	5	2	43
265	28	1	10	3	42
266	48	1	10	1	60
267	13	5	3	1	22
268	13	0	14	3	30
269	29	2	7	0	38
270	23	0	1	0	24
271	31	0	9	0	40
272	15	1	6	0	22
273	34	6	14	2	56
274	32	2	14	2	50
275	34	1	15	0	50
276	65	2	23	2	92

Table 11. (Continued).

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
223	39	1	23	2	65
225	29	19	83	19	150
227	53	23	69	16	161
280	19	2	4	0	25
281	37	2	13	0	52
282	10	0	3	0	13
283	30	1	4	1	36
284	46	2	11	2	61
285	26	1	15	0	42
286	36	0	4	0	40
287	1	2	9	5	17
288	50	3	5	1	59
289	23	1	3	1	28
290	48	3	20	2	73
291	60	3	36	4	103
292	41	10	18	4	73
293	22	4	37	5	68
294	33	4	10	3	50
295	66	5	21	3	95
296	30	0	9	1	40
277	98	2	33	10	143
278	31	0	14	3	48
279	16	0	11	0	27
297	2	0	0	0	2
298	20	0	2	1	23
299	19	1	10	1	31
338	11	6	27	4	48
339	15	2	16	0	33
341	21	16	46	16	99
342	32	16	82	14	144
343	21	12	36	8	77
344	19	4	33	5	61
345	15	5	16	7	43
346	31	13	78	12	134
347	13	14	53	9	89
348	14	8	58	8	88
349	32	12	99	15	158
601	20	10	48	10	88
602	4	17	23	13	57
TOTAL	**3,251**	**690**	**3,196**	**533**	**7,670**

Table 12. Muzzleloader Harvest using Bonus and Disease Management Permits by Permit Area, 2012.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
101	0	7	2	9
114	0	1	0	1
126	1	17	2	20
156	3	19	3	25
157	4	29	5	38
176	1	1	0	2
178	9	29	6	44
180	2	20	6	28
181	0	1	0	1
182	4	22	1	27
208	1	1	0	2
209	3	23	2	28
210	5	31	2	38
213	0	1	0	1
214	9	41	8	58
215	15	46	15	76
218	0	0	1	1
221	20	30	5	55
222	16	42	12	70
225	11	50	10	71
227	17	41	14	72
232	0	1	0	1
236	11	41	7	59
242	6	23	6	35
246	0	1	0	1
248	1	19	2	22
255	0	0	1	1
256	0	0	1	1
287	2	8	5	15
293	0	1	1	2
338	2	7	0	9
339	1	11	0	12
341	10	23	7	40
342	9	57	10	76
343	8	21	6	35
344	0	1	0	1
345	0	1	1	2
346	6	46	10	62
347	9	29	4	42
348	5	32	5	42
349	5	63	8	76
601	9	26	9	44
602	10	19	13	42
TOTAL	**215**	**882**	**190**	**1,287**

Table 13. Summary of Muzzleloader Special Hunts, 2012.
Includes Regular, Youth, All-Season, and Bonus Permits.

Area	Dates	Permits Issued	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
936 - Crow Wing SP[1]	12/7-12/9	40***	0	2	4	1	7
937 - Soudan SP[1]	11/24-12/9	20*	1	0	0	0	1
938 - City of Tower[1]	11/24-12/9	20*	2	0	0	0	2
939 - Lake Shetek SP[1]	12/1-12/2	15**	0	1	0	1	2
940 -Rice Lake SP[1]	12/1-12/2	20**	0	5	7	4	16
942 - Sibley SP[1]	11/24-11/25	50**	0	12	9	0	21
943 - Big Stone Lake[1]	12/1-12/2	10**	0	0	0	0	0
944 - Vermillion Highlands WMA[1]	11/24-12/9	25*	0	0	0	0	0
945 -Camp Ripley[1]	11/26-11/28	100*	16	13	26	5	60
TOTAL			**19**	**33**	**46**	**11**	**109**

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

Table 14. Free Landowner Muzzleloader Harvest by Permit Area, 2012.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
157	0	3	0	3
179	0	1	0	1
208	0	2	0	2
210	0	1	0	1
213	2	8	1	11
214	2	3	0	5
215	1	4	0	5
218	0	2	0	2
221	0	1	1	2
222	1	1	0	2
225	0	1	0	1
232	1	0	0	1
239	1	2	0	3
240	1	8	0	9
241	1	14	2	17
246	0	7	0	7

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
249	1	1	0	2
254	2	2	0	4
256	1	2	0	3
268	0	2	0	2
293	0	1	0	1
338	0	2	1	3
339	0	1	0	1
341	1	1	1	3
342	0	2	0	2
343	1	1	0	2
344	0	3	0	3
345	2	1	1	4
346	0	8	1	9
347	1	2	0	3
348	1	3	0	4
349	1	8	1	10
Total	**21**	**98**	**9**	**128**

Table 15. Summary of Youth Hunts and Youth Season, 2012.

Area	Dates	Permits Issued	Harvest Adult Male	Harvest Adult Female	Harvest Fawn Male	Harvest Fawn Female	Total
950 - Camp Ripley Archery	10/5-10/7	175	5	3	1	1	10
951 - Afton SP	11/3-11/4	15	4	5	1	2	12
952 - Sibley SP	10/27-10/28	10	3	1	0	0	4
954 - Lake Bemidji SP	10/13-10/14	20	0	3	1	0	4
956 - St. Croix SP	10/27-10/28	100	8	6	1	1	16
957 - Rydell NWR	10/20-10/21	20	0	0	1	0	1
958 - Savanna Portage SP	10/27-10/28	20	6	6	2	0	14
959 - Buffalo River SP	11/3-11/4	14	0	0	2	0	2
961 - Itasca SP	10/13-10/14	75	2	4	0	1	7
962 - Great River SP	10/27-10/28	25	0	0	0	1	1
965 - Banning SP	10/27-10/28	6	1	1	0	0	2
Total		**480**	**29**	**29**	**9**	**6**	**73**

Youth Deer Season - October 18 - 21, unlimited permits

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
101	5	16	1	2	24
105	21	18	7	4	50
111	12	6	2	3	23
114	1	4	0	0	5
201	4	0	0	1	5
203	0	1	0	0	1
208	7	5	0	0	12
209	13	15	3	5	36
225	0	1	0	0	1
256	23	12	5	2	42
257	10	9	3	0	22
260	13	15	3	2	33
263	18	15	3	4	40
264	27	32	2	3	64
267	11	9	0	1	21
268	6	10	2	1	19
338	8	6	1	0	15
339	6	6	1	1	14
341	20	18	9	3	50
342	25	12	4	5	46
343	17	10	5	4	36
344	15	11	3	6	35
345	19	12	4	3	38
346	20	15	10	11	56
347	12	12	3	5	32
348	11	9	5	4	29
349	20	20	5	7	52
601	10	7	6	2	25
602	8	19	7	8	42
Total	**362**	**325**	**94**	**87**	**868**

Table 16. Total Deer Harvest by Permit Area, 2012.
Includes all license types, permits, and special hunts.

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
101	255	203	56	50	564
103	789	139	37	21	986
105	798	478	122	91	1,489
108	1123	204	31	43	1,401
110	985	481	106	95	1,667
111	460	260	66	49	835
114	52	39	4	5	100
117	49	8	4	4	65
118	655	83	11	10	759
119	770	90	14	12	886
122	401	109	29	23	562
126	432	244	45	32	753
127	100	39	10	2	151
152	103	67	21	11	202
155	1663	1111	317	180	3,271
156	1830	1718	488	353	4,389
157	2643	2012	660	424	5,739
159	1199	767	183	101	2,250
169	1522	668	156	109	2,455
171	1353	533	141	86	2,113
172	2010	716	192	139	3,057
173	835	691	184	123	1,833
176	1638	931	206	169	2,944
177	753	527	146	92	1,518
178	2131	2085	543	390	5,149
179	1844	1270	355	238	3,707
180	1168	823	189	199	2,379
181	1245	745	205	155	2,350
182	711	1069	239	227	2,246
183	1356	590	155	75	2,176
184	3073	1235	321	256	4,885
197	1046	368	80	68	1,562
199	115	40	2	3	160
201	88	73	13	13	187
203	80	29	5	7	121
208	259	142	32	22	455
209	585	514	123	133	1,355
210	1004	879	213	222	2,318
213	1867	986	351	258	3,462
214	1594	1274	474	418	3,760
215	1311	1095	364	285	3,055
218	1103	659	226	160	2,148
219	687	408	126	86	1,307
221	1088	880	379	306	2,653
222	967	990	352	310	2,619
223	690	344	114	93	1,241
224	124	55	18	16	213
225	1412	1152	367	304	3,235
227	1051	988	350	248	2,637

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
278	470	178	29	20	697
279	267	124	21	14	426
280	303	127	16	10	456
281	524	178	34	19	755
282	167	40	7	5	219
283	386	95	19	11	511
284	467	112	27	19	625
285	485	183	44	31	743
286	450	101	15	15	581
287	120	187	53	50	410
288	540	156	38	19	753
289	291	59	16	7	373
290	547	217	47	23	834
291	844	349	98	44	1,335
292	545	217	85	49	896
293	698	347	87	57	1,189
294	393	145	24	16	578
295	606	204	36	28	874
296	371	104	13	9	497
297	184	38	9	11	242
298	774	162	45	30	1,011
299	355	166	38	16	575
338	297	301	86	67	751
339	315	284	58	67	724
341	816	747	214	172	1,949
342	739	808	204	195	1,946
343	667	682	150	127	1,626
344	464	478	69	90	1,101
345	561	400	95	74	1,130
346	992	1025	267	253	2,537
347	537	539	124	105	1,305
348	727	814	173	122	1,836
349	1277	1263	252	237	3,029
601	1502	1694	481	338	4,015
602	593	609	241	185	1,628
901	5	4	0	0	9
902	74	73	22	17	186
903	6	1	1	0	8
904	6	3	2	2	13
905	4	3	0	0	7
906	7	8	2	2	19
907	3	3	0	0	6
908	4	1	0	0	5
909	0	4	3	0	7
910	0	4	5	3	12
911	0	1	0	0	1
913	0	4	3	2	9
914	12	13	2	1	28
915	5	5	2	0	12

Table 16. (Continued).

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
229	287	160	42	30	519
230	337	196	72	37	642
232	313	167	67	18	565
233	312	158	37	22	529
234	259	109	10	15	393
235	65	24	11	7	107
236	861	751	246	171	2,029
237	349	107	20	11	487
238	110	33	13	2	158
239	1519	929	345	216	3,009
240	1698	939	301	221	3,159
241	3111	1953	708	545	6,317
242	634	762	230	183	1,809
246	2273	1481	502	411	4,667
247	740	556	183	133	1,612
248	454	408	99	110	1,071
249	1211	712	285	218	2,426
250	433	135	18	12	598
251	91	36	11	15	153
252	407	142	29	15	593
253	538	185	29	25	777
254	641	334	96	42	1,113
255	577	270	83	52	982
256	458	304	70	62	894
257	425	218	55	35	733
258	944	415	140	127	1,626
259	1740	1082	372	263	3,457
260	381	95	18	12	506
261	185	41	8	4	238
262	213	89	28	20	350
263	402	105	24	23	554
264	762	213	38	35	1,048
265	473	201	46	30	750
266	396	148	36	22	602
267	197	109	33	14	353
268	236	154	34	29	453
269	249	91	16	22	378
270	233	43	12	9	297
271	307	97	15	11	430
272	245	62	11	12	330
273	528	211	72	39	850
274	265	71	14	11	361
275	472	150	20	18	660
276	639	204	46	33	922
277	1373	527	88	79	2,067

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
916	26	15	4	2	47
917	3	0	0	0	3
918	2	4	0	0	6
919	0	4	3	3	10
920	0	2	2	2	6
921	29	67	18	12	126
922	5	9	3	3	20
923	0	1	1	0	2
924	0	24	4	1	29
925	7	1	1	0	9
926	4	14	5	3	26
927	37	24	4	6	71
928	10	16	10	7	43
929	9	18	7	3	37
930	13	32	5	6	56
936	0	4	2	1	7
937	1	0	0	0	1
938	2	0	0	0	2
939	0	0	1	1	2
940	0	7	5	4	16
942	0	9	12	0	21
945	16	26	13	5	60
950	5	3	1	1	10
951	4	5	1	2	12
952	3	1	0	0	4
954	0	3	1	0	4
956	8	6	1	1	16
957	0	0	1	0	1
958	6	6	2	0	14
959	0	0	2	0	2
961	2	4	0	1	7
962	0	0	0	1	1
965	1	1	0	0	2
970	170	167	50	43	430
972	0	1	0	0	1
973	1	0	0	0	1
975	1	3	2	1	7
976	0	7	2	4	13
977	10	24	4	10	48
983	0	11	4	0	15
984	0	2	1	0	3
985	1	11	2	2	16
991	0	3	1	1	5
TOTAL	**97,136**	**59,783**	**16,890**	**12,825**	**186,634**

Table 17. Estimated firearm hunter numbers, density, and harvest by Permit Area, 2012.

Permit Area	Firearm Hunters	Area Size (sq mi)	Hunters/ mile^2	Harvest/ mile^2
101	1,954	496	3.9	1.0
103	3,328	1,824	1.8	0.5
105	3,848	932	4.1	1.5
108	5,132	1,701	3.0	0.8
110	4,403	530	8.3	3.0
111	3,093	1,440	2.1	0.5
114	269	412	0.7	0.2
117	218	1,129	0.2	0.06
118	3,554	1,445	2.5	0.5
119	3,750	946	4.0	0.9
122	2,083	622	3.3	0.8
126	2,058	979	2.1	0.7
127	644	587	1.1	0.2
152	948	62	15.4	3.1
155	7,781	639	12.2	4.8
156	9,498	834	11.4	4.8
157	13,588	904	15.0	5.8
159	7,184	575	12.5	3.6
169	9,357	1,202	7.8	1.9
171	6,888	729	9.4	2.8
172	10,679	786	13.6	3.6
173	4,677	617	7.6	2.8
176	8,222	1,150	7.2	2.4
177	3,845	553	7.0	2.6
178	10,670	1,325	8.1	3.5
179	9,823	939	10.5	3.7
180	6,573	999	6.6	2.0
181	6,343	746	8.5	2.9
182	2,460	280	8.8	3.7
183	7,649	675	11.3	3.0
184	14,244	1,318	10.8	3.4
197	5,824	1,343	4.3	1.1
199	556	152	3.7	1.0
201	545	169	3.2	0.9
203	317	132	2.4	0.8
208	1,219	379	3.2	1.1
209	2,695	641	4.2	1.8
210	4,578	635	7.2	3.3
213	8,523	1,161	7.3	2.6
214	7,748	566	13.7	5.8
215	6,620	730	9.1	3.3
218	5,434	912	6.0	1.9
219	3,420	427	8.0	2.3
221	4,934	647	7.6	3.4
222	5,103	413	12.4	4.9
223	3,141	385	8.2	2.3
224	702	49	14.3	3.6
225	6,806	635	10.7	4.0
227	4,949	491	10.1	3.4
229	1,551	313	4.9	1.1
230	1,561	464	3.4	1.1
232	1,195	380	3.1	1.1
233	1,164	386	3.0	0.9
234	864	637	1.4	0.5
235	308	37	8.4	1.8
236	3,118	404	7.7	3.1
237	1,131	737	1.5	0.5
238	314	98	3.2	1.3
239	7,814	1,110	7.0	2.5
240	7,602	694	11.0	4.2
241	13,745	1,047	13.1	5.5
242	2,873	307	9.4	4.2
246	11,789	860	13.7	5.1
247	3,687	263	14.0	5.3
248	2,303	229	10.1	3.7
249	5,831	729	8.0	3.1
250	1,569	730	2.1	0.6
251	568	68	8.3	2.1
252	1,566	735	2.1	0.6
253	2,139	987	2.2	0.6
254	2,731	946	2.9	0.9
255	1,795	774	2.3	0.9
256	2,412	654	3.7	1.2
257	1,848	426	4.3	1.5
258	4,646	381	12.2	4.0
259	8,292	546	15.2	5.8
260	1,723	1,252	1.4	0.3
261	792	796	1.0	0.3
262	1,011	677	1.5	0.4
263	1,866	513	3.6	0.9
264	3,577	672	5.3	1.4
265	2,003	495	4.0	1.4
266	2,282	625	3.7	0.8
267	1,044	472	2.2	0.6
268	1,360	239	5.7	1.7
269	1,333	652	2.0	0.5

Table 17. (Continued).

Permit Area	Firearm Hunters	Area Size (sq mi)	Hunters/ mile^2	Harvest/ mile^2
270	941	758	1.2	0.3
271	1,047	646	1.6	0.5
272	1,194	544	2.2	0.5
273	2,883	634	4.6	1.1
274	1,031	381	2.7	0.7
275	2,141	777	2.8	0.7
276	3,269	575	5.7	1.3
277	6,151	876	7.0	1.8
278	2,149	422	5.1	1.3
279	1,186	346	3.4	1.0
280	1,577	676	2.3	0.6
281	2,471	579	4.3	1.0
282	783	780	1.0	0.2
283	1,541	640	2.4	0.6
284	1,662	853	1.9	0.5
285	2,516	580	4.3	1.0
286	1,389	458	3.0	1.1
287	675	51	13.3	7.6
288	1,859	630	3.0	0.9
289	1,044	820	1.3	0.3
290	2,407	666	3.6	1.0
291	3,706	832	4.5	1.2

Permit Area	Firearm Hunters	Area Size (sq mi)	Hunters/ mile^2	Harvest/ mile^2
292	2,818	517	5.4	1.3
293	2,692	512	5.3	1.8
294	1,262	689	1.8	0.7
295	2,220	855	2.6	0.7
296	1,694	675	2.5	0.6
297	1,155	449	2.6	0.5
298	3,769	677	5.6	1.4
299	1,591	389	4.1	1.1
338	2,083	472	4.4	1.1
339	1,870	406	4.6	1.3
341	4,407	483	9.1	3.0
342	3,964	374	10.6	4.0
343	3,160	486	6.5	2.1
344	3,182	190	16.8	4.8
345	3,014	335	9.0	2.8
346	4,133	328	12.6	5.7
347	3,094	434	7.1	2.3
348	3,746	332	11.3	4.5
349	5,656	499	11.3	4.8
601	2,864	1,756	1.6	0.7
602	1,911	304	6.3	4.0
Total	**463,191**	**83,265**	**5.6**	**1.9**

Table 18. Deer harvest per square mile by season, 2012.

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	1.01	0.04		1.09
103	1,824	0.01	0.52	0.01		0.54
105	932	0.03	1.48	0.04		1.54
108	1,701	0.04	0.78	0.01		0.82
110	530	0.08	3.01	0.05		3.14
111	1,440	0.01	0.54	0.01		0.56
114	412	0.02	0.20	0.00		0.23
117	1,129	0.00	0.06	0.00		0.06
118	1,445	0.02	0.48	0.02		0.53
119	946	0.02	0.91	0.01		0.94
122	622	0.03	0.85	0.03		0.90
126	979	0.05	0.67	0.05		0.77
127	587	0.01	0.25	0.01		0.26
152	62	0.16	3.08	0.03		3.28
155	639	0.21	4.83	0.09		5.12
156	834	0.39	4.78	0.09		5.26
157	904	0.43	5.82	0.10		6.35
159	575	0.21	3.64	0.06		3.91
169	1,202	0.07	1.95	0.02		2.04
171	729	0.11	2.77	0.02		2.90
172	786	0.21	3.64	0.03		3.89
173	617	0.09	2.84	0.04		2.97
176	1,150	0.08	2.43	0.05		2.56
177	553	0.08	2.63	0.05		2.75
178	1,325	0.28	3.51	0.10		3.89
179	939	0.22	3.67	0.05		3.95
180	999	0.27	2.05	0.06		2.38
181	746	0.19	2.90	0.06		3.15
182	280	4.20	3.65	0.17		8.02
183	675	0.13	3.05	0.04		3.22
184	1,318	0.19	3.44	0.08		3.71
197	1,343	0.05	1.11	0.01		1.16
199	152	0.05	0.98	0.02		1.05
201	169	0.04	0.93	0.10		1.08
203	132	0.00	0.84	0.07		0.91
208	379	0.02	1.06	0.09		1.17
209	641	0.17	1.77	0.11		2.06
210	635	0.25	3.26	0.14		3.65
213	1,161	0.26	2.56	0.16		2.98
214	566	0.62	5.77	0.26		6.64
215	730	0.65	3.27	0.27		4.18
218	912	0.30	1.89	0.17		2.36
219	427	0.49	2.29	0.28		3.06
221	647	0.49	3.41	0.20		4.10
222	413	1.14	4.90	0.31		6.35
223	385	0.72	2.34	0.17		3.22
224	49	0.73	3.61	0.00		4.34
225	635	0.85	4.01	0.24		5.09
227	491	1.68	3.35	0.33		5.37

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	0.40	1.13	0.13		1.66
230	464	0.20	1.08	0.10		1.38
232	380	0.19	1.13	0.16		1.49
233	386	0.26	0.90	0.21		1.37
234	637	0.08	0.49	0.05		0.62
235	37	1.03	1.77	0.11		2.91
236	404	1.64	3.10	0.29		5.03
237	737	0.08	0.53	0.05		0.66
238	98	0.25	1.28	0.09		1.62
239	1,110	0.14	2.45	0.12		2.71
240	694	0.21	4.17	0.17		4.55
241	1,047	0.30	5.52	0.22		6.03
242	307	1.42	4.17	0.30		5.89
246	860	0.19	5.07	0.16		5.43
247	263	0.60	5.29	0.22		6.12
248	229	0.75	3.71	0.23		4.69
249	729	0.18	3.06	0.09		3.33
250	730	0.13	0.62	0.07		0.82
251	68	0.06	2.14	0.04		2.25
252	735	0.14	0.60	0.07		0.81
253	987	0.14	0.59	0.06		0.79
254	946	0.17	0.88	0.13		1.18
255	774	0.22	0.94	0.11		1.27
256	654	0.07	1.17	0.07		1.30
257	426	0.07	1.54	0.05		1.67
258	381	0.17	3.98	0.12		4.27
259	546	0.31	5.81	0.22		6.33
260	1,252	0.02	0.34	0.02		0.38
261	796	0.03	0.26	0.02		0.30
262	677	0.06	0.43	0.03		0.52
263	513	0.04	0.90	0.06		1.00
264	672	0.05	1.35	0.06		1.46
265	495	0.07	1.36	0.08		1.52
266	625	0.07	0.80	0.10		0.96
267	472	0.01	0.64	0.05		0.70
268	239	0.03	1.66	0.13		1.81
269	652	0.05	0.47	0.06		0.58
270	758	0.06	0.30	0.03		0.39
271	646	0.07	0.53	0.06		0.67
272	544	0.05	0.52	0.04		0.61
273	634	0.12	1.13	0.09		1.34
274	381	0.09	0.73	0.13		0.95
275	777	0.10	0.69	0.06		0.85
276	575	0.18	1.27	0.16		1.60
277	876	0.39	1.81	0.16		2.36
278	422	0.23	1.30	0.11		1.65
279	346	0.12	1.03	0.08		1.23

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
280	676	0.08	0.56	0.04		0.67
281	579	0.21	1.01	0.09		1.30
282	780	0.05	0.22	0.02		0.28
283	640	0.11	0.63	0.06		0.80
284	853	0.12	0.54	0.07		0.73
285	580	0.24	0.97	0.07		1.28
286	458	0.13	1.05	0.09		1.27
287	51	0.12	7.64	0.34		8.09
288	630	0.22	0.88	0.09		1.20
289	820	0.08	0.34	0.03		0.45
290	666	0.18	0.96	0.11		1.25
291	832	0.29	1.19	0.12		1.61
292	517	0.31	1.28	0.14		1.73
293	512	0.39	1.79	0.13		2.32
294	689	0.07	0.69	0.07		0.84
295	855	0.16	0.75	0.11		1.02
296	675	0.08	0.60	0.06		0.74
297	449	0.02	0.52	0.00		0.54
298	677	0.03	1.43	0.03		1.49
299	389	0.32	1.08	0.08		1.48
338	472	0.34	1.12	0.10		1.56
339	406	0.38	1.29	0.08		1.75
341	483	0.68	3.05	0.20		3.93
342	374	0.70	3.99	0.38		5.08
343	486	1.00	2.12	0.16		3.27
344	190	0.45	4.85	0.32		5.62
345	335	0.33	2.80	0.13		3.26
346	328	1.19	5.66	0.41		7.25
347	434	0.44	2.29	0.21		2.94
348	332	0.71	4.46	0.26		5.44
349	499	0.72	4.81	0.32		5.84
601	1,756	1.49	0.74	0.05		2.27
602	304	0.99	7.86	0.24		9.09
Total	**83,265**	**0.26**	**1.88**	**0.09**		**2.22**

Table 19. 2012 Antlerless Lottery Distribution Report.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
103	1	1,186	1	1,186	0	**241**	**0.0%**
	2	368	0	151	217		
	3	17	0	0	17		
	4	7	0	0	7		
		1,578	**1**	1,337	**241**		
108	1	514	2	514	0	**98**	**0.0%**
	2	520	1	520	0		
	3	451	0	451	0		
	4	365	0	267	98		
		1,850	**3**	**1,752**	**98**		
110	1	1,667	118	0	1,667	**1,973**	**4.6%**
	2	200	7	0	200		
	3	14	0	0	14		
	4	1	0	0	1		
		1,882	**125**	**0**	**1,882**		
118	1	504	1	504	0	**98**	**0.0%**
	2	571	0	571	0		
	3	203	0	106	97		
	4	1	0	0	1		
		1,279	**1**	**1,181**	**98**		
119	1	716	1	716	0	**96**	**0.0%**
	2	753	0	753	0		
	3	182	0	92	90		
	4	6	0	0	6		
		1,657	**1**	**1,561**	**96**		
122	1	628	1	221	407	**494**	**0.0%**
	2	76	0	0	76		
	3	10	0	0	10		
	6	1	0	0	1		
		715	**1**	**221**	**494**		
169	1	4,271	8	1,940	2,331	**2,947**	**0.0%**
	2	582	0	0	582		
	3	27	0	0	27		
	4	6	0	0	6		
	5	1	0	0	1		
		4,887	**8**	**1,940**	**2,947**		
171	1	1,879	5	1,744	135	**1,470**	**0.0%**
	2	1,315	1	0	1,315		
	3	18	0	0	18		
	4	2	0	0	2		
		3,214	**6**	**1,744**	**1,470**		

Table 19. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
172	1 2 3 4 **5,282**	2,971 2,291 19 1 **5,282**	9 0 0 0 **9**	2,971 352 0 0 **3,323**	0 1,939 19 1 **1,959**	**1,959**	**0.0%**
183	1 2 3 **3,041**	2,850 174 17 **3,041**	5 3 2 **10**	619 0 0 **619**	2,231 174 17 **2,422**	**2,422**	**0.0%**
184	1 2 3 4 **6,416**	4,587 1,803 20 6 **6,416**	13 1 0 0 **14**	1,052 0 0 0 **1,052**	3,535 1,803 20 6 **5,364**	**5,364**	**0.0%**
197	1 2 3 4 5 **2,447**	2,250 180 12 4 1 **2,447**	3 0 0 0 0 **3**	972 0 0 0 0 **972**	1,278 180 12 4 1 **1,475**	**1,475**	**0.0%**
199	1 2 3 4 **161**	147 9 3 2 **161**	0 0 0 0 **0**	15 0 0 0 **15**	132 9 3 2 **146**	**146**	**0.0%**
234	1 2 3 **307**	294 10 3 **307**	1 1 0 0 2	31 0 0 **31**	263 10 3 **276**	**276**	**0.0%**
235	1 2 3 **96**	65 29 2 **96**	0 0 0 **0**	36 0 0 **36**	29 29 2 **60**	**60**	**0.0%**
237	1 2 3 5 **341**	234 98 8 1 **341**	1 1 0 0 **2**	234 14 0 0 **248**	0 84 8 1 **93**	**93**	**0.0%**
238	1 2 3 **113**	86 19 8 **113**	0 0 0 **0**	67 0 0 **67**	19 19 8 **46**	**46**	**0.0%**

Table 19. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
250	1 2 3 4 **669**	451 203 13 2 **669**	0 0 0 0 **0**	451 42 0 0 **493**	0 161 13 2 **176**	**176**	**0.0%**
251	1 2 **277**	233 44 **277**	1 0 **1**	83 0 **83**	150 44 **194**	**194**	**0.0%**
252	1 2 3 4 **601**	316 249 35 1 **601**	0 1 0 0 **1**	316 153 0 0 **469**	0 96 35 1 **132**	**132**	**0.0%**
253	1 2 3 4 6 **867**	500 310 52 4 1 **867**	1 0 0 0 0 **1**	500 193 0 0 0 **693**	0 117 52 4 1 **174**	**174**	**0.0%**
258	1 2 3 4 **2,210**	1,815 383 11 1 **2,210**	2 1 0 0 **3**	272 0 0 0 **272**	1,543 383 11 1 **1,938**	**1,938**	**0.0%**
260	1 2 3 **576**	565 9 2 **576**	4 0 0 **4**	283 0 0 **283**	282 9 2 **293**	**293**	**0.0%**
261	1 2 3 **212**	204 6 2 **212**	1 0 0 **1**	76 0 0 **76**	128 6 2 **136**	**136**	**0.0%**
262	1 2 3 4 **351**	267 81 1 2 **351**	0 1 0 0 **1**	78 0 0 0 **78**	189 81 1 2 **273**	**273**	**0.0%**
263	1 2 3 **692**	671 18 3 **692**	3 0 0 **3**	398 0 0 **398**	273 18 3 **294**	**294**	**0.0%**

Table 19. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
265	1 2 3 4 **751**	713 36 1 1 **751**	3 0 0 0 **3**	274 0 0 0 **274**	439 36 1 1 **477**	**477**	**0.0%**
266	1 2 3 **798**	659 137 2 **798**	2 0 0 **2**	328 0 0 **328**	331 137 2 **470**	**470**	**0.0%**
269	1 2 3 4 **484**	417 62 4 1 **484**	25 5 4 0 **34**	263 0 0 0 **263**	154 62 4 1 **221**	**221**	**0.0%**
270	1 2 3 4 **266**	231 26 8 1 **266**	0 0 0 0 **0**	231 12 0 0 **243**	0 14 8 1 **23**	**23**	**0.0%**
271	1 2 3 4 **315**	259 40 15 1 **315**	0 1 0 0 **1**	132 0 0 0 **132**	127 40 15 1 **183**	**183**	**0.0%**
272	1 2 3 4 **426**	289 114 19 4 **426**	0 1 1 0 **2**	283 0 0 0 **283**	6 114 19 4 **143**	**143**	**0.0%**
273	1 2 3 4 **1,216**	1,119 79 15 3 **1,216**	1 0 1 0 **2**	0 0 0 0 **0**	1,119 79 15 3 **1,216**	**1,213**	**-0.2%**
274	1 2 3 4 5 **439**	273 129 29 6 2 **439**	0 0 0 0 0 **0**	273 32 0 0 0 **305**	0 97 29 6 2 **134**	**134**	**0.0%**

Table 19. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
275	1	439	2	439	0	**184**	**0.0%**
	2	199	0	130	69		
	3	98	0	0	98		
	4	15	0	0	15		
	5	2	0	0	2		
		753	**2**	**569**	**184**		
276	1	1,082	1	915	167	**551**	**0.0%**
	2	301	1	0	301		
	3	82	0	0	82		
	4	1	0	0	1		
		1,466	**2**	**915**	**551**		
277	1	2,173	1	2,149	24	**901**	**0.0%**
	2	793	0	0	793		
	3	75	0	0	75		
	4	8	0	0	8		
	5	1	0	0	1		
		3,050	**1**	**2,149**	**901**		
278	1	673	0	673	0	**350**	**0.0%**
	2	369	3	86	283		
	3	63	0	0	63		
	4	3	0	0	3		
	5	1	0	0	1		
		1,109	**3**	**759**	**350**		
279	1	312	1	248	64	**265**	**0.0%**
	2	168	0	0	168		
	3	30	0	0	30		
	4	2	0	0	2		
	5	1	0	0	1		
		513	**1**	**248**	**265**		
280	1	358	1	358	0	**185**	**0.0%**
	2	178	0	58	120		
	3	58	0	0	58		
	4	5	0	0	5		
	5	2	0	0	2		
		601	**1**	**416**	**185**		
281	1	639	0	639	0	**306**	**0.0%**
	2	247	0	15	232		
	3	66	1	0	66		
	4	7	0	0	7		
	5	1	0	0	1		
		960	**1**	**654**	**306**		
282	1	111	0	111	0	**23**	**0.0%**
	2	54	1	54	0		
	3	29	0	8	21		
	4	2	0	0	2		
		196	**1**	**173**	**23**		

Table 19. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
283	1	327	1	327	0	**132**	**0.0%**
	2	148	0	118	30		
	3	89	0	0	89		
	4	13	0	0	13		
		577	**1**	**445**	**132**		
284	1	304	1	304	0	**91**	**0.0%**
	2	174	0	174	0		
	3	143	0	108	35		
	4	46	0	0	46		
	5	8	0	0	8		
	6	2	0	0	2		
		677	**1**	**586**	**91**		
285	1	824	1	542	282	**655**	**0.0%**
	2	354	0	0	354		
	3	14	0	0	14		
	4	3	0	0	3		
	5	2	0	0	2		
		1,197	**1**	**542**	**655**		
286	1	273	1	273	0	**90**	**0.0%**
	2	167	1	167	0		
	3	100	0	17	83		
	4	7	0	0	7		
		547	**2**	**457**	**90**		
288	1	278	0	278	0	**91**	**0.0%**
	2	162	1	162	0		
	3	160	0	79	81		
	4	10	0	0	10		
		610	**1**	**519**	**91**		
289	1	131	0	131	0	**43**	**0.0%**
	2	83	0	83	0		
	3	66	0	41	25		
	4	17	0	0	17		
	5	1	0	0	1		
		298	**0**	**255**	**43**		
290	1	649	0	649	0	**294**	**0.0%**
	2	392	0	199	193		
	3	95	0	0	95		
	4	6	0	0	6		
		1,142	**0**	**848**	**294**		
291	1	902	0	902	0	**660**	**0.0%**
	2	749	0	208	532		
	3	120	0	0	120		
	4	4	0	0	4		
	5	3	0	0	3		
	6	1	0	0	1		
		1,770	**0**	**1,110**	**660**		

Table 19. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
292	1 2 3 **943**	865 61 17 **943**	0 1 0 **1**	198 0 0 **198**	667 61 17 **745**	**745**	**0.0%**
294	1 2 3 4 **433**	285 111 30 7 **433**	0 1 0 0 **1**	258 0 0 0 **258**	27 111 30 7 **175**	**175**	**0.0%**
295	1 2 3 4 **937**	522 271 129 15 **937**	2 1 1 0 **4**	522 156 0 0 **678**	0 115 129 15 **259**	**259**	**0.0%**
296	1 2 3 4 **704**	306 269 122 7 **704**	1 1 1 0 **3**	306 267 0 0 **573**	0 2 122 7 **131**	**131**	**0.0%**
297	1 2 3 **316**	249 65 2 **316**	0 0 0 **0**	122 0 0 **122**	127 65 2 **194**	**194**	**0.0%**
298	1 2 3 4 **1,403**	1,256 130 16 1 **1,403**	2 0 0 0 **2**	822 0 0 0 **822**	434 130 16 1 **581**	**581**	**0.0%**
299	1 2 3 **690**	354 251 85 **690**	0 0 0 **0**	354 120 0 **474**	0 131 85 **216**	**216**	**0.0%**
TOTAL		**67,308**	**274**	**34,542**	**32,766**	**32,854**	

Table 21. 2012 Muzzleloader Lottery Distribution Report.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
103	1 2 **54**	46 8 **54**	0 0 **0**	45 0 **45**	1 8 **9**	**9**	**0.0%**
108	1 2 3 **43**	24 13 6 **43**	0 0 0 **0**	24 13 4 **41**	0 0 2 **2**	**2**	**0.0%**
110	1 2 3 **25**	22 2 1 **25**	0 0 0 **0**	0 0 0 **0**	22 2 1 **25**	**27**	**7.4%**
118	1 2 3 **26**	15 8 3 **26**	0 0 0 **0**	15 8 1 **24**	0 0 2 **2**	**2**	**0.0%**
119	1 2 3 **70**	31 35 4 **70**	0 0 0 **0**	31 35 0 **66**	0 0 4 **4**	**4**	**0.0%**
122	1 2 **8**	7 1 **8**	0 0 **0**	2 0 **2**	5 1 **6**	**6**	**0.0%**
169	1 2 3 **86**	80 5 1 **86**	0 0 0 **0**	33 0 0 **33**	47 5 1 **53**	**53**	**0.0%**
171	1 2 **65**	48 17 **65**	0 0 **0**	35 0 **35**	13 17 **30**	**30**	**0.0%**
172	1 2 **109**	77 32 **109**	0 0 **0**	68 0 **68**	9 32 **41**	**41**	**0.0%**
183	1 2 **95**	92 3 **95**	0 0 **0**	17 0 **17**	75 3 **78**	**78**	**0.0%**
184	1 2 **159**	135 24 **159**	0 0 **0**	23 0 **23**	112 24 **136**	**136**	**0.0%**
197	1 2 3 **41**	37 3 1 **41**	0 0 0 **0**	16 0 0 **16**	21 3 1 **25**	**25**	**0.0%**
199	1 **4**	4 **4**	0 **0**	0 **0**	4 **4**	**4**	**0.0%**

Table 21. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
234	1 2 **25**	22 3 **25**	0 0 **0**	1 0 **1**	21 3 **24**	**24**	**0.0%**
235	1 2 **19**	12 7 **19**	0 0 **0**	4 0 **4**	8 7 **15**	**15**	**0.0%**
238	1 2 **8**	6 2 **8**	0 0 **0**	4 0 **4**	2 2 **4**	**4**	**0.0%**
250	1 2 **79**	60 19 **79**	0 0 **0**	55 0 **55**	5 19 **24**	**24**	**0.0%**
251	1 2 **9**	7 2 **9**	0 0 **0**	3 0 **3**	4 2 **6**	**6**	**0.0%**
252	1 2 **72**	53 19 **72**	0 0 **0**	53 1 **54**	0 18 **18**	**18**	**0.0%**
253	1 2 3 **113**	79 33 1 **113**	0 0 0 **0**	79 8 0 **87**	0 25 1 **26**	**26**	**0.0%**
258	1 2 **68**	62 6 **68**	0 0 **0**	6 0 **6**	56 6 **62**	**62**	**0.0%**
260	1	20 **20**	0 **0**	6 **6**	14 **14**	**14**	**0.0%**
262	1 2 **32**	26 6 **32**	0 0 **0**	5 0 **5**	21 6 **27**	**27**	**0.0%**
263	1	14 **14**	0 **0**	8 **8**	6 **6**	**6**	**0.0%**
264	1	33 **33**	0 **0**	21 **21**	12 **12**	**12**	**0.0%**
265	1 2 **34**	33 1 **34**	0 0 **0**	11 0 **11**	22 1 **23**	**23**	**0.0%**
266	1 2 **48**	41 7 **48**	0 0 **0**	18 0 **18**	23 7 **30**	**30**	**0.0%**

Table 21. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
269	1 2 **48**	54 3 **48**	0 0 **0**	28 0 **28**	26 3 **29**	**29**	**0.0%**
270	1 **23**	23 **23**	0 **0**	21 **21**	2 **2**	**2**	**0.0%**
271	1 2 **27**	26 1 **27**	0 0 **0**	10 0 **10**	16 1 **17**	**17**	**0.0%**
272	1 2 **21**	18 3 **21**	0 0 **0**	14 0 **14**	4 3 **7**	**7**	**0.0%**
273	1 2 **81**	75 6 **81**	0 0 **0**	0 0 **0**	75 6 **81**	**87**	**6.9%**
274	1 2 3 **46**	35 10 1 **46**	0 0 0 **0**	30 0 0 **30**	5 10 1 **16**	**16**	**0.0%**
275	1 2 4 **59**	42 16 1 **59**	0 0 0 **0**	42 1 0 **43**	0 15 1 **16**	**16**	**0.0%**
276	1 2 **120**	95 25 **120**	0 0 **0**	71 0 **71**	24 25 **49**	**49**	**0.0%**
277	1 2 3 **303**	248 54 1 **303**	0 0 0 **0**	204 0 0 **204**	44 54 1 **99**	**99**	**0.0%**
278	1 2 **138**	104 34 **138**	0 0 **0**	88 0 **88**	16 34 **50**	**50**	**0.0%**
279	1 2 **59**	45 14 **59**	0 0 **0**	24 0 **24**	21 14 **35**	**35**	**0.0%**
280	1 2 3 **44**	34 9 1 **44**	0 0 0 **0**	29 0 0 **29**	5 9 1 **15**	**15**	**0.0%**
281	1 2 **120**	96 24 **120**	0 0 **0**	76 0 **76**	20 24 **44**	**44**	**0.0%**

Table 21. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
282	1 2 **16**	11 5 **16**	0 0 **0**	11 3 **14**	0 2 **2**	**2**	**0.0%**
283	1 2 **69**	48 21 **69**	0 0 **0**	48 3 **51**	0 18 **18**	**18**	**0.0%**
284	1 2 3 **63**	41 20 2 **63**	0 0 0 **0**	41 13 0 **54**	0 7 2 **9**	**9**	**0.0%**
285	1 2 **77**	62 15 **77**	0 0 **0**	32 0 **32**	30 15 **45**	**45**	**0.0%**
286	1 2 **57**	38 19 **57**	0 0 **0**	38 9 **47**	0 10 **10**	**10**	**0.0%**
288	1 2 **52**	34 18 **52**	0 0 **0**	34 9 **43**	0 9 **9**	**9**	**0.0%**
289	1 2 3 **44**	32 11 1 **44**	0 0 0 **0**	32 5 0 **37**	0 6 1 **7**	**7**	**0.0%**
290	1 2 3 **183**	134 48 1 **183**	0 0 0 **0**	127 0 0 **127**	7 48 1 **56**	**56**	**0.0%**
291	1 2 3 **213**	141 71 1 **213**	0 0 0 **0**	123 0 0 **123**	18 71 1 **90**	**90**	**0.0%**
292	1 2 **65**	61 4 **65**	0 0 **0**	10 0 **10**	51 4 **55**	**55**	**0.0%**
294	1 2 **54**	45 9 **54**	0 0 **0**	29 0 **29**	16 9 **25**	**25**	**0.0%**
295	1 2 **129**	**83** **46** **129**	0 0 **0**	83 5 **88**	0 41 **41**	**41**	**0.0%**
296	1 2 **91**	55 36 **91**	0 0 **0**	55 17 **72**	0 19 **19**	**19**	**0.0%**

Table 21. (Continued).

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
297	1	10	0	4	6	**6**	**0.0%**
		10	**0**	**4**	**6**		
298	1	44	0	26	18	**19**	**0.0%**
	2	1	0	0	1		
		45	**0**	**26**	**19**		
299	1	57	0	57	0	**34**	**0.0%**
	2	36	0	4	32		
	3	1	0	0	1		
	4	1	0	0	1		
		95	**0**	**61**	**34**		
TOTAL		**3,743**	**0**	**2,125**	**1,618**	**1,626**	

Table 22. 2012 Special Permit Areas for Firearms Hunters.

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
901 - Rice Lake NWR	1	65	0	35	30	**40**
	2	10	0	0	10	
		75	**0**	**35**	**40**	
902 - Saint Croix State Park	1	657	0	430	227	**400**
	2	173	0	0	173	
	3	2	0	0	2	
		832	**0**	**430**	**402**	
903 - Savanna Portage State Park	1	20	0	7	13	**20**
	2	8	0	0	8	
		28	**0**	**7**	**21**	
904 - Gooseberry Falls State Park	1	44	0	15	29	**40**
	2	10	0	0	10	
	3	1	0	0	1	
		55	**0**	**15**	**40**	
905 - Split Rock Lighthouse State Park	1	23	0	0	23	**30**
	2	3	0	0	3	
		26	**0**	**0**	**26**	
906 - Tettegouche State Park	1	87	0	0	87	**125**
	2	1	0	0	1	
		88	**0**	**0**	**88**	
907 - Scenic State Park	1	30	0	1	29	**30**
	2	2	0	0	2	
		32	**0**	**1**	**31**	
908 - Hayes Lake State Park	1	20	0	0	20	**75**
		20	**0**	**0**	**20**	
909 - Lake Bemidji State Park	1	15	0	0	15	**30**
	2	5	0	0	5	
		20	**0**	**0**	**20**	
910 - Zippel Bay State Park	1	56	0	5	51	**55**
	2	4	0	0	4	
		60	**0**	**5**	**55**	
913 - Lake Carlos State Park	1	19	0	10	9	**20**
	2	11	0	0	11	
		30	**0**	**10**	**20**	
914 - William O'Brien State Park	1	70	0	43	27	**60**
	2	33	0	0	33	
		103	**0**	**43**	**60**	
915 - Lake Bronson State Park	1	43	0	25	18	**30**
	2	12	0	0	12	
		55	**0**	**25**	**30**	

Table 22. (Continued).

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	**Rejected**			
916 - Maplewood State Park	1	158	0	158	0	**100**
	2	125	0	125	0	
	3	92	0	31	61	
	4	37	0	0	37	
	6	2	0	0	2	
	9	1	0	0	1	
		415	**0**	**314**	**101**	
917 - Old Mill State Park	1	11	0	1	10	**10**
		11	**0**	**1**	**10**	
918 - Lake Alexander Woods SNA	1	57	0	32	25	**40**
	2	15	0	0	15	
		72	**0**	**32**	**40**	
919 - Glacial Lakes State Park	1	24	0	0	24	**30**
		24	**0**	**0**	**24**	
920 - Zumbro Falls SNA	1	9	0	0	9	**12**
	2	1	0	0	1	
		10	**0**	**0**	**10**	
921 - Forestville/Mystery Cave State Park	1	130	0	50	80	**130**
	2	47	0	0	47	
	3	4	0	0	4	
		181	**0**	**50**	**131**	
922 - Lake Louise State Park	1	48	0	48	0	**25**
	2	24	0	1	23	
	3	2	0	0	2	
		74	**0**	**49**	**25**	
923 - Zumbro Falls SNA	1	14	0	4	10	**12**
	2	2	0	0	2	
		16	**0**	**4**	**12**	
924 - Whitewater State Game Refuge	1	77	0	19	58	**75**
	2	17	0	0	17	
	3	1	0	0	1	
		95	**0**	**19**	**76**	
925 - Vermillion Highlands Research, Recreation, and WMA	1	47	0	47	0	**25**
	2	41	0	31	10	
	3	16	0	0	16	
		106	**0**	**78**	**26**	
926 - Baker Park Reserve	1	149	0	149	0	**72**
	2	82	0	18	64	
	3	8	0	0	8	
		1	0	1	0	
		240	**0**	**168**	**72**	

Table 22. (Continued).

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	**Rejected**			
927 - Elm Creek Park Reserve	1	273	0	272	1	**155**
	2	152	0	14	138	
	3	17	0	0	17	
		442	**0**	**286**	**156**	
928 - Wild River SP	1	168	0	168	0	**75**
	2	100	0	29	71	
	3	3	0	0	3	
	4	1	0	0	1	
		272	**0**	**197**	75	
929 - Frontenac State Park - B	1	96	0	58	38	**60**
	2	22	0	0	22	
		118	**0**	**58**	**60**	
930 - Mille Lacs Kathio State Park	1	79	0	59	20	**40**
	2	20	0	0	20	
	9	1	0	0	1	
		100	**0**	**59**	**41**	
		3,598	**0**	**1,886**	**1,712**	**1,814**

Table 23. 2012 Special Permit Areas for Muzzleloader Hunters.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
936 - Crow Wing SP	1	143	0	143	0	**40**
	2	70	0	70	0	
	3	61	0	42	19	
	4	20	0	0	20	
	9	1	0	0	1	
		295	**0**	**255**	**40**	
937 - Soudan SP	1	23	0	6	17	**20**
	2	2	0	0	2	
	3	1	0	0	1	
		26	**0**	**6**	**20**	
938 - City of Tower	1	11	0	0	11	**20**
	2	1	0	0	1	
		12	**0**	**0**	**12**	
939 - Lake Shetek SP	1	25	0	25	0	**15**
	2	22	0	08	14	
	3	2	0	0	2	
		49	**0**	**33**	**16**	
940 – Rice Lake SP	1	122	0	122	0	**20**
	2	48	0	36	12	
	3	7	0	0	7	
	4	1	0	0	1	
		178	**0**	**158**	**20**	
942- Sibley SP	1	117	0	107	10	**50**
	2	39	0	0	39	
	3	1	0	0	1	
		157	**0**	**107**	**50**	
943 – Big Stone Lake SP	1	21	0	21	0	**10**
	2	8	0	1	7	
	3	3	0	0	3	
		32	**0**	**22**	**10**	
944 – Vermilion Highlands WMA	1	29	0	28	1	**25**
	2	23	0	0	23	
	3	1	0	0	1	
		53	**0**	**28**	**25**	
TOTAL		**802**	**0**	**609**	**193**	**200**
GRAND TOTAL		**75,451**	**274**	**39,162**	**36,289**	**36,494**

2012 MINNESOTA ELK HARVEST REPORT

Leslie McInenly, Big Game Program Leader
Joel Huener, Wildlife Area Manager
Christine Reisz, Area Wildlife Manager

INTRODUCTION

A limited number of licenses are offered to Minnesota residents to hunt elk. In 2012, there were three established zones; 1) Zone 10 near Grygla, Minnesota, 2) Zone 20 - Kittson County Central and 3) Zone 30 - Kittson County Northeast (Figures 1 and 2). In 2012, there were three regular season hunts (September 15-23; December 1-9; December 15-23). Hunts were held during the first season in all zones, during the second season in zones 10 and 20, and during the third season only in zone 20. 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 2012, unsuccessful hunters from the September and December seasons were authorized to hunt in a special January 12-20, 2013, antlerless-only extended season in the Kittson County zone to help meet population objectives.

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 23 licenses were available and 1127 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 2012, a total of 8 elk were harvested in the zones (Table 2). Long-term elk harvest for the zones is depicted in Table 3 on pages 3 and 4.

Table 1. License allocation and application numbers for three elk hunting zones, 2012.

Zone	Either-Sex	Antlerless	Bull-only	Total	Total Applicants
10 – Grygla	2	3	0	5	471
20 – Kittson Central	3	13	0	16	442
30 – Kittson NE	0	0	2	2	214
Total	**5**	**16**	**2**	**23**	**1127**

Table 2. Distribution of the 2012 Minnesota elk harvest. License allocation totals represent the actual number sold, not the number authorized through rule.

Grygla Hunt Zone (10)

Season	Either-Sex Licenses	Antlerless Licenses	Bulls taken	Antlerless taken	Total elk taken
September 15 - 23	2	0	1 (5x5)	0	1
December 1 - 9	0	3	0	0	0
Total	**2**	**3**	**1**	**0**	**1**

Kittson County Central Hunt Zone (20)

Season	Either-Sex Licenses	Antlerless Licenses	Bulls taken	Antlerless taken	Total elk taken
September 15 - 23	1	5	3 (2 bulls*, 1calf)	1	4
December 1 - 9	1	4	0	0	0
December 15 - 23	1	4	0	0	0
January 12-20 (extended season)	0	11**	0	2	2
Total	**3**	**13**	**3**	**3**	**6**

* One sub-legal spike bull was illegally harvested and subsequently confiscated. One 8x8 bull was also harvested.

** Hunters/parties with unfilled tags from Zone 20 were invited back for a special extended season hunt. Six parties hunted during the period from January 12-15; five parties hunted during the period from January 17-20. One cow was harvested in each of the extended season periods.

Kittson County Northeast Hunt Zone (30)

Season	Bull-only Licenses	Bulls taken	Total elk taken
September 15 - 23	2	1 (6x6)	1
Total	**2**	**1**	**1**

Table 3. Grygla and Kittson County elk harvests, 1987-2012.

	Grygla			
	Bulls (or Either-Sex)		Antlerless	
Year	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
2012	2	1	3	0
Total	28	19	66	39

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

	Kittson County (Combined)			
	Bulls (or Either-Sex)		Antlerless	
Year	Permits	Harvest	Permits	Harvest
2008	1	1	10	10
2009	12	9[a]	4	5
2010	1	1	3	3
2011	2	3[b]	8[c]	4
2012	5	4[d]	13	3
Total	21	18	38	25

[a] One additional bull (6x7) was wounded but not retrieved in 2009. It was found dead later and is counted in the total.
[b] One bull was a male calf and was legally tagged as an antlerless animal.
[c] Three 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.
[d] One bull was a sub-legal spike and was confiscated.

Figure 1. Grygla Hunt Zone.

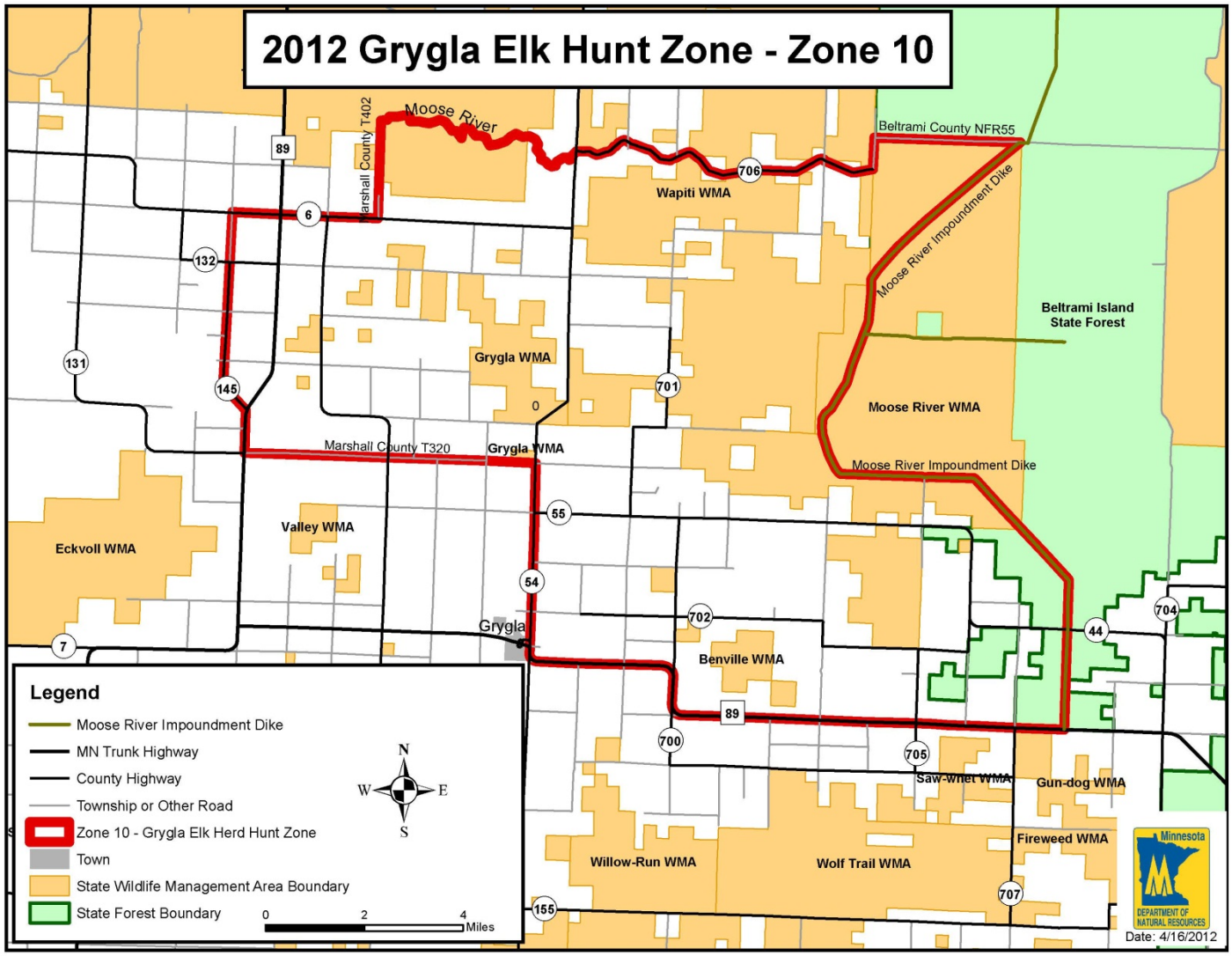
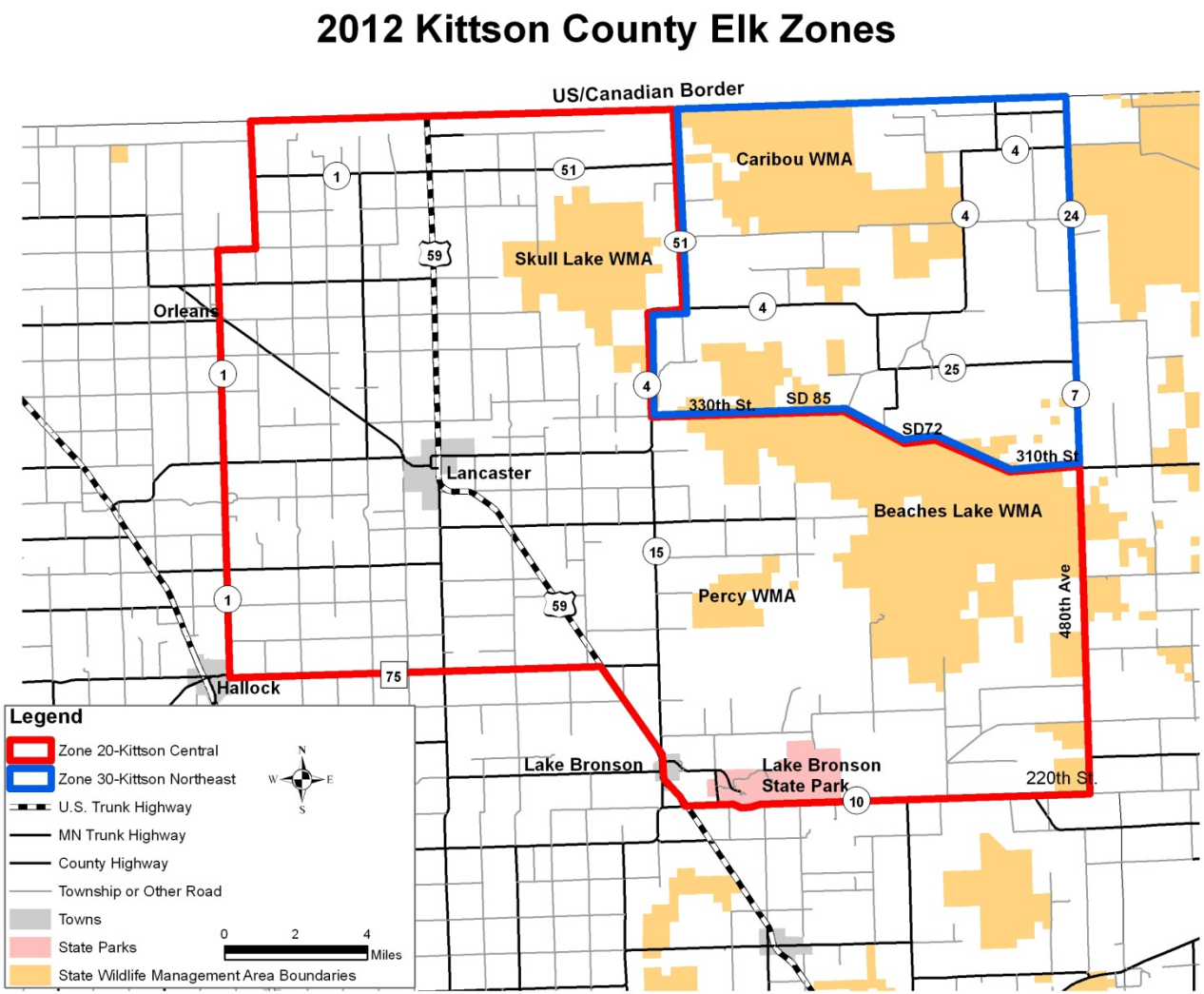


Figure 2. Kittson County Hunt Zones.



2012 MINNESOTA MOOSE HARVEST

Glenn D. DelGiudice, 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 1 of 8 registration stations and provide information on the location where they killed their moose and date of kill. Hunters also are requested to collect biological samples from the moose harvested and these are submitted at the registration station.

RESULTS

In 2012, State hunters harvested 46 moose in northeastern Minnesota (Figure 1). No season was held in northwestern Minnesota. Of the 1,460 parties that applied for this year's moose hunt, 76 (5%) were drawn and purchased a license (Table 1). Additionally, 11 hunting parties which returned permits last year (2011) prior to the hunt, because of access restrictions caused by the Pagami Creek wildfire, were offered the opportunity to hunt the same zones (20, 24, 25, 62, and 64) in 2012 and all accepted. So a total of 87 licenses were purchased this year (Table 1). 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 49 permits and band members killed 16 moose (11 bulls and 5 cows). The Fond du Lac band issued 64 moose permits (bulls only) of 72 available. The final harvest was 20 bulls (18 by hunters and 2 subsistence/ceremony animals). The Fond du Lac season closed on 31 December 2012.

DISCUSSION

The success rate of State hunters in 2012 was 53%, a decrease of 5% from 2011 (Tables 1 and 2). This was the sixth year of hunting for bulls only. The success rate for members of the 1854 Treaty Authority was 33%, up 7% from last year. The success rate for the Fond du Lac band hunters was 28%, up 3% from last year.

Table 1. Moose harvested, licenses offered and sold, application rate, and party success in 2012 moose hunt by State hunters in northeastern Minnesota.

Zone	Bulls	Licenses Offered	Licenses Sold*	Party Applications**	Chances for Permit	% Success‡
20	1	2 (2)	2 (2)	27	7%	25%
21	1	3	3	63	5%	33%
22	1	2	2	17	12%	50%
24	1	1 (1)	1 (1)	49	2%	50%
25	0	1 (1)	1 (1)	51	2%	0%
26	0	1	1	19	5%	0%
27	1	4	4	44	9%	25%
28	1	2	2	19	11%	50%
29	2	2	2	71	3%	100%
30	2	5	5	143	3%	40%
31	1	3	3	156	2%	33%
32	1	2	2	26	8%	50%
33	1	2	2	52	4%	50%
36	3	5	5	34	15%	60%
37	1	2	2	23	9%	50%
60	3	3	3	19	16%	100%
61	3	5	5	60	8%	60%
62	4	5 (5)	5 (5)	89	6%	40%
63	3	3	3	26	12%	100%
64	4	6 (2)	6 (2)	57	11%	50%
70	2	2	2	75	3%	100%
72	1	2	2	67	3%	50%
73	2	2	2	40	5%	100%
74	2	2	2	30	7%	100%
76	2	3	3	68	4%	67%
77	0	2	2	36	6%	0%
79	2	2	2	27	7%	100%
80	1	2	2	72	3%	50%
Total	46	76	76 (11)	1,460	5%	53%

* 11 Parties (in parentheses) returned their license in 2011 prior to the hunt, because of access restrictions caused by the Pagami Creek wildfire. These same 11 parties were offered the opportunity to hunt the same zones (20, 24, 25, 62, and 64) in 2012 and all accepted.

** 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%
2012	1,460	76	87	46	53%

* 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 (20, 24, 25, 62, and 64) was restricted. In 2012 – these same 11 parties were offered the opportunity to hunt the same zones and all accepted.

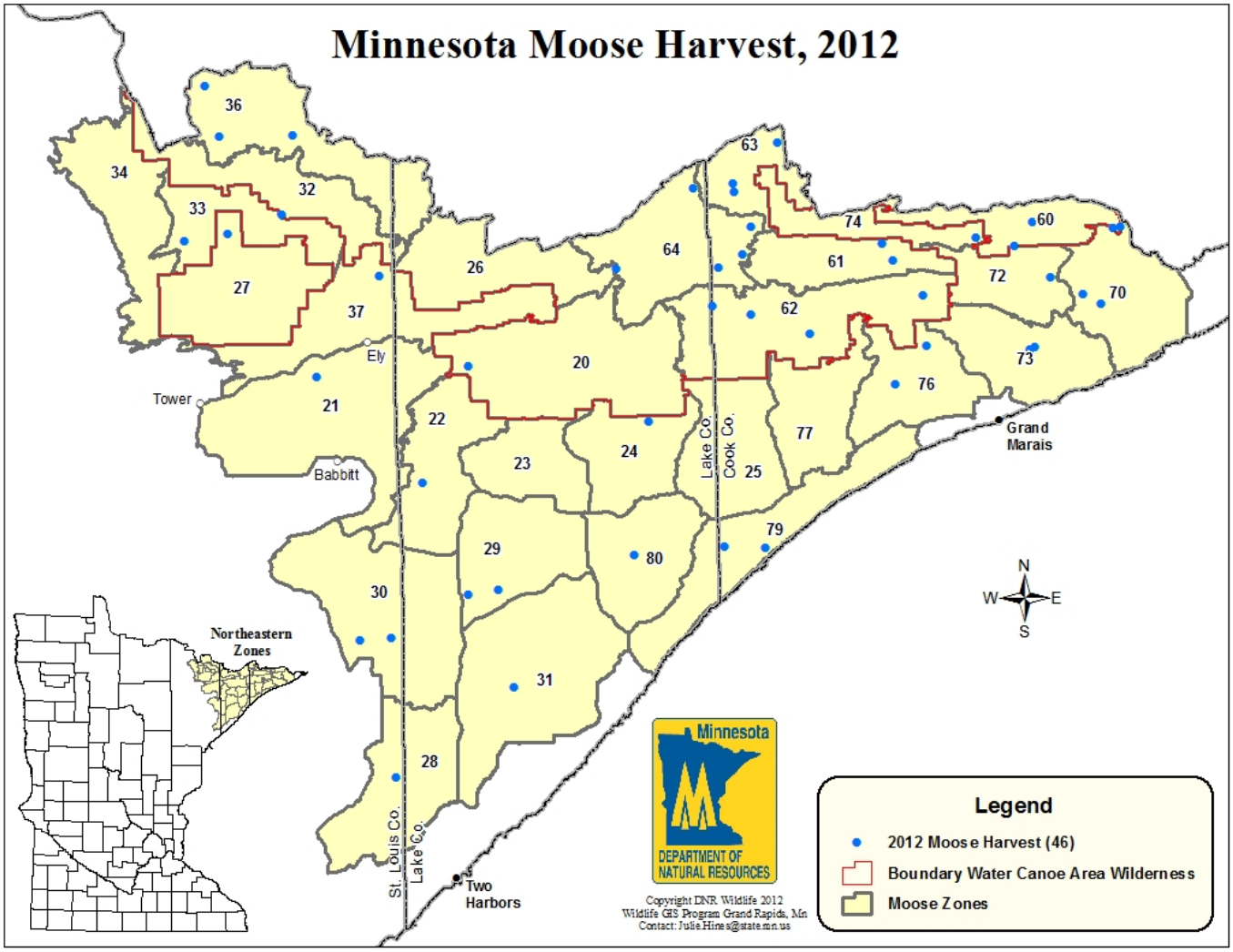


Figure 1. Moose zones and locations of harvested moose during the State's 2012 moose season.

MINNESOTA SANDHILL CRANE HARVEST REPORT, 2012

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). In 2012 the season was 15 September – 21 October. The bag limit remained the same at 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. 2013. 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, 2010-2012. (Kruse, K.L. et al. 2013).

Year	Number of Permits	Active Hunters	Harvest
2010	1,954	964	830
2011	1,342	643	765
2012	1,032	410	407

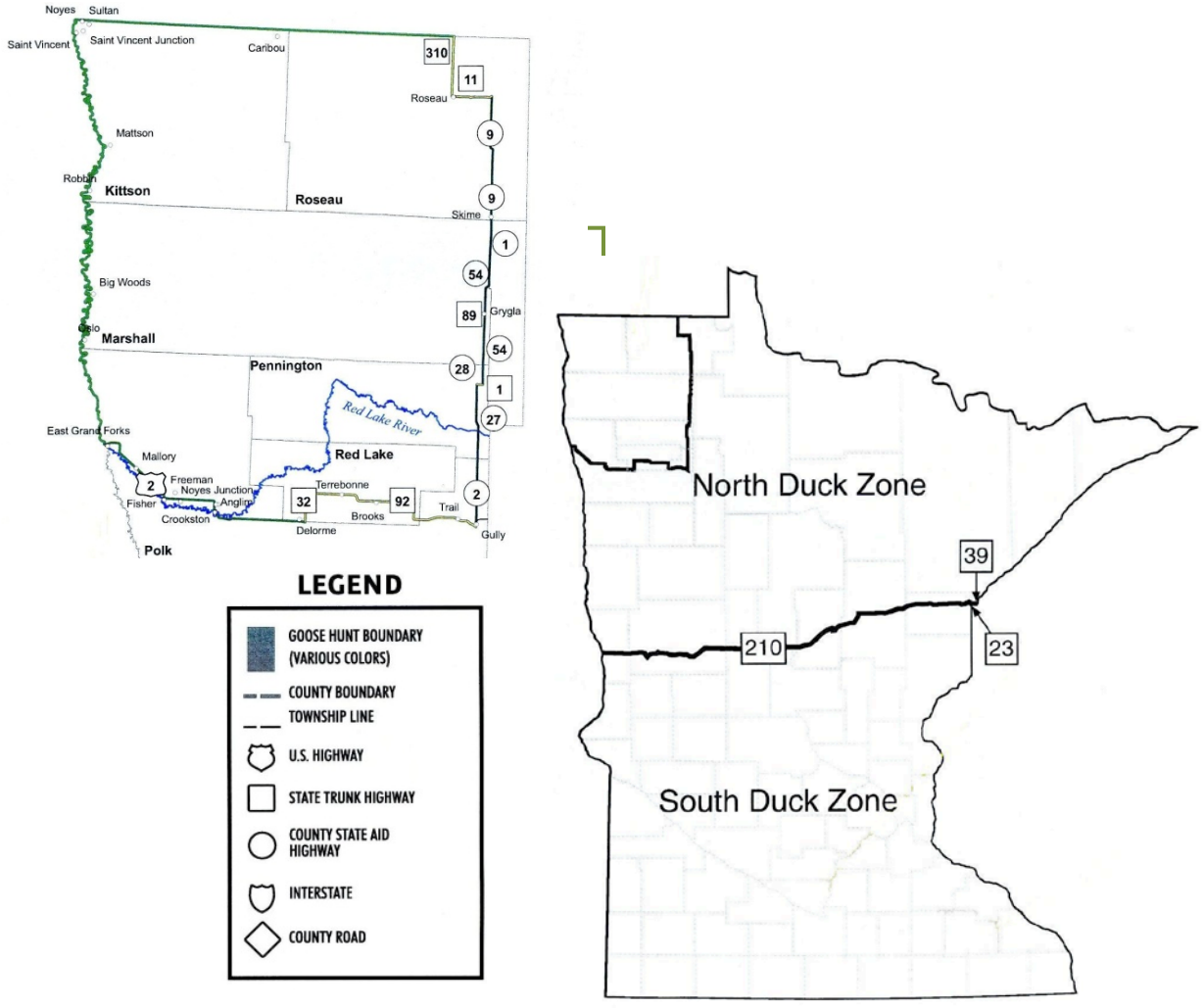


Figure 1. Sandhill crane hunting zone in Minnesota, 2010-2013.