

HUNTING HARVEST STATISTICS

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2013 SMALL GAME HUNTER MAIL SURVEY

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INTRODUCTION

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

METHODS

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

The sampling frame consisted of individuals who purchased a small game hunting license (any type) for the 2013-14 small game hunting season (N= 258,581). A stratified random sample (n= 7,000, 2.7%), allocated proportionally by license type (n=9) was drawn from the Minnesota DNR electronic database. License type was used as strata and included the following small game license types: Resident Senior Citizen, Resident Youth, Resident Adult, Resident Individual Sport, Resident Combination Sport, Resident Lifetime, Resident Lifetime Sport, Nonresident Youth, and Nonresident Adult. For analysis, license types were pooled into "Resident" (N= 252,550) and "Nonresident" (N= 6,031) (Figure 2). A free youth license was added to the sampling frame for 2011-12 (20,960) and 2012-13 (20,987) but that license has since been discontinued. Estimates for those years have been recalculated without the youth license so that those estimates are comparable from year to year. The percent of respondents who said they hunted or did not hunt is reported in Table 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, 125 surveys were undeliverable; 3,589 surveys were returned for an adjusted response rate of 52%. Estimated number of hunters declined for geese, crows, ring-necked pheasants, rabbits and hares (Table 2). Success rates for all species were fairly similar to last year as was estimated take per hunter (Tables 3 and 4). License sales decreased about 5% from the previous year (Figure 2). Pheasant stamp sales were down about 17% (Table 5), most likely in response to predictions of low numbers from the August roadside survey. Total estimated harvest for the top four small game species in Minnesota is presented in

Figure 3. Total estimated harvest for all small game species is presented in Table 5. Survey results for selected species taken by Non-resident hunters are presented in Table 6.

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



2013 Small Game Hunter Report

1. Did you hunt small game, listed below, in Minnesota this year (March 2013 - Feb 2014)? No Yes (Please check box)
2. Indicate the **total number of days** spent hunting small game of all species listed below, in Minnesota. _____
3. For the species you hunted indicate your harvest, number of days hunted, and county in which you hunted most for each species, even if **None** were bagged. Report only game **you personally** bagged and retrieved in Minnesota. **Do not** include birds taken on shooting preserves or game farms.

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

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

You have been selected at random from among Minnesota's small game hunting license buyers to assist us in evaluating the 2013-2014 small game hunting season (**March 2013-February 2014**). We need information to estimate the season's harvest and to help set future small game seasons. Answer only for your Minnesota 2013 hunting experience.

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

Please fill out the attached questionnaire and mail as soon as possible. No envelope or stamp is necessary; just tear along the perforation and drop into a mailbox.

THANK YOU FOR YOUR COOPERATION

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

Figure 1. Sample of Small Game Hunter survey card.

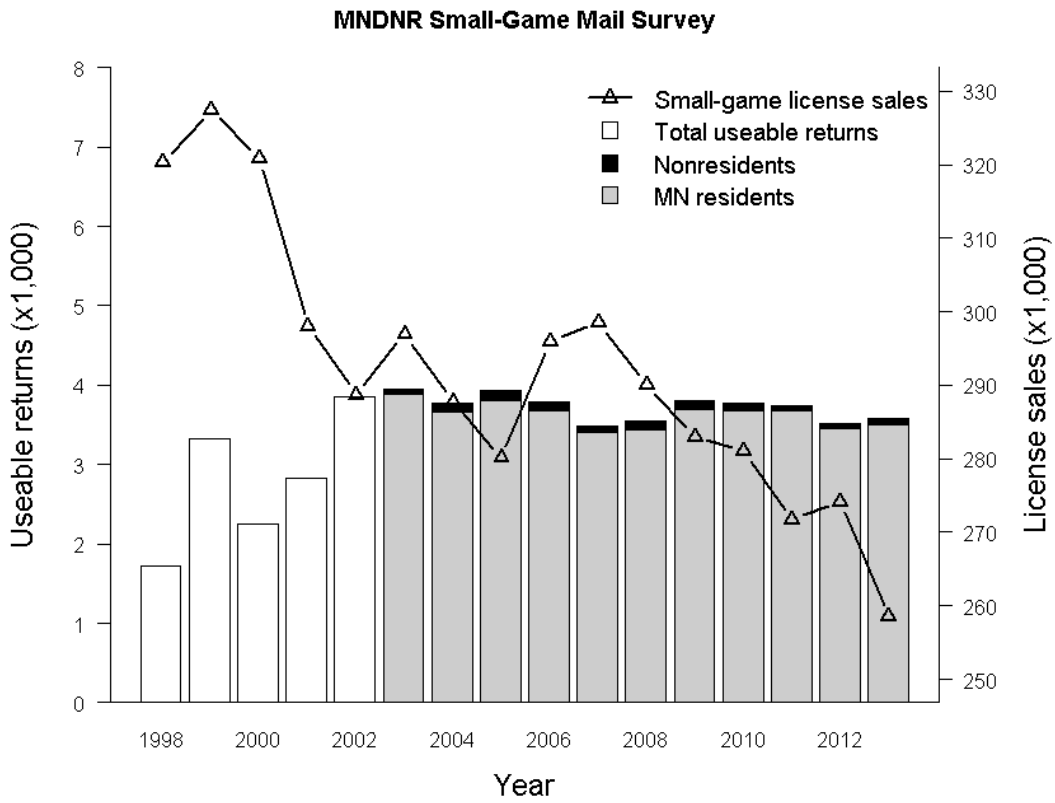


Figure 2. Number of Minnesota small game license sold and usable returned surveys, 1998-2013. Includes resident and non-resident licenses, and excludes duplicate and free licenses.

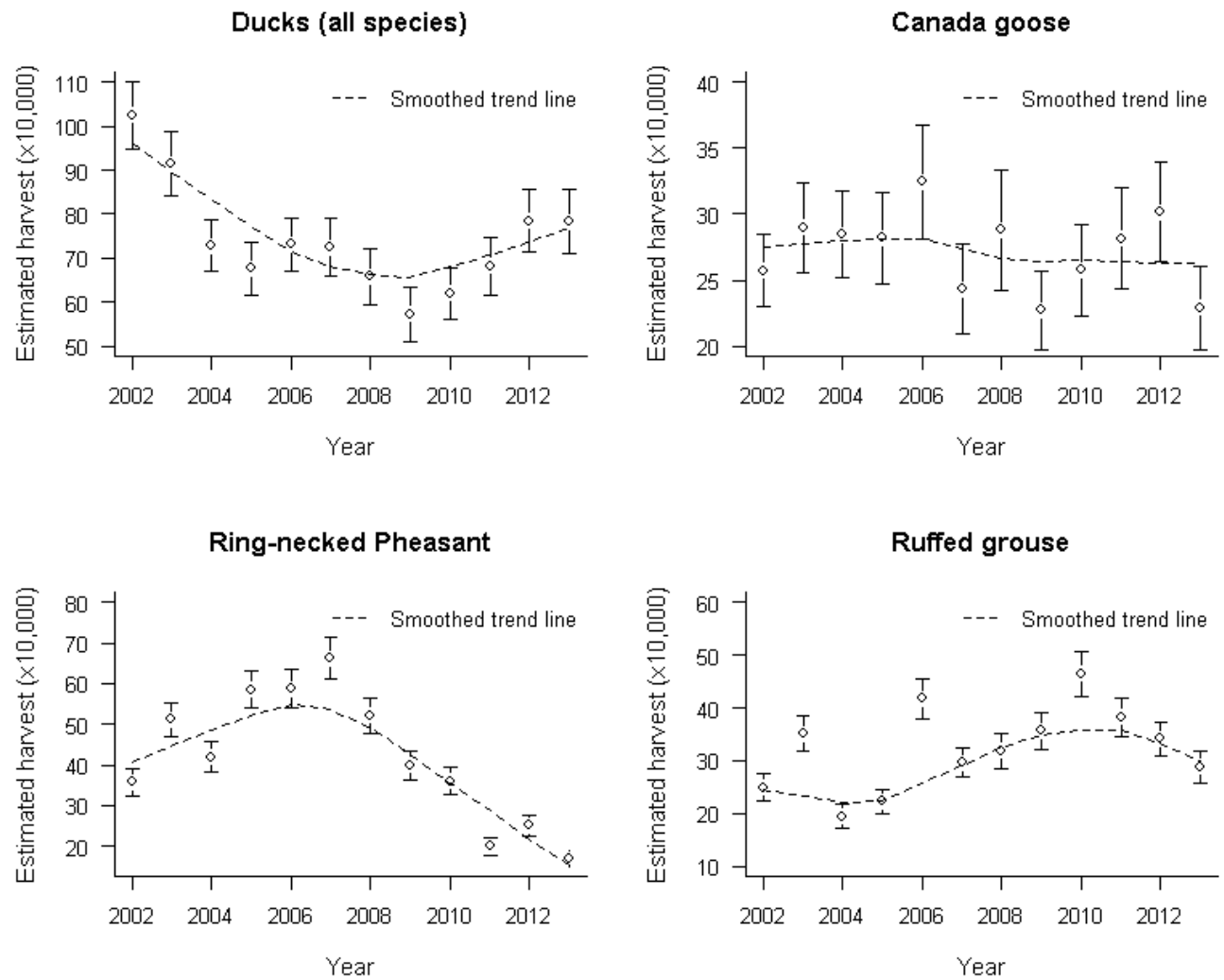


Figure 3. Summary of top four small game species harvested in Minnesota, 2002-2013.

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

		Returns from mail survey	Projections from license sales
2004-05	Hunted	2,934 (78%)	223,275
	Did not hunt	<u>847 (22%)</u>	<u>64,450</u>
		3,781 (100 %)	287,725
2005-06	Hunted	3,035 (77%)	216,000
	Did not hunt	<u>900 (23%)</u>	<u>64,156</u>
		3,935 (100 %)	280,156
2006-07	Hunted	2,994 (79%)	233,759
	Did not hunt	<u>795 (21%)</u>	<u>62,139</u>
		3,789 (100 %)	295,898
2007-08	Hunted	2,894 (78%)	232,505
	Did not hunt	<u>822 (22%)</u>	<u>65,961</u>
		3,716 (100 %)	298,467
2008-09	Hunted	2,678 (75%)	218,753
	Did not hunt	<u>873 (25%)</u>	<u>71,311</u>
		3,551 (100 %)	290,064
2009-10	Hunted	2,850 (75%)	212,126
	Did not hunt	<u>952 (25%)</u>	<u>70,857</u>
		3,802 (100 %)	282,983
2010-11	Hunted	2,824 (75%)	210,129
	Did not hunt	<u>953 (25%)</u>	<u>70,911</u>
		3,777 (100 %)	281,040
2011-12	Hunted	2,761 (74%)	214,137
	Did not hunt	<u>987 (26%)</u>	<u>76,549</u>
		3,748 (100 %)	290,686
2012-13	Hunted	2,669 (76%)	223,808
	Did not hunt	<u>851 (24%)</u>	<u>71,360</u>
		3,520 (100 %)	295,168
2013-14	Hunted	2,586 (72%)	186,317
	Did not hunt	<u>1,003 (28%)</u>	<u>72,264</u>
		3,589 (100 %)	258,581

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

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

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

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

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

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

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

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

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

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

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

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

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

Harvest estimates in this table, and the number of hunters and mean take per hunter in Table 5, are calculated from different questions on the survey form. The sample used in calculations differs from one estimator to the next. This is because some respondents give specific answers to one question but not to a related one. A formula is used to calculate the total estimated take for each species that appear in this table. In most years the formula produces results rather close to those obtained by multiplying the average take per hunter times the number of hunters. However, in other years (e.g., 1985) results of the two methods are quite divergent, perhaps as a result of an unusual sample. This is being investigated further, and as a result, numbers may change somewhat in future reports. The most current report of survey findings will have the best data available at that time. A youth-free license was part of the sampling frame for the 2011-12 and 2012-13 seasons but was discontinued for 2013-14. The harvest statics for those years have been recomputed by removing the youth free license from both the sampling frame and the respondents' database. The estimates are now more comparable over time.

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

^b Estimates based upon response of hunters to questionnaires.

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

^d Mourning dove season added 2004.

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

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

^a Excludes duplicate licenses and nonresident shooting preserve licenses.

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

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

The following information has been excerpted from: U.S. Fish and Wildlife Service. Migratory bird hunting activity and harvest during the 2012 - 2013 and 2013-14 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland, U.S.A. The entire report is available on-line at <http://www.fws.gov/migratorybirds/NewsPublicationsReports.html>

Table 1. Species composition of the Minnesota waterfowl harvest, 2012 and 2013. (from: Raftovich, R.V., S. Chandler, and K.A. Wilkins. 2014. Migratory Bird Hunting activity and harvest during the 2012-13 and 2013-14 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland. USA July 2014. 64 pp).

Species	Minnesota Harvest					Mississippi Flyway Harvest		
	2012	% of Harvest	2013	% of Harvest	Percent change in Harvest 12-13	2012	2013	Percent change Harvest 12-13
Mallard	197,316	26.33	166,366	27.37	-19	1,882,553	1,837,000	-2
Domestic mallard	0	0	0	0	0	647	1,277	+49
American black duck	587	0.08	0	0	0	20,688	24,951	+17
Black x mallard	587	0.08	0	0	0	2,074	5,633	+63
Gadwall	18,792	2.51	15,254	2.51	-23	1,240,234	1,009,467	-23
American wigeon	9,983	1.33	4,767	0.78	-109	137,133	95,602	-43
Green-winged teal	56,376	7.52	33,368	5.49	-69	932,461	848,357	-10
Blue-winged /cinnamon teal	123,322	16.46	115,360	18.98	-7	932,096	942,908	+1
Northern shoveler	15,856	2.12	15,731	2.59	-1	391,133	355,367	-10
Northern pintail	5,285	0.71	8,104	1.33	35	156,593	155,104	-1
Wood duck	184,396	24.61	149,681	24.63	-23	780,024	774,961	-1
Redhead	22,315	2.98	19,544	3.22	-14	99,179	121,598	+18
Canvasback	4,111	0.55	8,104	1.33	49	52,081	76,103	+32
Greater scaup	2,936	0.39	3,814	0.63	23	40,968	49,064	+17
Lesser scaup	17,617	2.35	10,011	1.65	-76	307,579	97,873	-214
Ring-necked duck	75,755	10.11	31,838	5.25	-137	324,658	240,898	-35
Goldeneye	4,111	0.55	1,430	0.24	-187	26,055	29,593	+12
Bufflehead	3,523	0.47	14,777	2.43	76	67,418	88,370	+24
Ruddy duck	2,349	0.31	0	0	0	20,443	8,933	-129
Scoters	0	0	0	0	0	3,989	3,091	-29
Hooded merganser	4,111	0.55	9,057	1.49	55	45,886	45,416	-1
Other mergansers	0	0	0	0	0	7,214	13,174	+45
Total Duck Harvest (retrieved kill)	749,300 ±13%		608,800 ±14%		- 23	7,522,700 ±5%	6,882,900 ±8%	-9

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

Table 2. Top 10 states in number of **adult duck hunters**, 2013, and number of hunter-days and retrieved duck kill. (from: Raftovich, R.V., S. Chandler, and K.A. Wilkins. 2014. Migratory Bird Hunting activity and harvest during the 2012-13 and 2013-14 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland. USA July 2014. 64 pp).

State	Number of active duck hunters	Duck hunter days afield	Total duck harvest	Seasonal duck harvest per hunter
Louisiana	77,600 ± 14%	766,200 ± 19%	2,390,500 ± 21%	30.8 ± 25%
Wisconsin	53,100 ± 15%	370,500 ± 19%	455,700 ± 16%	8.6 ± 22%
Minnesota	52,200 ± 11%	312,100 ± 12%	607,800 ± 14%	11.6 ± 18%
California	47,000 ± 11%	403,200 ± 11%	1,062,400 ± 14%	22.6 ± 18%
Texas	46,400 ± 24%	360,600 ± 46%	1,049,300 ± 42%	22.6 ± 49%
Arkansas	44,900 ± 11%	305,200 ± 15%	933,700 ± 17%	20.8 ± 20%
North Dakota	32,100 ± 8%	161,200 ± 8%	466,700 ± 9%	14.6 ± 11%
Michigan	31,800 ± 15%	197,300 ± 22%	296,200 ± 26%	9.3 ± 30%
Illinois	28,500 ± 12%	248,600 ± 17%	396,800 ± 18%	13.9 ± 22%
North Carolina	26,400 ± 17%	165,000 ± 17%	279,700 ± 17%	10.6 ± 24%
Mississippi Flyway		3,107,200 ± 7%	6,882,900 ± 8%	
United States		6,196,900 ± 5%	13,716,400 ± 6%	

Table 3. Top 10 states in number of **adult goose hunters**, 2013, and number of hunter-days and retrieved goose kill. (from: Raftovich, R.V., S. Chandler, and K.A. Wilkins. 2014. Migratory Bird Hunting activity and harvest during the 2012-13 and 2013-14 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland. USA July 2014. 64 pp).

State	Number of active goose hunters	Goose hunter days afield	Total goose harvest	Seasonal goose harvest per hunter
Minnesota	42,400 ± 14%	239,500 ± 19%	191,600 ± 19%	4.5 ± 24%
Wisconsin	30,000 ± 16%	220,500 ± 20%	86,300 ± 22%	2.9 ± 27%
Texas	30,300 ± 26%	90,500 ± 38%	148,800 ± 36%	4.9 ± 45%
California	29,800 ± 13%	201,800 ± 16%	162,200 ± 19%	5.4 ± 23%
Michigan	26,400 ± 18%	159,900 ± 25%	148,200 ± 35%	5.6 ± 39%
North Dakota	24,800 ± 9%	117,500 ± 11%	199,600 ± 15%	8.0 ± 18%
Ohio	23,500 ± 18%	160,300 ± 23%	128,500 ± 18%	5.5 ± 25%
Illinois	23,100 ± 15%	173,100 ± 21%	117,800 ± 23%	5.1 ± 27%
Maryland	21,800 ± 8%	130,000 ± 13%	163,000 ± 14%	7.5 ± 16%
Pennsylvania	21,800 ± 17%	114,200 ± 20%	109,400 ± 26%	5.0 ± 31%
Mississippi Flyway		1,497,500 ± 8%	1,195,500 ± 12%	
United States^b		3,301,400 ± 6%	3,360,400 ± 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 AUGUST 2013 CANADA GOOSE HUNT IN MINNESOTA

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The first August Canada goose season in Minnesota was held 10 - 25 August 2013, (16 days) in a portion of west-central Minnesota hereafter called the August Goose Zone (AGZ; Fig. 1). The AGZ was determined using the number of agricultural depredation complaints (primarily the number of Canada goose depredation shooting permits issued by Minnesota Department of Natural Resources (DNR) Area Wildlife Managers), and a series of meetings with DNR Area Managers, the DNR Canada goose sub-committee, and the DNR Waterfowl Committee. The primary purpose of the August Canada goose hunt is to decrease local populations of Canada geese in areas of the state that have large numbers of Canada goose depredation complaints. The season also offers additional Minnesota Canada goose hunting opportunities.

During the August season the daily bag limit was 10 Canada geese per day within the AGZ, with no possession limit. Shooting hours were 1/2-hour before sunrise to 1/2-hour after sunset. Goose hunters were required to obtain a \$4.00 permit to participate in the August season. This is the same permit required to hunt in the September Goose Season. This report documents results of the 2013 August goose hunter mail questionnaire survey (Appendix A).

METHODS

Permittees were randomly selected to receive a post-season hunter survey. We used a stratified design (with 2 strata based on a permit-sales-date of 8/4 as a cutpoint, i.e., stratum 1 = permit sold prior to 8/4, stratum 2 = permits sold between 8/4 and 8/25). Only 22% of stratum 1 respondents hunted in Aug, vs. 61% in stratum 2. Questionnaires were sent to 2,400 permit holders following the August 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.

We surveyed hunters as to the number of days hunted, the county they hunted in the most, the number of geese shot and retrieved, and the number of geese knocked down and not retrieved during the August goose season. Hunters were also asked to indicate whether or not they had hunted during the 1/2-hour after sunset period, and how many geese they shot during that period.

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 13,740 Special Canada Goose Season permits were sold prior to 26 August 2013. Response rate to the survey was 66%. Among those respondents, 48% indicated that they hunted during the August season. Active hunters were

afield an average of 3.1 days, harvested 1.2 geese per day hunted, and retrieved 3.8 geese per hunter (Table 1). The number and percentage of hunters that hunted in each county in Minnesota is presented in Appendix B.

From the survey, we estimate that 6,570 active hunters shot and retrieved 25,050 Canada geese during the 2013 August season (Table 1). Data from the survey also indicate that hunters knocked down and lost 2,420 geese, for a loss rate of 8.8%.

We asked hunters to indicate whether they had hunted geese during the ½-hour after sunset. A total of 29% of hunters reported hunting in the ½-hour after sunset period, and 1,960 geese, or 8% of the total geese, were harvested during this period.

This was the first year the August goose hunt was held in Minnesota. Spring 2013 was very late, with very cold temperatures and extensive areas of snow cover through May. This appeared to severely impact Canada goose reproduction within the AGZ (Rave 2013) and likely decreased hunter participation and success in 2013.

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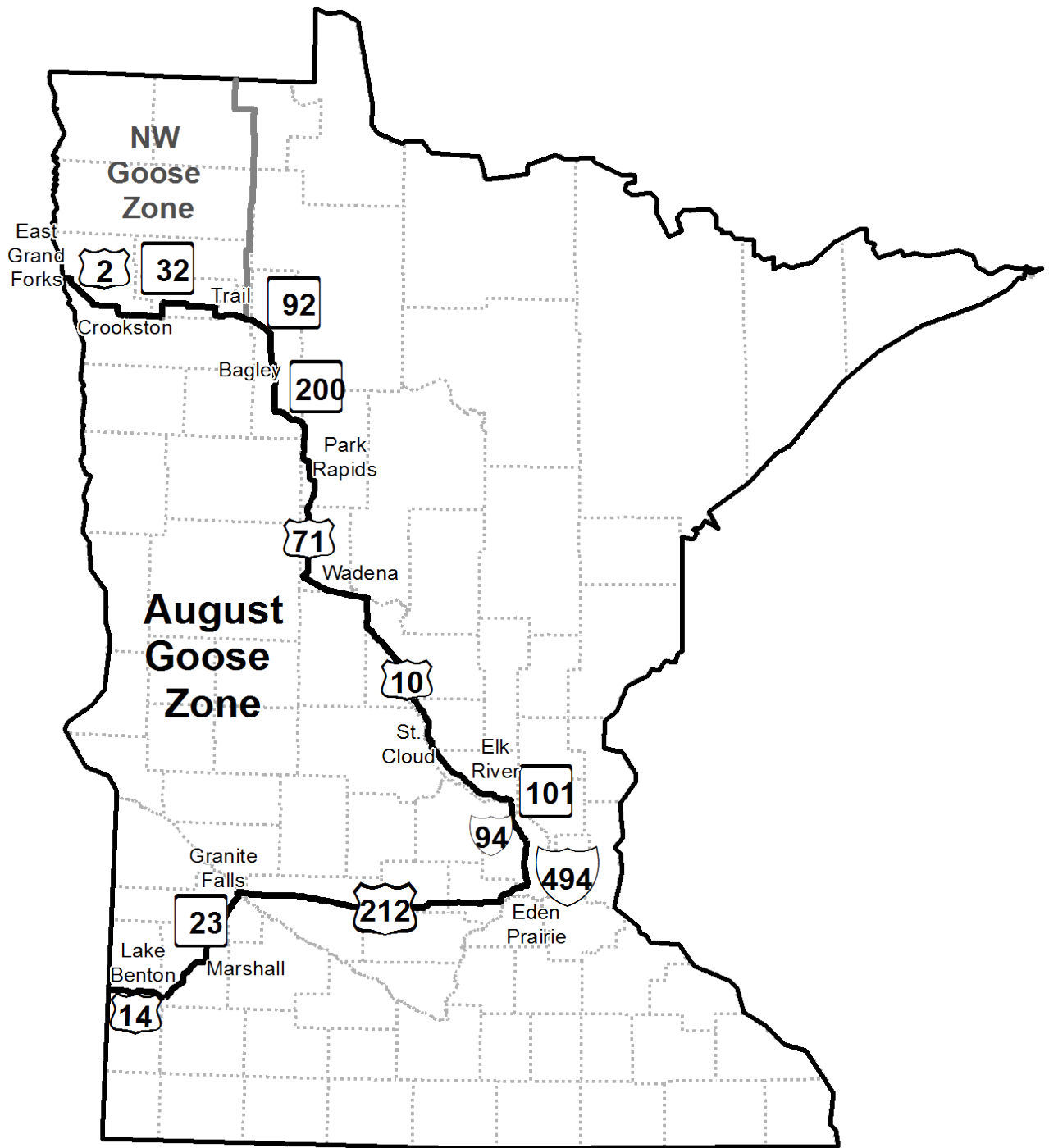


Figure 1. August Goose Zone in relation to the Northwest (NW) Goose Zone within Minnesota, 2013.

Table 1. Permit sales, hunter activity, and harvest^a during the August Canada Goose season (10 - 25 August) in Minnesota, 2013.

Parameter	Total
Total permits sold ^b	13,740
Questionnaires delivered	2,380
Useable questionnaires returned	1,570
% responding	66.2
Active hunters	750
% active hunters	48.0
Days hunted per active hunter	3.0
Geese shot and retrieved per active hunter	3.8
Unretrieved harvest per active hunter	0.37
% Unretrieved harvest	8.8
EXPANDED:	
Active hunters	6,570
Hunter days	20,328
Retrieved harvest	25,050
Est. unretrieved harvest	2,420
Total harvest	27,480

^aHarvest estimates not adjusted for memory/exaggeration bias.

^bSpecial goose permits sold prior to August 26

Appendix A. Questions asked on the 2013 August Canada Goose Season Hunter Survey.

1. Did you hunt Canada geese in Minnesota during August 10 – 25, 2013? Yes / No
If NO, please disregard all remaining questions and return this survey card.
2. How many days did you hunt Canada geese in Minnesota during August 10 – 25, 2013? _____
3. In what county did you hunt Canada geese most often during August 10 – 25, 2013? _____
4. How many Canada geese did you personally shoot and retrieve in Minnesota? _____
5. How many Canada geese did you personally knock down but could NOT retrieve? _____
6. Did you hunt Canada geese in Minnesota during the ½ hour after sunset period? Yes / No
7. If yes, how many Canada geese did you shoot and retrieve during the ½ hour after sunset period? _____

Appendix B. Number and percent of active August Canada goose hunters in the August Canada Goose Hunt survey in each county within the August Goose Zone, Minnesota, 2013.

County	Hunters		County	Hunters	
	N	%		N	%
BECKER	15	0.022	POPE	25	0.037
BENTON	1	0.001	RED LAKE	0	0
BIG STONE	17	0.025	RENVILLE	7	0.01
CARVER	38	0.057	SHERBURNE	12	0.018
CHIPPEWA	8	0.012	STEARNS	105	0.157
CLAY	7	0.01	STEVENS	15	0.022
CLEARWATER	2	0.003	SWIFT	14	0.021
GRANT	14	0.021	TODD	22	0.033
HENNEPIN	16	0.024	TRAVERSE	2	0.003
HUBBARD	2	0.003	WADENA	1	0.001
KANDIYOHI	41	0.061	WILKIN	1	0.001
LAC QUI					
PARLE	16	0.024	WRIGHT	59	0.088
LINCOLN	8	0.012	YELLOW MEDICINE	8	0.012
LYON	4	0.006			
MAHNOMEN	2	0.003			
McLEOD	36	0.054			
MEEKER	35	0.052			
MORRISON	9	0.013			
NORMAN	0	0			
OTTERTAIL	44	0.066			
POLK	2	0.003			



HUNTER ACTIVITY AND GOOSE HARVEST DURING THE AUGUST AND SEPTEMBER 2013 EARLY CANADA GOOSE HUNTS IN MINNESOTA

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The August and September Canada goose seasons in Minnesota were 10-24 August, and 1 - 20 September, 2013 respectively. During the August season the daily bag limit was 10 Canada geese per day within a portion of the state, the Intensive Harvest Zone (IHZ; Fig 1), with no possession limit. Shooting hours were 1/2-hour before sunrise to 1/2-hour after sunset. During the September season the daily bag limit was 10 Canada geese per day in the IHZ, and 5 geese per day in the rest of the state. 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 (Anoka County) and on Swan Lake (Nicolette County). Goose hunters in both the August and September seasons were required to obtain a \$4.00 permit to participate in the September season. This report documents results of the 2013 August and September goose hunter mail questionnaire survey (Appendix A).

METHODS

Permittees were randomly selected to receive a post-season hunter survey. Questionnaires were sent to 3,045 permit holders following the September 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, number of geese shot and retrieved, number of geese knocked down and not retrieved, in each of the August and September goose seasons. Hunters were asked to indicate the number of days during the two seasons 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 August and September Canada goose hunting seasons 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 27,778 Special Canada Goose Season permits were sold prior to 22 September, 2013. Response rate to the survey was 46%. Among those respondents, 25% indicated that they hunted during the August season, and 61% indicated they hunted during the September season.

Responses from the survey indicate that 6,810 hunters participated in the August hunt (Table 1), while 16,840 participated in the September hunt (Table 2). A total of 18,570 hunters hunted during either the August and/or September Early goose season. Hunters shot and retrieved 23,570 Canada geese during the 2013 August season, and 81,230 during the 2013 September season for a total early season estimated goose harvest of 104,800 geese (Table 3). 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 August and September Canada goose harvest by the adjustment factor would indicate a 2013 retrieved harvest of 88,870 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 in August and September, and 32% of all days spent hunting during the August and September seasons were overwater. The survey indicates that 21% of the geese harvested in the two early seasons (22,470 total geese) were harvested by hunters overwater. These results were similar to the results obtained in the 2012 survey.

The estimated harvest from the Intensive Harvest Zone during the August and September seasons was 23,600 and 37,300 Canada geese respectively (total 60,900 Canada geese). Another 43,900 Canada geese was harvested in the rest of the state during the September season. In 2013, sixty percent of all geese in the August season were harvested in the first week, and 40% the second. Thirty-two percent of geese during the September season were harvested in the first week of the season, followed by 38% in the second week, and 30% 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 in 2013 for the August season was: overall experience 4.6, geese bagged 3.8, number of geese seen 3.9, and regulations 5.1. Mean satisfaction in 2013 for the September season was: overall experience 5.2 (5.1 in 2012), geese bagged 4.3 (3.9 in 2012), number of geese seen 4.4 (4.4 in 2012), and regulations 5.1 (5.1 in 2012).

We asked hunters how strongly they supported overwater hunting (1=strongly oppose, ..., 5=strongly support) at 3 locations in Minnesota: The Northwest Goose Zone (NW), Swan Lake (SL), and at Carlos Avery Wildlife Management Area (CA). Mean support for the 3 areas was NW 3.1, SL 3.2, and CA 3.2.

Finally we asked hunters how they felt about the 10 Canada goose daily bag in the Intensive Harvest zone during the August and September seasons. Five % of respondents felt the limit was too low, 46% of respondents felt the limit was about right, 14% felt the limit was too high, and 35% of respondents had no opinion.

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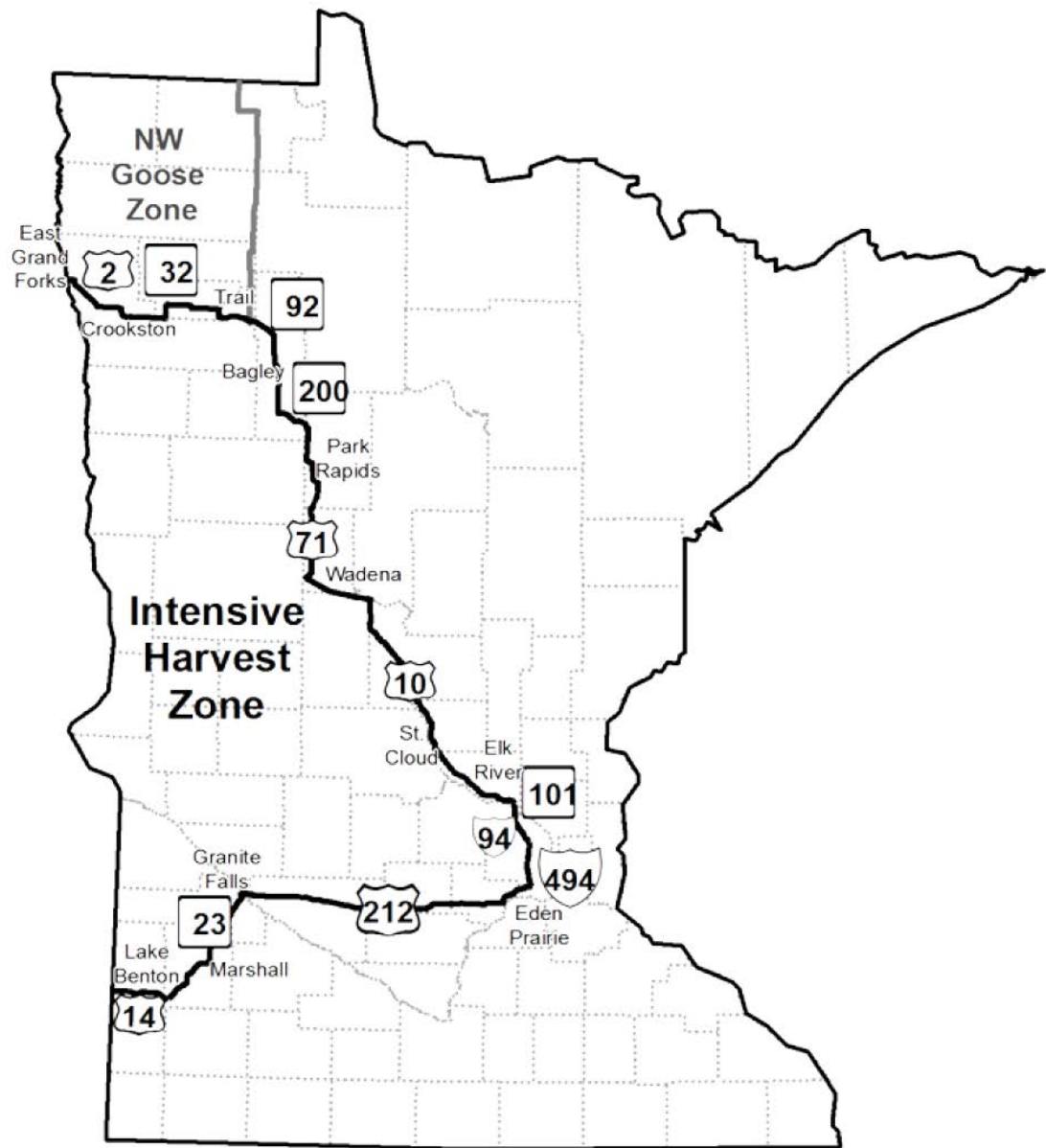


Figure 1. Intensive Harvest Zone in relation to the Northwest (NW) Goose Zone within Minnesota, 2013.

Table 1. Permit sales, hunter activity, and harvest^a during the August Canada Goose season (10 – 25 August) in Minnesota, 2013.

Parameter	Total
Total early goose permits sold	27,778
Questionnaires delivered	3,045
Useable questionnaires returned	1,400
% responding	46.0
Days hunted per active hunter	3.1
Geese shot and retrieved per active hunter	3.5
Unretrieved harvest per active hunter	0.5
% unretrieved harvest	12.8
EXPANDED:	
Active hunters	6,810
Hunter days	21,230
Retrieved harvest	23,570
Est. unretrieved harvest	3,490
Total harvest	27,060

^a Harvest estimates not adjusted for memory/exaggeration bias.

Table 2. Permit sales, hunter activity, and harvest^a during the September Canada Goose season (1 – 21 September) in Minnesota, 2013.

Parameter	Total
Total permits sold	27,778
Questionnaires delivered	3,100
Useable questionnaires returned	1,400
% responding	46.0
Days hunted per active hunter	3.9
Geese shot and retrieved per active hunter	4.8
Unretrieved harvest per active hunter	0.4
% unretrieved harvest	8.4
EXPANDED:	
Active hunters	16,840
Hunter days	64,970
Retrieved harvest	81,230
Est. unretrieved harvest	7,440
Total harvest	88,670

^a Harvest estimates not adjusted for memory/exaggeration bias.

Table 3. 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. Total retrieved harvest during the August and September Canada Goose Seasons, combined, in Minnesota, 2013.

Year	Northwest	West	Southeast	Twin Cities Metro	Remainder	Total Geese Harvested	Number of Hunters	Geese/Hunter day	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
2013						104,800	18,570	1.25	4.82

2013 September Special Canada Goose Season Hunter Survey

You are being asked to provide information to help us evaluate the harvest of Canada geese in Minnesota during August 10 – 25 or September 1-20, 2013. Your cooperation is important. Please return this survey card even if you did not hunt Canada geese. THANK YOU! Ed Boggess, Director, Division of Fish and Wildlife, MN DNR.

1. Did you hunt Canada geese during either the August 10-25 Intensive Harvest Zone or September 1-20, 2013 September Canada goose season? (Please check one for each month.)

August ___ Yes ___ No **September** ___ Yes ___ No

If you answered NO, to question 1, you may skip to question 7.

2. Indicate the number of days hunted, total harvest of geese, and total number of geese knocked down but not retrieved in each season and goose zone during August and September 2013.

<i>Goose Season/zone</i> <i>(see map for goose-zone boundaries)</i>	Number of days hunted	Total geese personally shot and retrieved	Total geese personally knocked down but <u>not</u> retrieved
August 10-25 (Intensive Harvest zone)			
September 1-20 (Intensive Harvest zone)			
September 1-20 (Remainder of State zone)			

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 either the August or September 1 Canada goose season?

_____ Yes _____ No (If No, please proceed to Question 4.)

If Yes:

How many days did you personally hunt overwater? _____ days

How many geese did you personally shoot while hunting overwater? _____ geese

4. During the 2013 August and September Canada goose seasons, how many geese did you personally harvest during each of the following periods:

Saturday Aug. 10–Friday Aug. 16 _____ geese

Saturday Aug. 17–Sunday Aug. 25 _____ geese

Sunday Sept. 1–Friday Sept. 6 _____ geese

Saturday Sept. 7 – Friday Sept.13 _____ geese

Saturday Sept. 14 – Friday Sept. 20 _____ geese

5. If you hunted geese during the 2013 **August** Canada goose season, how satisfied or dissatisfied were you with the following? (*Please circle one response for each.*) If you did not hunt during this season please skip to question 6.

	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

6. If you hunted geese during the 2013 **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

7. Canada goose hunting is currently not allowed within 100 yards of surface water in the September goose season in the Northwest goose zone, Carlos Avery Wildlife Management area, and an area around Swan Lake. Do you support or oppose maintaining these restrictions?

Maintain water restrictions	Strongly oppose	Oppose	Neither support nor oppose	Support	Strongly support
Northwest goose zone	1	2	3	4	5
Carlos Avery WMA	1	2	3	4	5
Swan Lake area	1	2	3	4	5

8. The Minnesota DNR increased the daily bag limit in the Intensive Harvest zone during the August and September seasons this year. Which one statement describes how you feel about the daily goose bag limit used in the Intensive Harvest zone (10 Canada geese per day)?

- The daily limit was too low.
- The daily limit was about right.
- The daily limit was too high.
- No opinion.

If you have general comments you may write them here (include additional sheets 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:



2014 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 2014 Light Goose Conservation Order hunter mail questionnaire survey.

METHODS

Minnesota held a light goose Conservation Order harvest from 1 March - 30 April 2014. 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 1,278 permits was issued and 759 responses (60 %) to the questionnaire were obtained (Table 1). In calculating harvest estimates, we assumed that the 519 non-respondents participated in the conservation action and took light geese in the same manner as respondents (i.e., tallies were expanded by 1.68). Harvest was again concentrated in the southwest portion of the state with some also being taken in west-central Minnesota. Five hundred sixty people attempted to take light geese during the 61-day conservation order period. Active participants pursued light geese for 2,580 days and 2,880 light geese were shot and retrieved. This was an average retrieved take of 5.1 geese per active participant. Another 210 light geese were estimated wounded and not retrieved.

Unplugged shotguns were used by 270 (48.8 %) individuals to take 2,060 (71.5%) geese, of which 770 (26.7%) were taken with the 4th, 5th, or 6th shell. Electronic calls were used by 160 (27.8%) participants to take 1,710 (59.4%) light geese. During the 1/2 hour after sunset period, 550 (19.1%) geese were harvested by 200 (36.2%) active hunters.

The method used for hunting white geese was 37.7% over decoys, 26.7% pass shooting, and 35.6 % sneaking geese.

ACKNOWLEDGMENTS

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

Figure 1. Light Goose Conservation Order hunter mail questionnaire, 2014.

MINNESOTA 2014 LIGHT GOOSE HARVEST SURVEY
For the Period of March 1 - April 30, 2014 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, 2014. 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 2014 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, 2014? 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, 2014? _____
3. In what county did you hunt light geese most often during March 1 - April 30, 2014? _____
4. How many light geese did you personally shoot and retrieve in Minnesota? _____
5. How many light geese did you personally shoot, but were UNABLE to retrieve? _____
6. Did you hunt light geese in Minnesota with a gun(s) that was holding more than 3 shells? Yes / No
7. If yes, how many light geese did you shoot with a gun holding more than 3 shells? _____
8. How many light geese did you shoot and retrieve with the 4th, 5th, or 6th shell? _____
9. Did you hunt light geese in Minnesota with the aid of an electronic caller? Yes / No
10. If yes, how many light geese did you shoot and retrieve with the aid of an electronic caller? _____
11. Did you hunt light geese in Minnesota during the 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

Table 1. Summary of Light Goose Conservation Order harvest in Minnesota, 2002 - 2014

Statistic	Year												
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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	1,278
Useable returns	1,375	1,071	1,095	998	955	921	910	1,057	671	659	675	810	759
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	60.0
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	44.0
Estimated total hunters	1,209	553	690	618	516	514	773	1,103	389	455	600	770	560
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	2,580
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	4.6
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	2,880
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	5.1
Estimated crippling losses	637	253	315	150	163	172	302	640	70	145	210	370	210
Percent using unplugged guns	46.4	50.6	48.2	44.0	42.3	43.6	46.7	46.8	44.9	44.2	43.0	49.4	48.8
Est. number hunters using unplugged guns	560	280	333	272	215	224	361	516	175	201	260	380	270
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	2,060
Est. harvest with shell 4-5-6	615	401	491	269	287	277	339	822	131	311	460	620	770
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	27.8
Est. number hunters using e-calls	142	87	133	110	73	88	148	260	101	97	130	190	160
Est. harvest while using e-calls	512	474	326	268	280	329	566	1,171	192	531	460	620	1,710
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	36.2
Est. number hunting after 1/2-hr sunset	550	228	265	264	223	197	326	475	154	180	250	260	200
Est. harvest 1/2-hr after sunset	841	267	311	242	246	209	511	713	87	238	240	260	550



MINNESOTA'S WILD TURKEY HARVEST - 2014

Steve Merchant, Wildlife Populations and Regulations Manager

This report summarizes the fall 2013 and spring 2014 wild turkey harvest information. The fall turkey season was 30 days in length (September 28- October 27) and allowed for an unlimited number of hunters to take one wild turkey of either sex. The spring turkey season regulated harvest and distributed hunting pressure by allocating permits across 12 permit areas (PAs; Figure 1) and 8 time periods using a quota system for the first 3 time periods. During spring, adult hunters interested in pursuing turkeys for the first 3 time periods were required to apply for a permit through a lottery system but youth hunters were able purchase a permit over-the-counter, and hunt in any permit area. 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 for the last 5 seasons. Persons with an archery turkey license could hunt the last 5 time periods in their entirety. The goal of this system was to provide quality turkey hunting opportunities by managing hunter interference rates while allowing hunters to take the harvestable surplus of turkeys.

Fall 2013 Turkey Season – The number of permits issued to hunters declined from 10,779 permits in 2012 to 8,193 in 2013 (Table 1, Figure 2). Hunters still needed to select and hunt within one of the twelve permit areas. There were 1,078 turkeys harvested during Fall 2013, which was a 38 percent decline from 2012 (Table 1). Hunter success rates averaged 13.2%, which was below the 5-year average (18%). Fewer hunters contributed in part to the lower harvest, however the lower hunter success rates are likely due to fewer hatch-year turkeys in the population, and perhaps a lower total turkey population due to 2 consecutive years of inclement weather during the nesting/brood periods.

Spring 2014 Turkey Season – There were 48,204 permits issued during the spring season, including 14,003 general/landowner permits, 12,179 youth permits, 4,899 archery permits, and 17,123 surplus permits (Table 6). Hunters registered 11,447 turkeys (Table 3 and 5), which was the third highest harvest recorded and near the 5-year average (Figure 3). Success rates by license type are found in Table 5. The winter of 2013-14 saw deep snow and extreme cold in portions of the turkey range. The impact of the extended winter weather on turkey populations is unknown, but some winter losses were reported. For the second year in a row snow remained on the ground during the first or second seasons in some portions of the turkey range, and it is again reasonable to believe that the weather likely affected hunter effort and turkey activity.

Table 1. Permits available and issued, applicants, registered harvest, and hunter success rates for fall wild turkey seasons 1990 – 2013, 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
2013	Unlimited	N/A	8,193	1,078	13

^a Success rates not adjusted for non-participation.

Table 2. Permits issued, registered harvest, and hunter success during the 2014 Minnesota spring wild turkey season.

Permit Area	Regular Permits Issued ^a	Total Harvest
501	8319	3,084
502	706	236
503	3545	1,313
504	794	315
505	2864	1,033
506	1114	398
507	7898	2,875
508	3463	1,140
509	222	106
510	2404	903
511	124	36
512	39	8

^a Permits issued for the Camp Ripley disabled veterans hunt, archery, and youth permits were not included.

^b Success rates were not adjusted for non-participation, and do not include youth or archery licenses.

Table 3. Permits available, permits issued, and registered harvest from 1978 – 2014 for all spring wild turkey hunting seasons in Minnesota.

Year	Permits			Registered harvest	Success (%) ^a
	Available	Issued	Issued (%)		
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
2014 ^b	Unlimited	43,305 ^c	N/A	11,447	25

^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, 4,550, and 4,899 permits issued to archers in 2011, 2012, 2013, and 2014 respectively.

Table 4. Permits available and issued by license type (resident and non-resident) and time period for the spring 2014 wild turkey season, Minnesota.

Time period	Permits available	Permits issued		
		General lottery ^a	Surplus	Youth ^b
A	5,921	4,927	4	NA
B	5,921	4,084	1,052	NA
C	5,921	4,977	3	NA
D	Unlimited	5	8,253	NA
E	Unlimited	3	2,397	NA
F	Unlimited	0	1,213	NA
G	Unlimited	1	2,777	NA
H	Unlimited	6	1,385	NA
Total ^a	Unlimited	14,003	17,123	12,179

^a includes landowner licenses.

^b Youth permits were good for all time periods.

Table 5 Total harvest by time-period, spring 2014 wild turkey season, Minnesota.

Time period	Total Harvest	Percent Harvest
A	2631	23.0
B	2143	18.7
C	1701	14.9
D	2450	21.4
E	816	7.1
F	428	3.7
G	795	6.9
H	482	4.2
Total	11,447	100

Table 6. 2014 Total permits sold, harvest and success rate by type of license.

	Total Permits Sold	Harvest	Success Rate
Lottery	14,003	4,769	34
Surplus	17,123	3,917	23
Youth	12,179	2,206	18
Archery	4899	504	10
Total	48,204	11,447	24

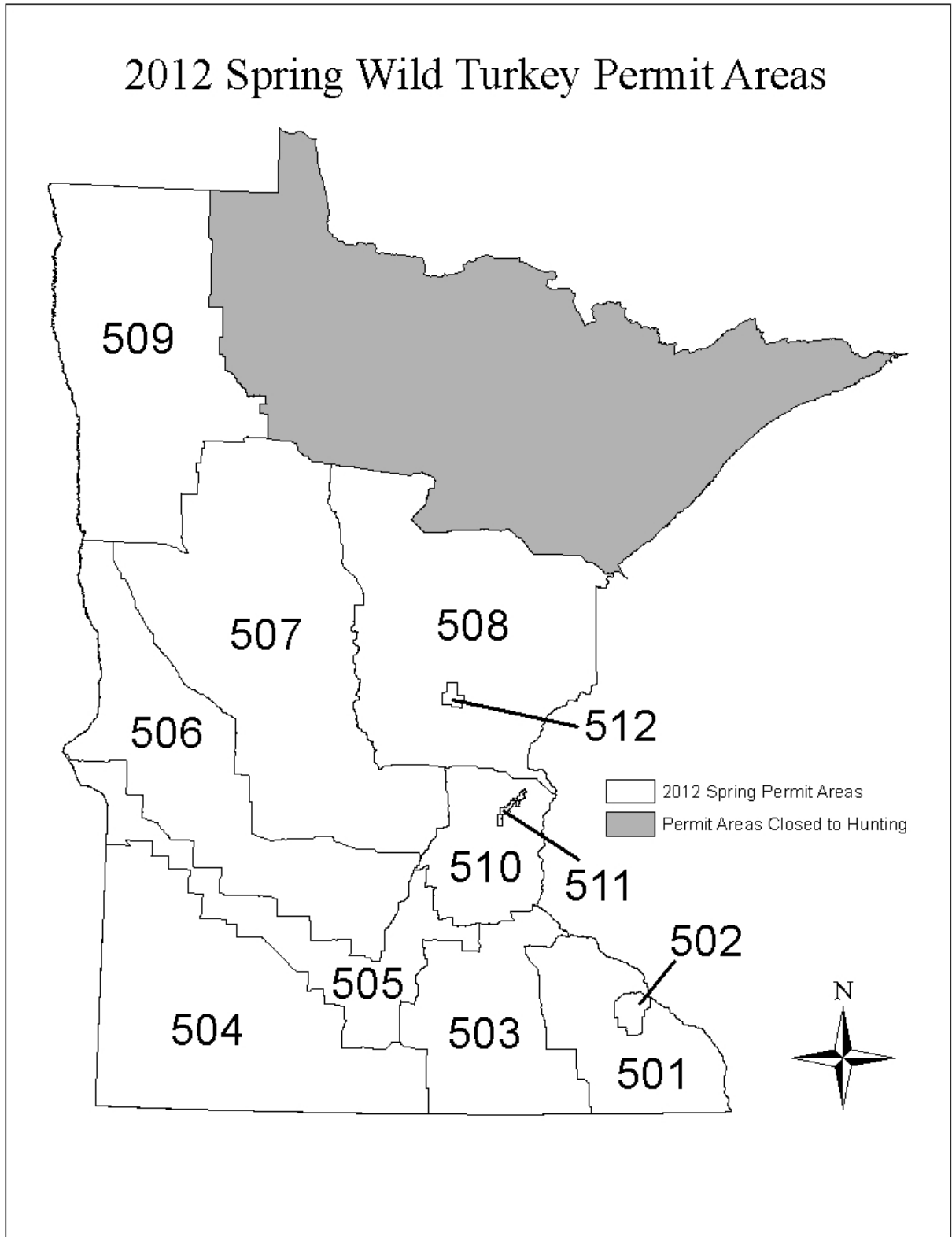


Figure 1. Permit areas open for hunting during the 2014 spring turkey hunting season, Minnesota.

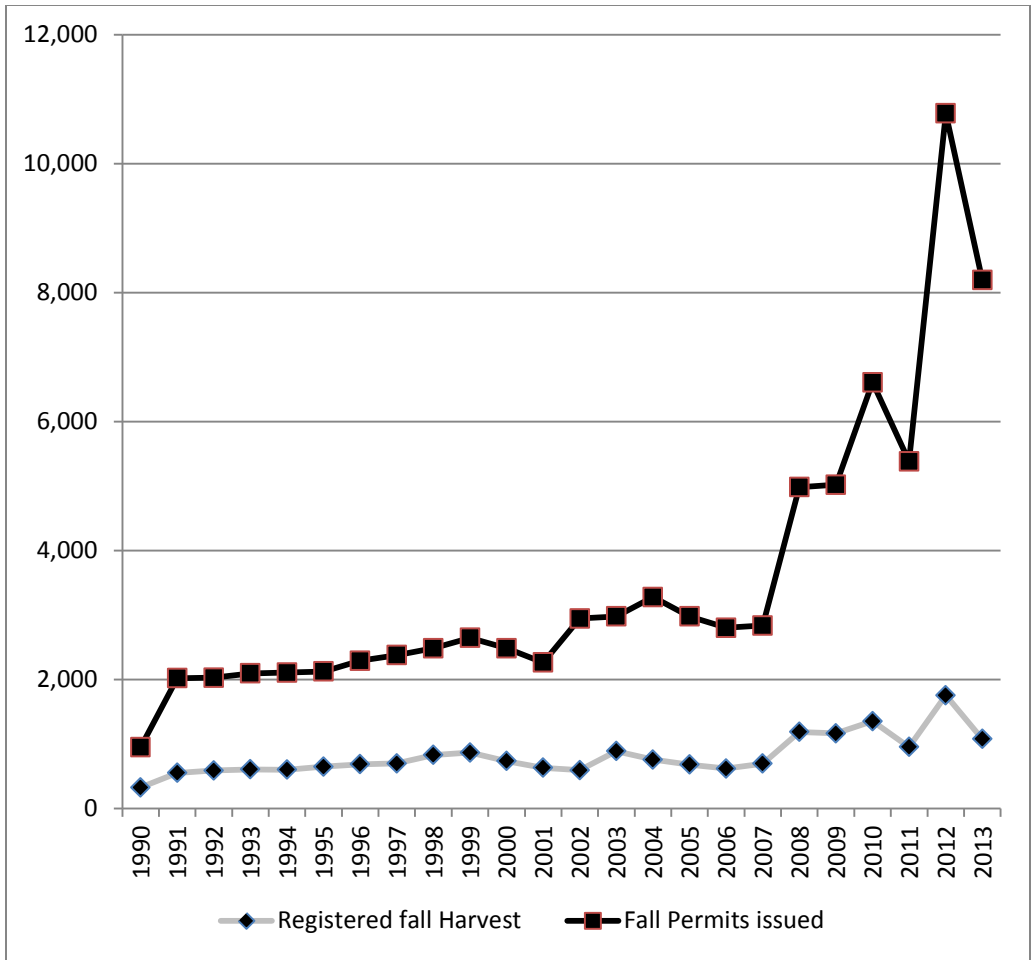


Figure 2. Permits issued and registered harvest for fall wild turkey seasons, 1990-2013, Minnesota.

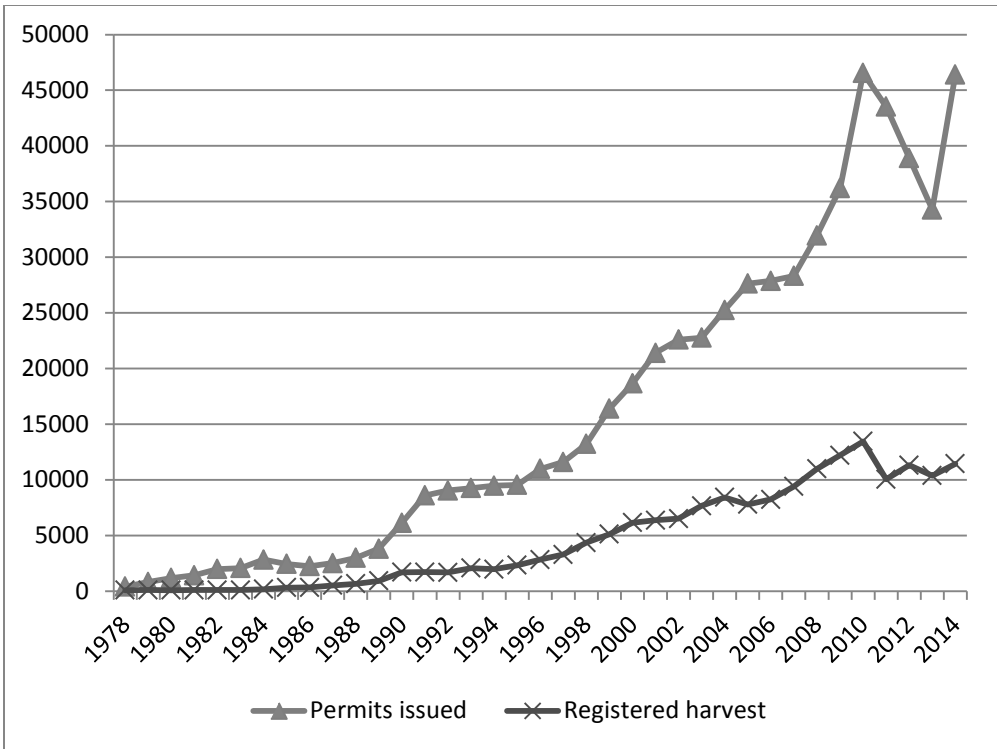


Figure 3. Permits issued and registered harvest for spring wild turkey seasons, 1978-2014, Minnesota.



2013 MINNESOTA PRAIRIE-CHICKEN HARVEST SURVEY

Charlotte Roy, Forest Wildlife Populations and Research Group

SUMMARY OF FINDINGS

Prairie-chicken (*Tympanuchus cupido pinnatus*) hunting season dates and permit areas were modified in 2013 in an attempt to increase hunter success and satisfaction. I estimated harvest, hunter success, and satisfaction from a postcard survey that is conducted annually. Although fewer hunters went afield (estimated at 93 and the lowest since 2005), hunter success (0.60) and satisfaction (3.7 on a scale of 1-5) were higher than in recent years. Harvest was estimated at 96 prairie-chickens, and 17 sharp-tailed grouse (*Tympanuchus phasianellus*) were harvested during prairie-chicken hunts.

INTRODUCTION

Prairie-chicken (*Tympanuchus cupido pinnatus*) hunting was closed in 1943 because of population declines resulting from habitat loss. However, hunting was reopened in 2003 because prairie-chicken populations were considered robust enough to allow a limited season. During 2003-2005, a limited-entry 5-day hunting season was opened in 7 permit areas in western Minnesota. Permits were awarded through a lottery system, with a bag and season limit of 2 prairie-chickens. In 2006, 4 new permit areas were added and the number of permits was increased in some areas. Surplus licenses were offered for sale after the lottery for the first time in 2011, and in 2013, the permit areas were revised again. These most recent changes eliminated 801A and 802A, modified 803A to include portions of the former 802A and 803A, and added 812A and 813A to expand hunting eastward (Fig. 1a,b). The number of available permits was also reduced in some permit areas to more closely reflect opportunities to harvest prairie-chickens in each permit area. The season was lengthened from 5-days to 9-days to provide hunting opportunity on >1 weekend, and moved forward several weeks to open 28 September and close 6 October. The earlier season was an attempt to improve hunter success and satisfaction by providing hunting opportunities before pheasant season opened.

Prairie-chicken hunting in Minnesota is a privilege that is only available to residents. Landowners or tenants of ≥ 40 acres of grassland within a permit area are eligible to apply for a landowner lottery that awards 20% of the available permits in a permit area. Extra landowner permits are then included with the regular lottery. Any landowner not receiving a permit through the landowner lottery can participate in the regular lottery. The lottery gives preference to persons that have applied for a permit unsuccessfully for the most years. Upon selection, lottery winners must purchase a prairie-chicken hunting permit before hunting. Although sharp-tailed grouse (*Tympanuchus phasianellus*) hunting is closed south of highway 2 (i.e., permit areas 804A-813A), licensed prairie-chicken hunters may also take sharp-tailed grouse while hunting prairie-chickens. Harvest is documented each year in this annual report.

METHODS

Lottery applicants, winners, and permit purchases are recorded by the Electronic Licensing System (ELS). Registration of harvested birds has not been mandatory except during 2003-2006, so I determined harvest through a postcard survey. I sent a postcard to each lottery winner the week before hunting season. Three weeks later I sent another postcard to people who had not yet responded. Postcards contained 5 questions: did you hunt, and if so, for how many days, how many prairie-chickens did you harvest, how many sharp-tailed grouse did you harvest during prairie-chicken hunts, and how satisfied were you (on a scale of 1-5)?

Only responses from lottery winners who purchased a hunting permit were considered. I compared responses from the first mailing to responses from the second mailing to examine possible nonresponse bias. I assumed that non-respondents would have had the same response as respondents to the second mailing when estimating the number of hunters, birds harvested, birds per harvester, and hunter success due to detected nonresponse bias. Each of these metrics was calculated by permit area and summed for all areas.

RESULTS & DISCUSSION

The combined quota for the 11 permit areas during 2013 was 126, and 277 individuals applied in the lottery (Table 1). Only 2 permit areas (804A and 813A) had fewer applicants than permits available, and all 5 surplus permits were purchased. Of the 131 lottery winners, 97 later purchased a permit, of whom, 4 were landowners.

Seventy-eight permit purchasers (83%) responded to the survey and 3 surveys were undeliverable; 56 (59%) responded to the first mailing and 22 (23%) to the second mailing. This response rate is slightly lower than survey response rates during the last two years (90% in 2011, and 95% in 2012), but similar to 2010 (84%). Respondents to the first mailing were more likely than respondents to the second mailing to have hunted (98% vs. 90% of respondents), hunted a similar number of days (2.1 vs. 2.2), were more likely to have harvested a prairie-chicken (66% vs. 52%), tended to harvest more chickens (1.2 vs. 0.8 birds per hunter), harvested a similar number of sharp-tails (0.1 vs. 0.5 birds per hunter), and tended to be more satisfied (mean 3.9 vs. 3.3, median 4 vs. 3), with 85% and 76% of respondents reporting satisfaction scores ≥ 3 , respectively. Thus, hunters that were more successful and satisfied were more likely to respond to the survey, indicating a nonresponse bias.

I attempted to correct for the nonresponse bias this year, which differed from previous years with similar results in first and second mailings, and when it was assumed that non-respondents would have had similar responses to all respondents. Instead, I assumed that non-respondents would have had similar responses to those received from the second mailing (i.e., class method of correction). This assumption may not eliminate nonresponse bias if non-respondents were less successful and less satisfied than respondents to the second mailing, but should more closely approximate the actual harvest and hunter numbers than assuming similar responses of non-respondents and all respondents.

Seventy-four respondents reported that they hunted prairie-chickens (Table 2). I estimated the total number of hunters to be 93 (i.e., purchasers who went afield) after accounting for hunting by non-respondents. Hunters reported harvesting 83 prairie-chickens during the 9-day season. I estimated total harvest as 96 prairie-chickens, with an estimated 56 hunters

bagging ≥ 1 chicken. Survey respondents reported harvesting 17 sharp-tailed grouse while hunting prairie-chickens from permit areas 803A, 804A, and 805A (Fig. 1).

Prairie-chicken hunter success and satisfaction during 2013 were higher than during recent years (Table 3). Improvements in satisfaction and success may be due to the earlier season, younger birds (for success but not necessarily satisfaction), less interference with other hunters (i.e., no overlap with pheasant season), and changes in the permit areas to provide new opportunities. Successful hunters reported higher average satisfaction (4.4) than respondents that were not successful (2.6). However, some hunters ($n = 11$) reported that they preferred the later season (i.e., did not like the season changes this year). Although we cannot exclude the possibility that non-respondents had lower satisfaction than respondents to the second mailing, survey results support the conclusion that the changes to the hunting season improved hunter success and satisfaction of prairie-chicken hunters overall.

ACKNOWLEDGEMENTS

I would like to thank Laura Gilbert for preparing and mailing the postcards and entering data. I would also like to thank Mike Larson for his assistance in transitioning prairie-chicken data management and report writing responsibilities, as well as for commenting on the report. Funding for this survey was partially provided by the Federal Aid in Wildlife Restoration Act, Minnesota project W-69-S-14.

Table 1. Prairie-chicken hunt lottery applicants, winners, and hunting permit purchasers in Minnesota during 2013.

Permit area	Permits available	No. of applicants	Lottery winners		Permit purchasers ^a		Surplus purchasers ^c
			No. ^b	Proportion	No.	Proportion	
803A	10	18	10	0.56	8	0.80	0
804A	12	11	11	1.00	8	0.73	1
805A	12	70	13	0.19	12	0.92	0
806A	12	33	15	0.45	13	0.87	0
807A	20	39	20	0.51	16	0.80	0
808A	15	31	18	0.58	18	1.00	0
809A	15	22	17	0.77	6	0.35	0
810A	15	32	15	0.47	7	0.47	0
811A	5	13	6	0.46	3	0.50	0
812A	5	7	5	0.71	5	1.00	0
813A	5	1	1	1.00	1	1.00	4
All	126	277	131	0.47	97	0.74	5

^a Lottery winners who purchased a hunting permit.

^b The number of permits may exceed the quota when the last applicant selected in the lottery belongs to a hunting party.

^c Number of people purchasing a surplus permit after the lottery because the permit quota was not met during the lottery.

Table 2. Prairie-chicken harvest in Minnesota during 2013.

Permit area	No. of hunters ^a		Birds harvested		Birds per harvester ^b	Success rate ^c
	Self-reported	Estimated	Self-reported	Estimated		
803A	5	7	10	11	1.8	0.86
804A	7	8	6	7	1.4	0.63
805A	10	12	14	15	1.7	0.75
806A	8	12	11	14	1.8	0.67
807A	12	16	13	16	1.6	0.63
808A	14	17	17	19	1.9	0.59
809A	4	6	5	6	1.5	0.67
810A	5	6	4	5	2.5	0.33
811A	3	3	0	0	NA	NA
812A	5	5	3	3	1.5	0.4
813A	1	1	0	0	NA	NA
All	74	93 ^d	83	96 ^d	1.7 ^d	0.60 ^d

^a Permit purchasers who hunted.

^b Estimated number of birds harvested per successful hunter.

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

^d Assumed that non-respondents were represented by respondents in the second mailing.

Table 3. Summary of prairie-chicken hunting in Minnesota during 2003–2013.

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
2013	126	277	93 ^f	96 ^f	0.60 ^f	3.7 ^f

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

^b Proportion of hunters harvesting ≥ 1 prairie-chicken.

^c Mean on a scale of 1–5.

^d A hunter survey was not conducted during 2007; results are from the Electronic Licensing System, which documented 150 permit purchasers.

^e One hunter reported harvesting 10 prairie-chickens in 2010.

^f Assumed that non-respondents were represented by respondents in the second mailing.

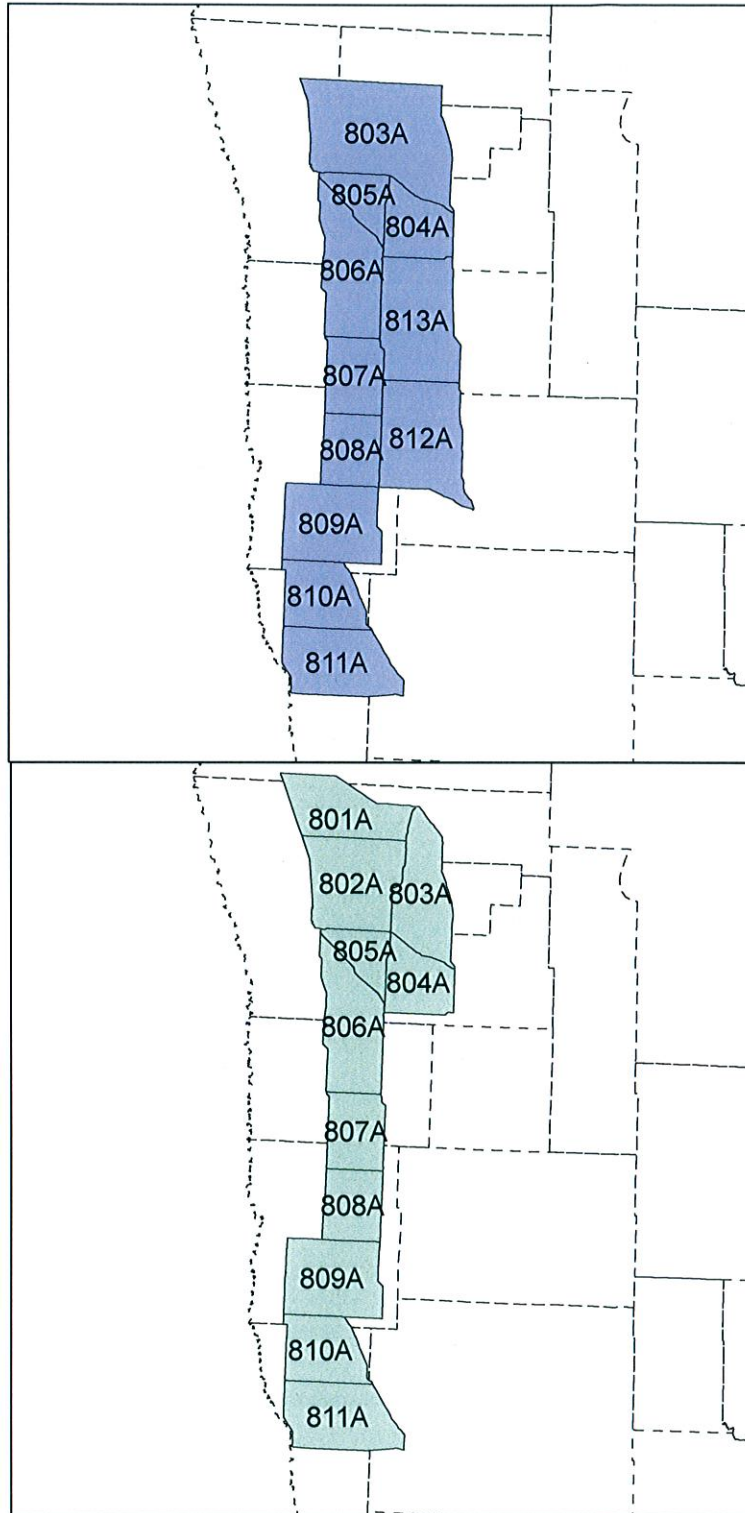


Figure 1a. Prairie-chicken hunting permit area boundaries in northwestern Minnesota during 2013 (top) compared to 2012 (bottom). County boundaries are indicated by dashed lines. Permit areas 812A and 813A were added, 801A was eliminated, and 802A and portions of 803A were combined into a revised permit area 803A.

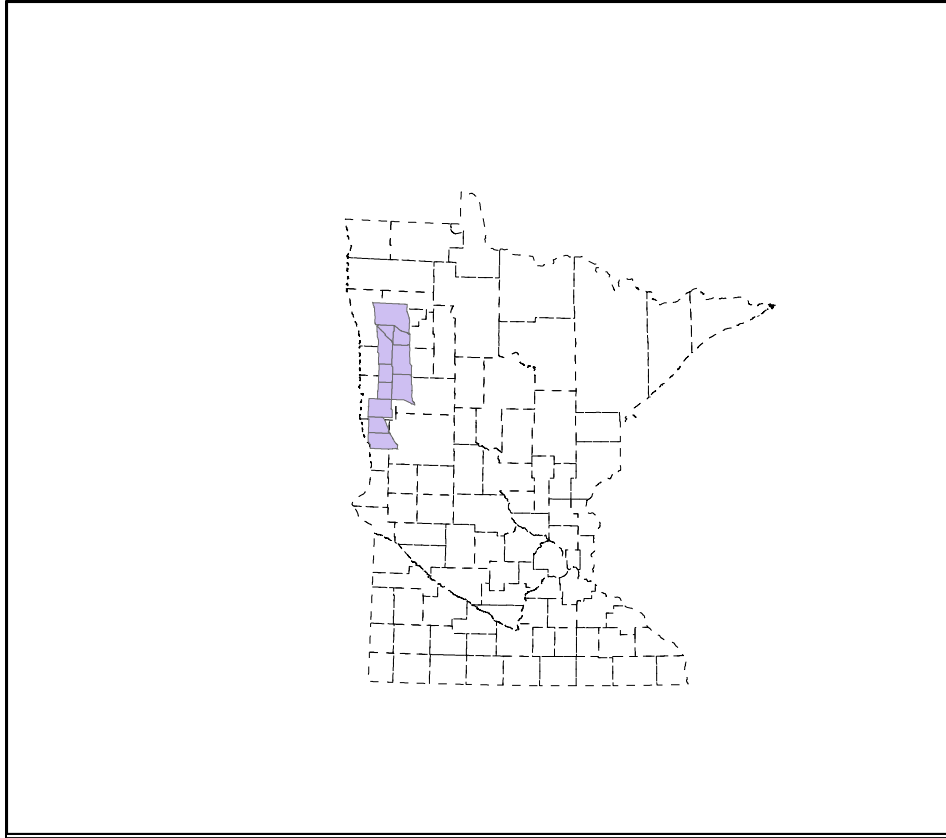


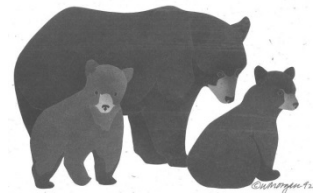
Figure 1b. Northwestern location of prairie-chicken hunting permit areas within the state relative to county boundaries (dashed lines).



STATUS OF MINNESOTA BLACK BEARS, 2013

Final Report to Bear Committee

March 13, 2014



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 \approx 70%), which is used to estimate age, and thus harvest age structure. We used harvest age structure accumulated since 1980 to reconstruct minimum population size (Downing population reconstruction) and thereby assess population trend.

RESULTS

Permit applications for bear licenses seem to have stabilized at a higher level during 2010-2013 than before that, when permit availability was higher (Table 1 and Figure 1). The reduced permit availability seems to have driven up sales of no-quota licenses, which were the highest on record in 2012 and second highest in 2013. The estimated number of hunters in the field (6,300) was the lowest since 1989, and the total harvest (1,866) was the lowest since 1988. Statewide success rate was the same as last year (30%), but quota area success rate (37%) was the highest since the very poor food year of 1995. High success rate in the quota zone is related in part to reduced numbers of hunters (i.e., competition).

The number of available quota zone permits was reduced 38% from 2012 to 2013 (Tables 2, 3); this reduction was distributed fairly uniformly across Bear Management Units (BMUs) (Figure 2). This followed a reduction of 15% from 2011 to 2012. These reductions were aimed at increasing the bear population in the quota zone. This was the third year of a system whereby all available licenses for the quota zone were sold (those not purchased by permittees selected in the lottery were purchased later as surplus).

As permit allocations have been reduced, the percentage of 1st-year applicants drawn in the lottery diminished (Table 4). In 2009, some 1st-year applicants (preference level 1) were drawn in all BMUs. In 2013, 1st year applicants were drawn only in BMU 22 (BWCAW). Less than 50% of 2nd-year applicants were drawn in all but 2 BMUs, and no 2nd year applicants were drawn in 2 BMUs (44 and 45).

The statewide harvest and harvest for the quota zone were the lowest since 1988. Three BMUs (12, 24, 26) had record low harvests. BMU 11 had the lowest harvest since 2006, but the no-quota zone as a whole had a fairly normal harvest. The percent of the total statewide harvest contained within the no-quota zone has sharply increased with reduction of quota zone permits, reaching a record this year (26%).

The statewide harvest and harvest for the quota zone were the lowest since 1988 (Table 5, Figure 3). Three BMUs (12, 24, 26) had record low harvests. BMU 11 had the lowest harvest since 2006, but the no-quota zone as a whole had a fairly normal harvest. The percent of the total statewide harvest contained within the no-quota zone has sharply increased with reduction of quota zone permits, reaching a record this year (26%).

Hunting success was the highest since the early-mid 1990s in the quota zone as a whole, and in 4 quota zone BMUs; one additional BMU (51) had the highest success since it was established by splitting the quota and no-quota zones in 1987 (Table 6). These high success rates are likely a reflection of low hunter density (and possibly more hunter effort, given the decreased opportunity to be drawn for a permit). For the first time hunter numbers could be estimated for the individual BMUs in the no-quota zone, based on where hunters indicated they planned to hunt when they purchased their license. This enabled a derivation of hunting success for BMUs 10, 11, and 52. This system, though, needs improvement as many no-quota hunters selected portions of the quota zone.

During years of normal fall food abundance, about 70% of the harvest occurs during the 1st week of the bear season, and ~83% occurs by the end of the 2nd week (Table 7). This year (2013), harvesting was delayed: only 61% in the first week and 76% after the 2nd week.

The number of wildlife and enforcement personnel submitting bear nuisance tally forms each month was higher than normal, but the total number of registered complaints (623) was about average (mean = 586) since the institution of the nuisance bear policy took effect in 2000 (Tables 8, 9 and Figure 4). Also, as typical, only 25 bears were known killed as nuisances, 3 were translocated, and 32 killed in vehicle collisions.

The abundance of wild bear foods in 2013 (Table 11) was the highest in 15 years (since the summer of 1998). This was in sharp contrast to 2012, when bear foods were the scarcest they had been since the catastrophic food failure of 1995 (Table 10, 11, 12, Figure 5). Statewide food survey results show that it is typical for fruiting to be better than average the year after food failures, as witnessed in 1985/1986, 1990/1991, 1995/1996, and now 2012/2013. High bear food indices this year were primarily due to abundant summer berries particularly across the northern tier of survey areas. In contrast to summer foods, productivity of key fall foods (hazel, oak, and dogwood — those that affect hunting success) were average or a bit above average across most of the bear range in 2013.

A combination of fall food abundance and number of hunters accounts for 84% of the yearly variation in the bear harvest since 1984 (Figure 6). Predictions of the number of bears killed by hunters, based solely on these 2 factors, have been more accurate since 2000 ($R^2 = 0.95$). Since then, actual bear harvest has only once differed from predicted harvest by >10%.

Following a 15-year period of relative abundance and stability, bear food production exhibited a wider swing in 2012 and 2013 than observed since 1996 (Figure 7). Back-to-back years of poor foods followed by abundant foods often result in a partial synchronization of reproduction among female bears, resulting in alternating years of small and large cohorts being born for the next several years: 2014 reproduction is likely to reflect the excellent 2013 summer food crop.

Sex ratios of harvested bears (Figure 8) 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 and hunter density). In 2013, 3 BMUs had record

high (or tied with record high) sex ratios (%M)(BMUs 13, 25, 26), as did the state as a whole (62%). However, no BMU showed a consistent trend in sex ratios (BMU 26 shows a generally increasing trend from 2007 to 2013, but not so going back before that).

Statewide, ages of harvested females declined dramatically during the past 3 decades (Figure 9), as evidenced by a declining median age and increasing proportion of the harvest composed of 1–2 year-olds (Figure 11). Median age of harvested females was 2.8 years old in 2013, with signs that this downward trend is leveling off. Median ages of harvested males has remained at about 2 years old for the past 20 years (Figure 10). Variation in female median ages within individual BMUs is too great to discern short-term trends. The low, male-skewed harvest this year resulted in smaller sample sizes of female ages per BMU, and hence more erratic median ages. Notably, though, BMU 11 (no quota) has less erratic female median ages through time than adjacent BMU 12, and BMU 52 (no quota) has similar female median ages as adjacent BMU 51.

Ages of harvested bears are now used as the principal means of monitoring population trends (Figure 12). Although hunters are required to submit a tooth from their harvested bear, >25% do not comply, and this missing sample, if somewhat different in age composition than the submitted teeth, may affect the resulting analyses. This year, for the first time, hunters could register their bear either by phone or internet, but if they did so, they were required to complete their registration by obtaining a tooth envelope at a registration station. These hunters, though, had poorer compliance with tooth submission than hunters who registered their bear and received a tooth envelope at the registration station in one step. Compliance in tooth submission also varied considerably among BMUs. Compliance was notably poor in the no-quota zone (Figure 13).

DISCUSSION

Ages of harvested bears accumulated since 1980 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 (Figure 14). Whereas both the tetracycline-based and reconstructed populations showed an increase during the 1990s, followed by a decline during the 2000s, the shapes of the 2 trajectories differed somewhat (the reconstructed population curves were less steep). Therefore, it was not possible to exactly match the curve from the reconstruction to all 4 tet-based estimates, so a group of curves were scaled to differing degrees to intersect different sets of tet- estimates. Both the tetracycline and age-reconstructed estimates showed a population decline of ~30% from 2001 to 2008. A light harvest in 2008 enabled the population to grow slightly, but it declined again after heavier harvests in 2009, 2010, and 2012. It appears that the light harvest of 2013 enabled the population to increase slightly. This conclusion remains tentative, however, as population estimates for the most recent 3 years are not directly obtained from population reconstruction, but may be derived from relationships between harvest and prior reconstructed population estimates.

Table 1. Bear permits, licenses, hunters, harvests, and success rates, 1993-2013.

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Permit applications	27365	30127	29922	30405	27353	30245	29384	29275	26824	21886	16431	16466	16153	15725	16345	17362 ^a	17571 ^a	18647 ^a	19184 ^a	18103 ^a	18107 ^a
Permits available	8630	9400	11950	12030	11370	18210	20840	20710	20710	20610	20110	16450	15950	14850	13200	11850	10000	9500	7050 ^b	6000	3750
Licenses purchased (total)	9224	9826	12448	12414	11440	16737	18355	19304	16510	14639	14409	13669	13199	13164	11936	10404	9892	9689	9555	8986	6589
Quota area ^c	7528	8125	10304	10592	9655	14941	16563	17021	13632	12350	9833	10063	9340	9169	8905	7842	7342	7086	5684	4951	3188
Quota surplus/military ^c									235	209	2554	1356	1591	1561	526	233	77	83	1385	1070	578
No-quota area ^c	1696	1701	2144	1822	1785	1796	1792	2283	2643	2080	2022	2238	2268	2434	2505	2329	2473	2520	2486	2965 ^h	2823
% Licenses bought																					
Of permits available ^d	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	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	85.0
Estimated no. hunters ^e	8600	9100	11600	11500	10300	14500	15900	16800	15500	13800	13600	12900	12500	12500	11300	9900	9400	9200	9100	8600	6300
Harvest	3003	2329	4956	1874	3212	4110	3620	3898	4936	1915	3598	3391	3340	3290	3172	2135	2801	2699	2131	2604	1866
Harvest sex ratio (%M) ^f	56	62	47	62	55	55	53	58	56	61	58	57	59	58	57	62	59	59	61	59	62
Success rate (%)																					
Total harvest/hunters ^g	35	26	43	16	31	28	23	23	29	14	26	26	26	26	28	21	30	29	23	30	30
Quota harvest/licenses	34	26	42	15	29	25	20	20	28	14	25	26	25	25	28	21	30	30	24	33	37

^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; 2013 = 2129).

^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; 2012 = 67; 2013 = 85 [including surplus 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 2011-13, 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 2011-13 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 no-quota hunters could take 2 bears. In 2013, hunters could take 2 bears only if they bought 2 licenses (1 quota + 1 no-quota): of 30 people who bought 2 licenses, only 2 killed 2 bears.

^h Record high number of no-quota area licenses purchased.

Figure 1. Relationship between licenses sold and hunting success (note inverted scale) in quota zone, 1987-2013 (non-quota zone first partitioned out in 1987). Number of licenses explains 35% of variation in hunting success during this period ($P= 0.0001$). Large variation in hunting success is also attributable to food conditions.

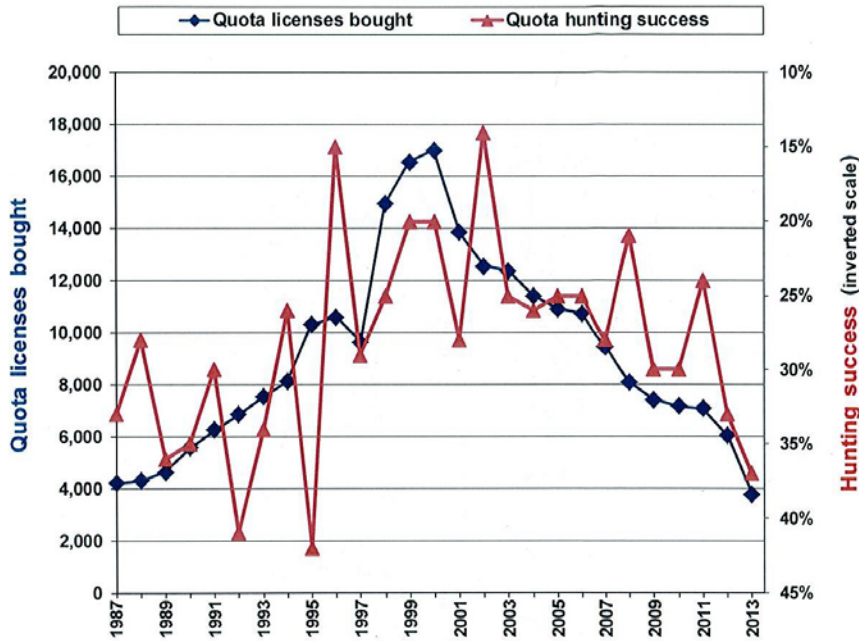


Figure 2. Bear management units (BMUs) within quota (white) and no-quota (gray) zones. Hunters in the quota zone are restricted to a single BMU, whereas no-quota hunters can hunt anywhere within that zone. BMU 10 is renamed this year (previously grouped with BMU 11, then separated as BMU 11b), in preparation for possibly making BMU 11 a quota area.

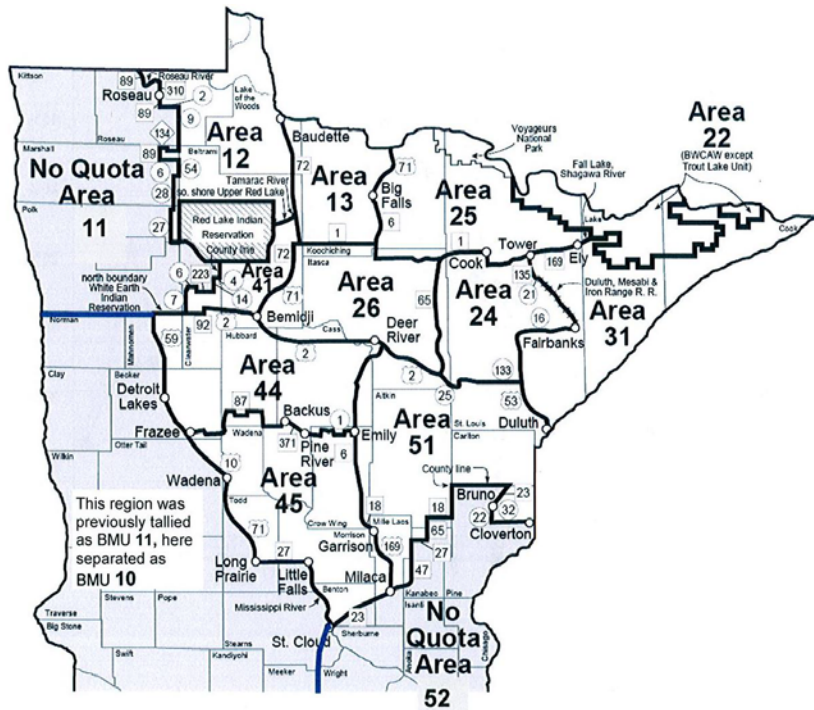


Table 2. Number of bear hunting quota area permits available, 2009-2013 (aligned with permit applications in Table 3 below; highlighted values show drop from previous year).

BMU	2013	2012	2011		2010	2009
			After reduct. ^a	Before reduct.		
12	200	300	350	450	450	450
13	250	400	450	600	600	600
22	50	100	100	125	100	150
24	200	300	350	500	550	650
25	500	850	900	1200	1200	1250
26	350	550	650	900	900	1000
31	550	900	1000	1300	1300	1300
41	150	250	300	400	400	400
44	450	700	850	1100	1100	1100
45	150	200	250	400	400	600
51	900	1450	1850	2500	2500	2500
Total	3750	6000	7050	9475	9500	10000

^a Beginning in 2011, all licenses not purchased by permittees were sold (Table 3). In order not to increase the number of hunters, 2011 permit allocations were reduced by the mean percentage of licenses that were purchased in each BMU in 2009–2010. The table shows the permit allocation before and after this reduction. In 2012 and 2013, permits were allocated based on this new procedure.

Table 3. Number of quota BMU permit applicants and surplus licenses bought, 2009- 2013^a. Shaded values indicate undersubscribed areas (applications < permits available).

BMU	2013			2012			2011 ^b			2010		2009	
	Apps	Bought license	Surplus bought	Apps	Bought license	Surplus bought	Apps	Bought license	Surplus bought	Apps	Surplus	Apps	Surplus
12	707	160	44	813	244	60	834	267	84	903	5 ^c	876	
13	664	213	37	719	325	76	751	366	84	753		700	
22	55	36	14	83	56	43	90	71	31	114		91	0 ^d
24	763	170	30	888	253	47	918	294	56	971		843	
25	1575	432	69	1625	713	137	1763	712	190	1811	5 ^c	1694	
26	1695	303	47	1666	458	92	1894	512	139	1959		1874	
31	2261	478	72	2406	758	146	2505	826	174	2414		2423	
41	575	135	15	592	208	42	688	253	47	718		685	
44	2682	386	65	2619	612	88	3010	697	154	2923		2787	
45	1205	141	9	1135	170	30	1019	208	42	937		941	
51	3796	734	166	3650	1154	296	4086	1478	372	3950	1 ^c	3822	
Total^e	15978	3188	568	16196	4951	1057	17558	5684	1373	17453		16736	

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

^b In 2011-13, 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 quota BMU lottery applicants with preference level 1 (1st year applicants) who were drawn for a bear permit, 2009- 2013. 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	2013		2012		2011		2010		2009
	Pref 1	Pref 2	Pref 1	Pref 2	Pref 1	Pref 2	Pref 1	Pref 2	Pref 1
12	0	49	0	80	2		23		29
13	4		33		51		77		84
22	89		100		100		88		100
24	0	41	0	75	14		49		75
25	0	81	28		35		60		72
26	0	7	0	49	0	77	15		32
31	0	45	0	84	11		35		43
41	0	43	0	86	6		31		37
44	0	0 ^a	0	28	0	55	0	90	3
45	0	0 ^a	0	29	0	67	24		61
51	0	53	1		25		52		58

^a No preference level 2 applicants were drawn, and only a portion of level 3 applicants were drawn (BMU 44 = 68%; BMU 45 = 75%).

Table 5. Minnesota bear harvest tally^a for 2013 by Bear Management Unit (BMU) and sex compared to harvests during 2008-2012 and record high and low harvests (since establishment of each BMU).

BMU	2013			2012	2011	2010	2009	2008	5-year mean	Record low harvest (yr)	Record high harvest (yr)
	M (%M)	F	Total								
Quota											
12	45 (73)	17	62 ^d	82	106	95	140	101	105	63 (87)	263 (01)
13	73 (77) ^m	22	95 ^e	112	119	155	149	129	133	71 (88)	258 (95)
22	3 (33)	6	9	8	11	9	7	7	8	3 (03)	41 (89)
24	55 (72)	21	76 ^f	108	122	124	151	100	121	93 (96)	288 (95)
25	126 (64) ⁿ	71	197 ^g	254	317	307	344	298	304	149 (96)	584 (01)
26	80 (66) ⁿ	41	121 ⁿ	238	167	232	228	137	200	131 (96)	513 (95)
31	117 (59)	80	197 ^g	363	358	363	384	248	343	157 (88)	697 (01)
41	21 (53)	19	40 ^g	70	54	71	104	77	75	38 (96)	201 (01)
44	115 (64)	66	181	188	130	248	255	196	203	130 (11)	643 (95)
45	26 (54)	22	48	67	32	58	42	72	54	32 (11)	178 (01)
51	206 (59)	143	349	471	288	501	416	344	404	247 (91)	895 (01)
Total	867 (63)	508	1375 ⁱ	1961	1704	2163	2220	1709	1951	1192 (88)	4288 (01)
No Quota^b											
11	84 (62)	52	136 ^j	224	219	178	315	172	222	38 (87)	351 (05)
10 ^c	7 (78)	2	9	14	3	11	9	3	8		
52	204 (59)	142	346	405 ^k	205	347	257	251	293	105 (02)	405 (12)
Total	295 (60)	196	491	643	427	536	581	426	523	198 (87)	678 (95)
State	1162 (62) ⁿ	704	1866 ⁱ	2604	2131	2699	2801	2135	2474		4956 (95)

^a Hunters receive tooth envelopes at registration stations, but the sex recorded on tooth envelopes may differ from the registered sex:

2011: 1450 [97%] unchanged, 12 M_(reg)→F_(tooth), 38 F→M

2012: 1821 [98%] unchanged, 15 M_(reg)→F_(tooth), 28 F→M

2013: 1338 [97%] unchanged, 13 M_(reg)→F_(tooth), 23 F→M.

Sex shown on table is the registered sex because only ~70% of tooth envelopes are submitted (2011: 72%; 2012: 73%; 2013: 75%).

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 2011–2013.

^b Some hunters with no-quota licenses hunted in the quota area, and their kills were assigned to the BMU where they apparently hunted:

2008: 14; 2009: 3; 2010: 14; 2011: 14; 2012: 8; 2013: 11.

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 Previously called BMU 11b.

^d Record low harvest since this area was established in 1987.

^e Lowest harvest since 1991.

^f Record low harvest since this area was established in 1989.

^g Lowest harvest since 1996.

^h Record low harvest since this area was established in 1991.

ⁱ Lowest since 1988 (quota—no-quota split in 1987).

^j Lowest harvest since 2006.

^k Record high harvest.

^m Record high %males.

ⁿ Ties record high %males (since quota—no-quota split).

Year	Quota area	No-quota area
2008	23	4
2009	19	14
2010	20	8
2011	11	2
2012	6	1
2013	5	1

Figure 3. Trends in statewide bear harvest and proportions of harvest in the no-quota zones, 1987-2013.

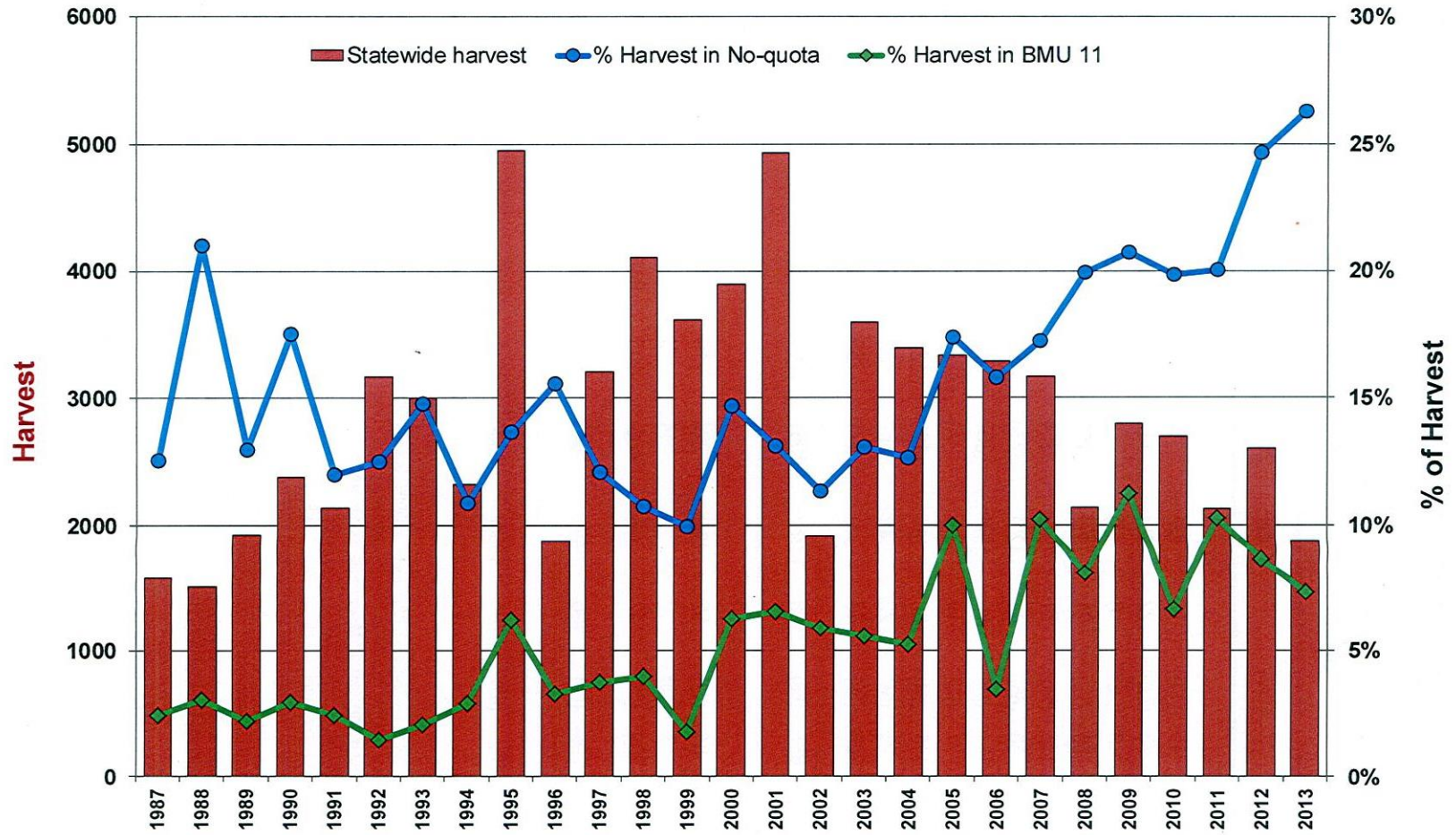


Table 6. Bear hunting success (%) by BMU, measured as the registered harvest (excluding second bear) divided by the number of licenses sold^a, 2008-2013.

BMU	Max success (yr) (excl 2013)	Mean success 2008-2012	2013	2012	2011	2010	2009	2008
12	49 (95)	32	30	27	30	30	39	32
13	59 (95)	30	38 ^d	28	26	34 ^c	32	28
22	21 (92)	11	18 ^e	8	11	14	16 ^c	8
24	45 (92)	30	38 ^e	36 ^e	35 ^e	29	31 ^d	20
25	47 (92)	33	39 ^d	30	35	34	36	28 ^f
26	59 (95)	30	34	43 ^d	26	34	31	17 ^f
31	55 (92)	34	36	40 ^d	36	36	38 ^c	21 ^f
41	50 (95)	27	26	28	18	25	34	27
44	43 (95)	24	40 ^d	27	15 ^f	28	30	21
45	24 (95)	18	32	33 ^b	13	21 ^d	11 ^f	11 ^f
51	37 (95)	23	39 ^g	32 ^d	16 ^f	27	23	19
Quota	42 (95)	28	37 ^d	33 ^d	24	30	30	21
11 ^h			15					
10 ^h			12					
52 ^h			19					
No Quota	32 (95)	19	17	20	15 ^f	20	22	17 ^f
Statewide	40 (95)	25	28	28	22	27	28 ^c	20

^a Harvest/licenses instead of harvest/hunters because BMU-year-specific estimates for the proportion of license-holders that hunted are unreliable. No-quota hunters could take 2 bears during 2008-2012, so their success was calculated by whether or not they shot at least 1 bear. No-quota hunters could take only 1 bear in 2013. 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 Highest success since establishment of this BMU in 1987.

^h For the first time, in 2013, an attempt was made to differentiate the number of no-quota hunters by BMU. When no-quota hunters bought licenses, they recorded the deer block where they anticipated hunting. Those who selected blocks in or adjacent to BMUs 10 (3%), 11 (30%), or 52 (63%) were categorized as such; those hunters who selected blocks in the quota zone (127= 4%) were distributed in no-quota zones proportional to those who selected blocks in the no-quota zone (note: 5 of them harvested a bear in the no-quota zone, 4 harvested a bear in the quota zone, 1 harvested a bear in the quota zone with a quota zone license, and the remainder were unsuccessful); 10 hunters chose blocks in SE Minnesota, 9 of whom lived in the area, but none harvested a bear.

Table 7. Cumulative bear harvest (% of total harvest) by date, 1992-2013.

Year	Day of week for opener	Aug 22/23 – Aug 31	Sep 1 – Sep 7	Sep 1 – Sep 14	Sep 1 – Sep 30
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
2013	Sun		61	76	94

^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, 1993-2013.

	Apr	May	Jun	Jul	Aug	Sep	Oct
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
2013	63	56	62	49	42	42	32

^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 1993-2013, including number of bears killed and translocated, and bears killed in vehicular collisions.

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Number of personnel participating in survey ^a	88	88	83	84	69	71	52	60	54	50	39	34	42	46	46	37	51	40	34	56	63
Complaints examined on site	1010	696	1568	337	661	226	189	105	122	75	81	75	61	57	63	59	65	70	37 ^h	113	69
Complaints handled by phone ^b				959	2196	743	987	618	660	550	424	507	451	426	380	452	535	514	396 ^h	722 ⁱ	623
Total complaints received				1296	2857	969	1176	723	782	625	505	582	512	483	443	511	600	584	433 ^h	835	692
• % Handled by phone				74%	77%	77%	84%	85%	84%	88%	84%	87%	88%	88%	86%	88%	89%	88%	91%	86%	90%
Bears killed by:																					
• Private party or DNR	111	67	232	27	93	31	25	25	22	12	13	25	28	11	21	22	23	22	9 ^h	16	24
• Hunter before season ^c																					
– from nuisance survey	21	28	81	6	32	23	5	7	4	0	3	3	6	2	18	3	4	3	3	11	0
– from registration file	30	25	138	18	35	31	24	43	20	11	8	4	13	6	25	5	15	10	5	12	0
• Hunter during/after season ^d	8	3	13	0	4	3	0	1	1	0	0	0	1	0	0	0	0	0	0	0	1
• Permittee ^e	6	3	57	4	7	11	7	2	6	4	6	1	5	4	5	1	3	5	0	0	1 ⁱ
Bears translocated	180	171	295	64	115	24	29	1	6	3	1	3	3	3	1	3	2	2	2	0	3
• % bears translocated ^f	18	25	19	19	17	11	15	1	5	4	1	4	5	5	2	5	3	3	5	0	4
Bears killed by cars ^g	54	40	68	42	52	61	60	39	43	26	25	16	22	18	20	27	18	28	15 ^h	33	32

Table 9 footnotes:

- ^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 2005-2013 are either from the forms or from the confiscation records, whichever was greater (they differed very little)(2013: 32 confiscations, 28 reported in nuisance survey).
- ^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 4 permits issued, 1 bear killed.

Figure 4. Trends in nuisance bear complaints, nuisance bears killed and moved, and percentage of complaints handled by phone, 1981-2013, showing dramatic effect of change in nuisance bear policy.

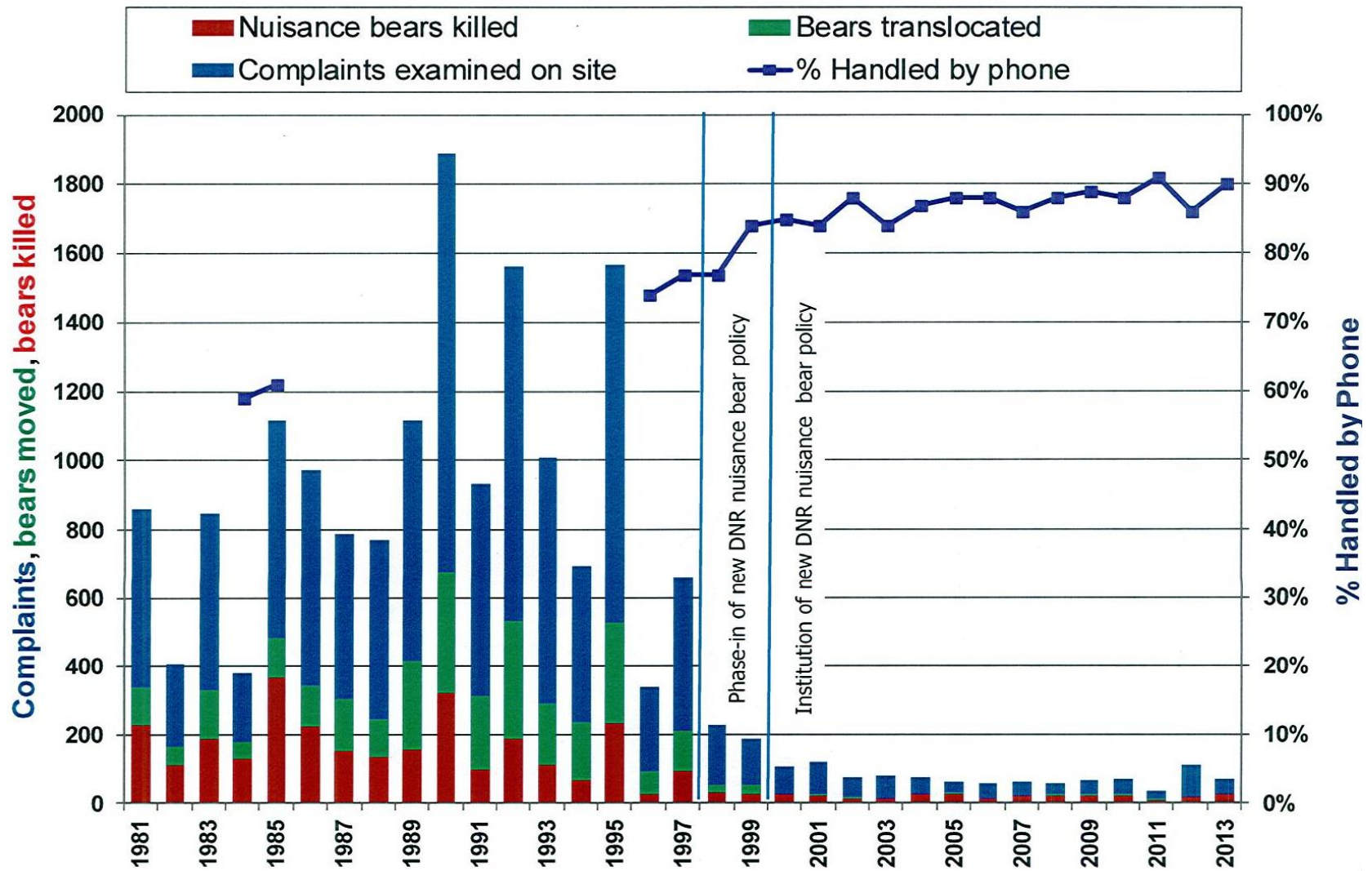
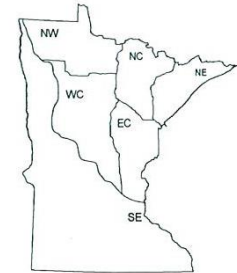


Table 10. Regional bear food indices^a in Minnesota's bear range, 1984-2013. Shaded blocks indicate particularly low (<45; pink) or high (≥ 70 ; green) values.

Year	Survey Area						Entire Range
	NW	NC	NE	WC	EC	SE ^b	
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
2013	71.9	77.1	76.0	59.1	63.2	57.3	71.8



^a Each composite "bear food index" value listed here represents the sum of the average indices for 14 species, calculated based on all surveys conducted in that survey area that year. Likewise, the range-wide mean is based on all surveys completed in the state that year and is not an average of the survey area means.

^b Surveys were first compiled for the SE area in 2013. Bear range shows increasing expansion into this area.

Table 11. Regional mean index values^a for bear food species in 2013 compared to the previous 29-year mean (1984-2012) in Minnesota's bear range. Shading indicates particularly high (green) or low (pink) fruit abundance relative to average (≥ 1 point difference for individual foods; ≥ 5 points difference for composite scores).

FRUIT	NW		NC		NE		WC		EC		SE ^d	Entire Range	
	29yr mean	2013 <i>n</i> = 12 ^b	29yr mean	2013 <i>n</i> = 14	29yr mean	2013 <i>n</i> = 6	29yr mean	2013 <i>n</i> = 11	29yr mean	2013 <i>n</i> = 6	2013 <i>n</i> = 6	29yr mean	2013 <i>n</i> = 41 ^c
SUMMER													
Sarsaparilla	4.5	6.9	5.9	5.0	5.4	4.5	4.6	3.9	5.5	3.2	2.0	5.1	4.7
Pincherry	3.2	2.6	4.3	6.2	4.0	6.0	3.9	2.4	3.7	2.3	2.0	3.8	4.3
Chokecherry	5.5	8.6	5.3	9.2	4.3	7.4	5.4	5.1	4.6	4.6	3.7	5.1	7.0
Juneberry	4.9	8.4	4.7	10.2	4.9	6.8	3.8	3.7	3.9	4.3	3.0	4.4	6.9
Elderberry	1.4	1.4	3.1	1.9	3.6	3.7	3.1	3.0	3.3	3.0	4.0	3.0	2.6
Blueberry	4.9	7.9	5.3	9.3	4.8	5.8	3.7	3.4	3.6	2.5	2.0	4.3	5.7
Raspberry	6.6	6.7	8.1	8.8	7.9	9.4	7.1	6.6	7.0	7.2	6.2	7.3	7.5
Blackberry	1.3	0.3	2.3	1.0	1.0	1.5	3.4	2.5	4.4	5.8	5.5	2.9	2.6
FALL													
Wild Plum	2.0	2.5	1.8	2.3	1.0	2.5	2.6	2.5	2.4	3.3	5.0	2.1	2.9
HB Cranberry	5.1	6.2	4.3	4.8	3.6	5.2	3.7	3.3	3.5	4.8	2.0	4.0	4.9
Dogwood	6.0	8.2	5.7	6.1	5.0	5.0	5.7	7.1	5.9	6.6	5.6	5.6	6.7
Oak	3.5	4.0	3.0	4.1	1.7	3.0	5.9	5.9	5.9	4.2	8.6	4.4	5.0
Mountain Ash	1.6	1.6	2.6	2.9	4.6	8.2	1.8	2.0	2.2	3.0	2.7	2.6	4.3
Hazel	6.3	6.6	7.7	5.3	7.3	7.0	8.1	7.7	7.8	8.4	5.0	7.4	6.7
TOTAL	56.8	71.9	64.1	77.1	59.1	76.0	62.8	59.1	63.7	63.2	57.3	62.0	71.8

^a Food abundance indices were calculated by multiplying species abundance ratings x fruit production ratings.

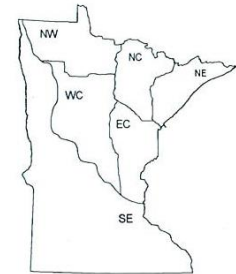
^b *n* = Number of surveys used to calculate area-specific means

^c Sample size for the entire range does not equal the sum of the sample sizes of 5 survey areas because some surveys were conducted on the border of 2 or more areas and were included in calculations for both.

^d Surveys were first compiled for the SE area in 2013.

Table 12. Regional productivity indices^a for 3 important fall foods (oak, hazel, and dogwood) in Minnesota's bear range, 1984-2013. Shading indicates particularly low (≤ 5.0 ; yellow) or high (≥ 8.0 ; tan) values.

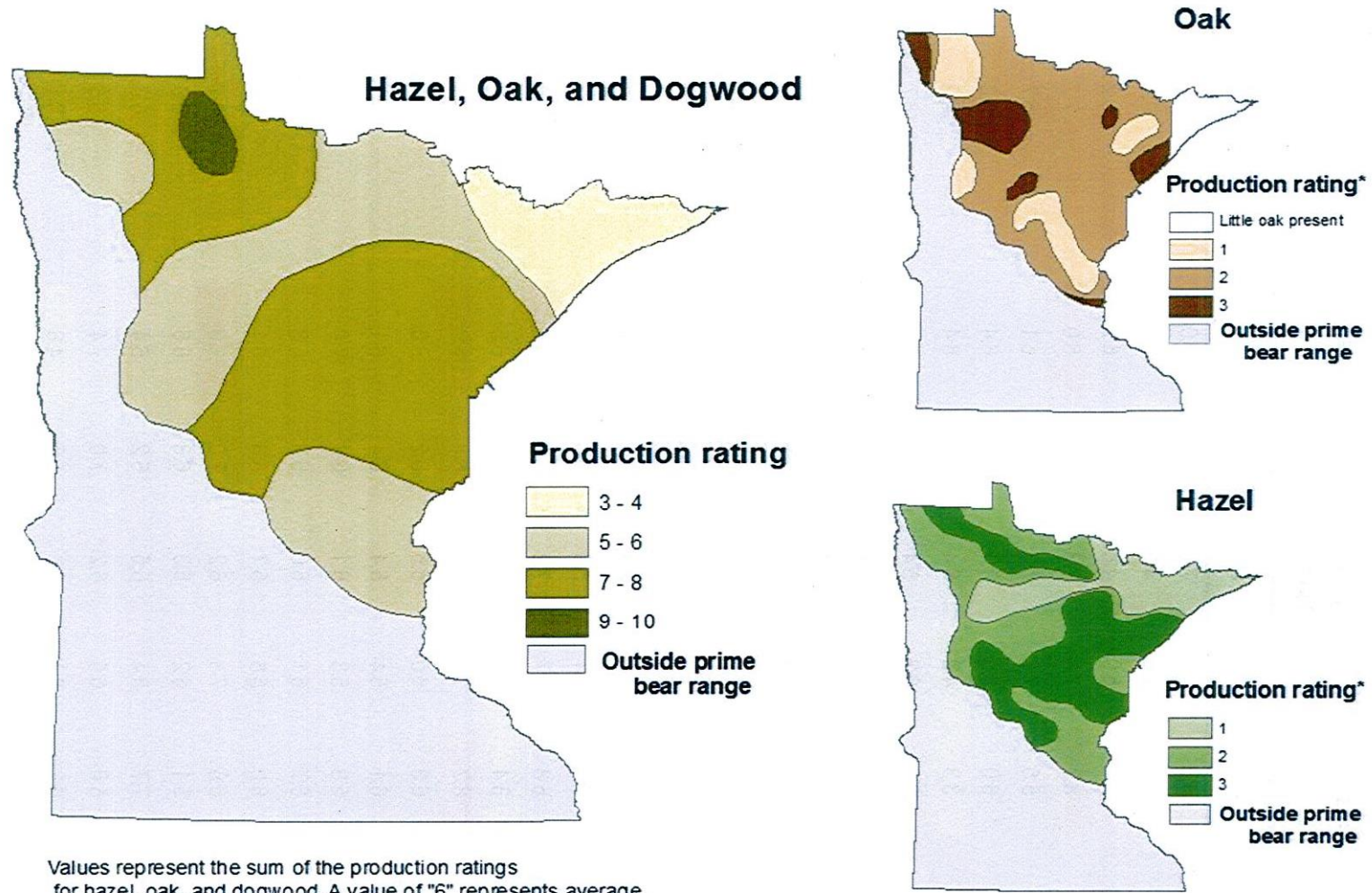
Year	Survey Area					Entire Range
	NW	NC	NE	WC	EC	
1984	4.2	7.6	7.0	6.2	7.0	6.5
1985	4.9	2.8	4.2	4.7	5.3	4.4
1986	7.2	5.0	4.0	7.0	6.2	6.2
1987	8.0	7.8	7.3	7.6	8.0	7.7
1988	5.5	7.2	7.3	6.8	6.1	6.7
1989	6.0	5.3	4.1	5.7	6.4	5.8
1990	3.3	4.2	6.4	5.7	6.4	5.2
1991	6.2	6.2	5.4	7.2	7.7	6.7
1992	4.7	5.0	4.4	4.4	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	5.9
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
2013	6.8	6.0	5.7	6.7	6.9	6.2



^a Each value represents the sum of the average production scores for hazel, oak, and dogwood, calculated based on all surveys conducted in that survey area that year. Means were calculated using all surveys completed in the state, not by averaging values from the 5 food survey areas.

^b Surveys were first compiled for the SE area in 2013.

Figure 5. Productivity of key fall bear foods in Minnesota's primary bear range, 2013.



* 0 = almost none, 1 = below average, 2 = average, 3 = above average, 4 = bumper crop

Figure 6. Number of bears harvested vs. number predicted based on fall food abundance and the number of hunters: 1984-2013 (top; $R^2 = 0.84$); 2000-2013 (bottom; $R^2 = 0.95$).

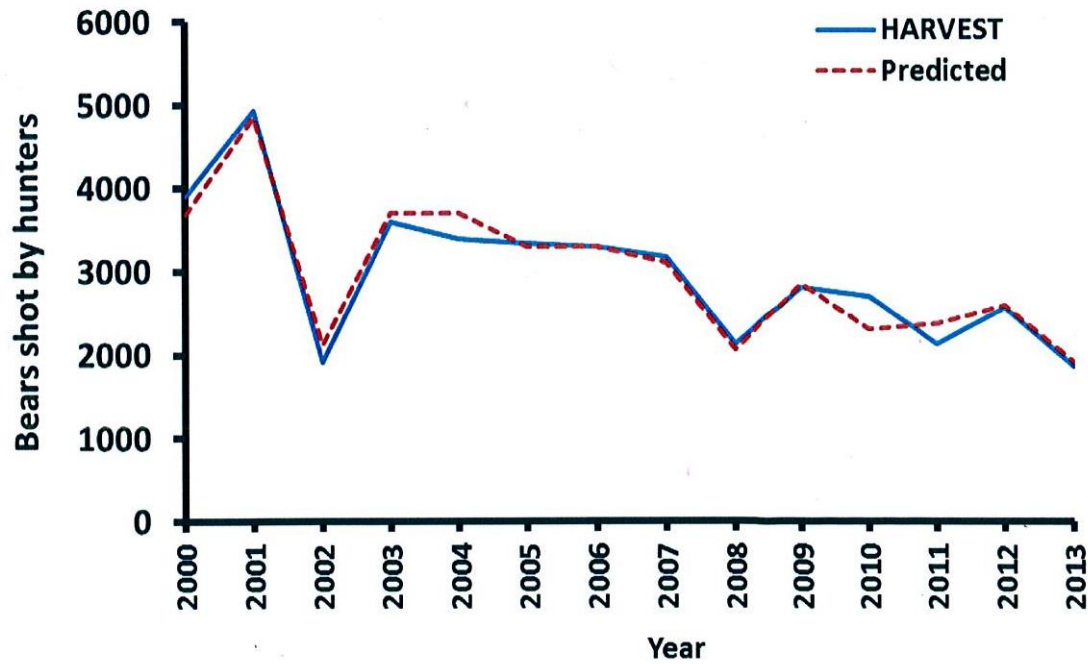
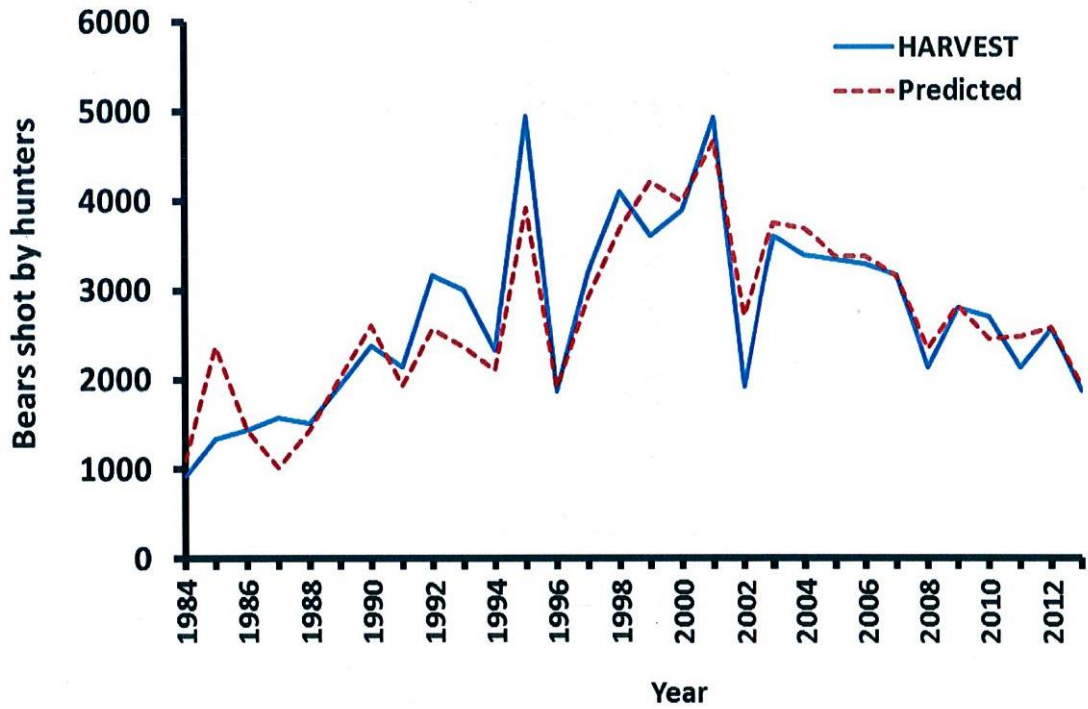


Figure 7. Trends in year-to-year variability of bear food index across Minnesota's bear range, 1984-2013. Bear food abundance was somewhat higher in 2013 and lower in 2012 than in any of the previous 15 years, but less extreme than the variation observed during 1984-1996.

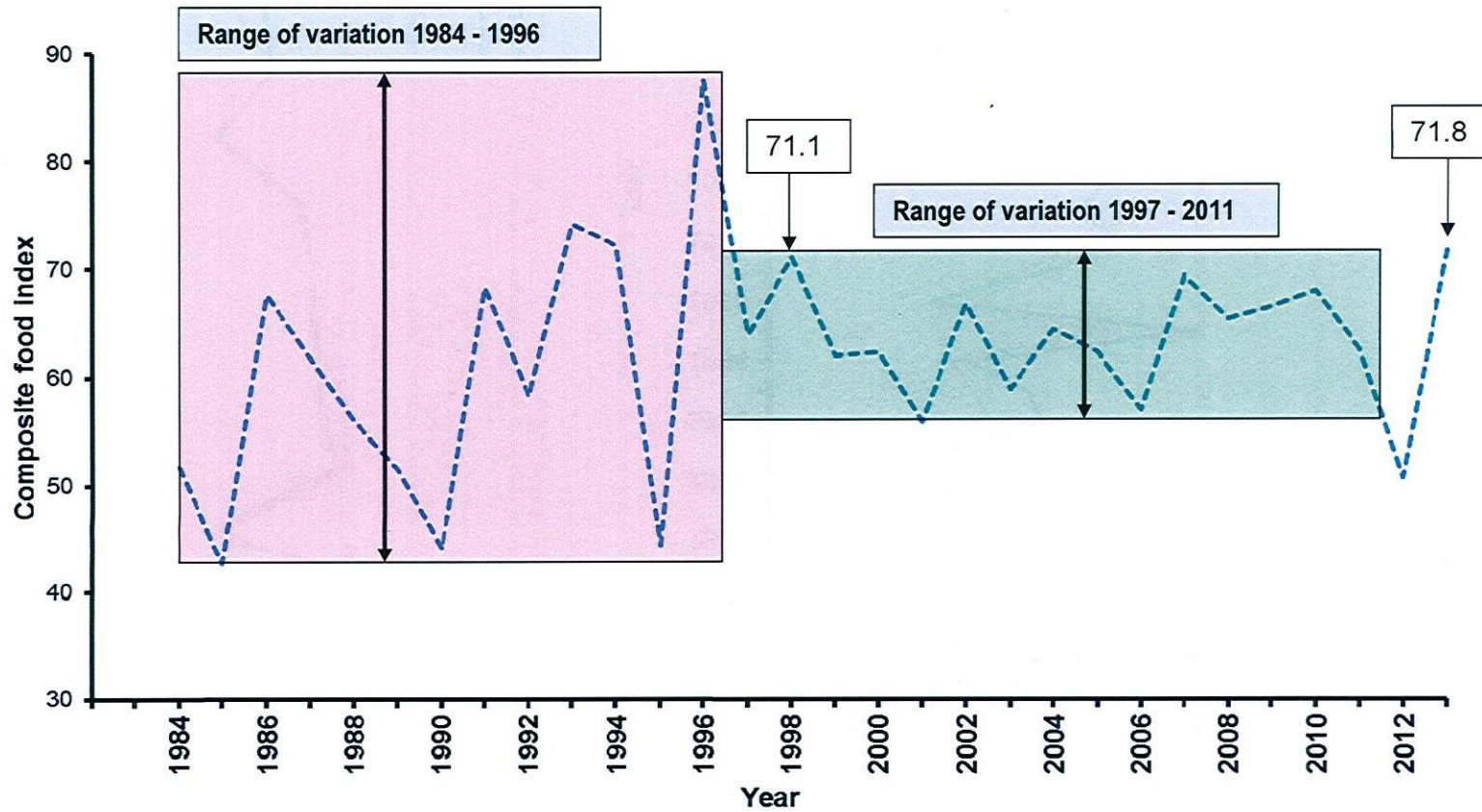


Figure 8. Sex ratio of harvested bears by BMU, 2007-2013.

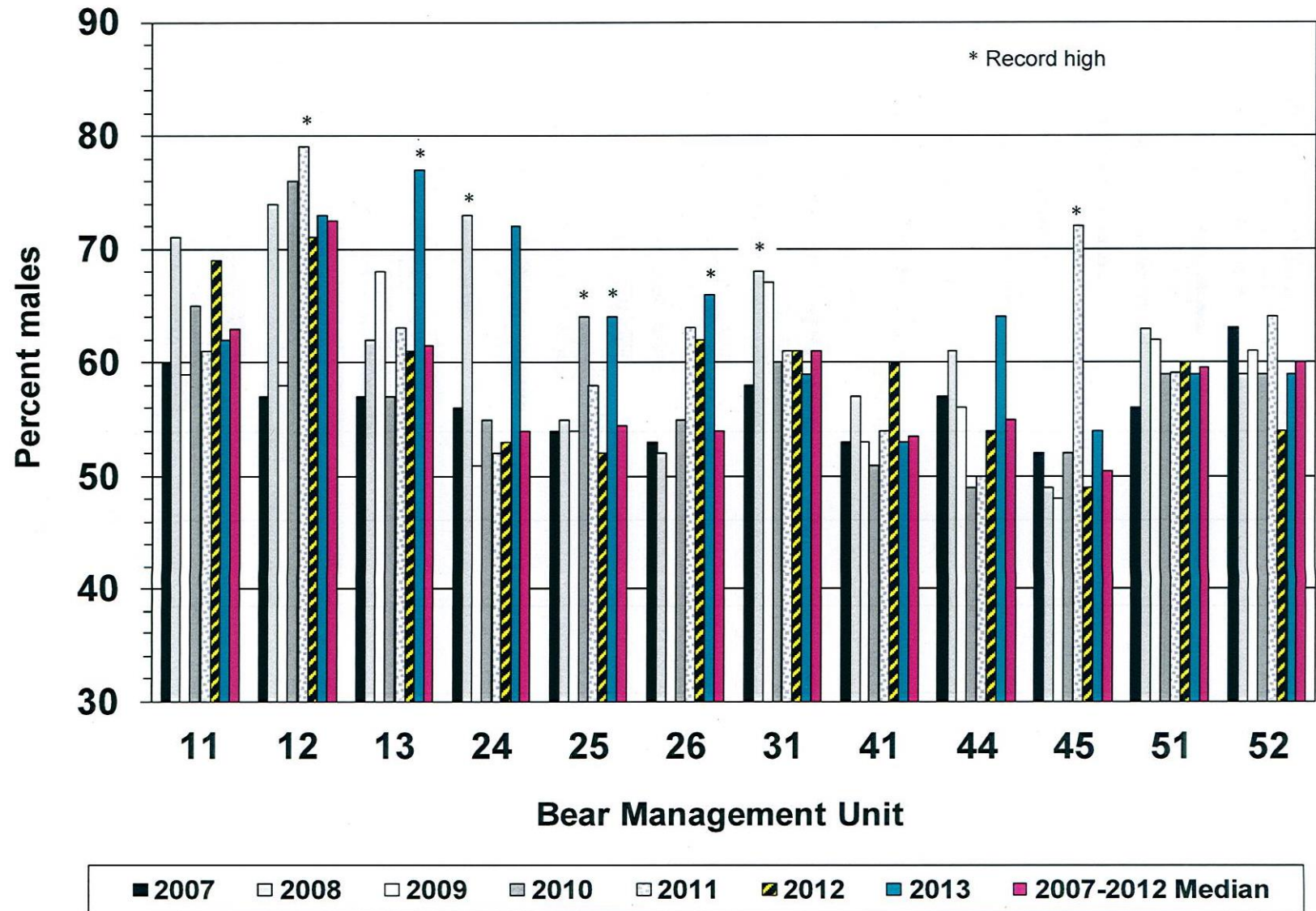


Figure 9. Median ages of harvested female bears by BMU, 2007-2013.

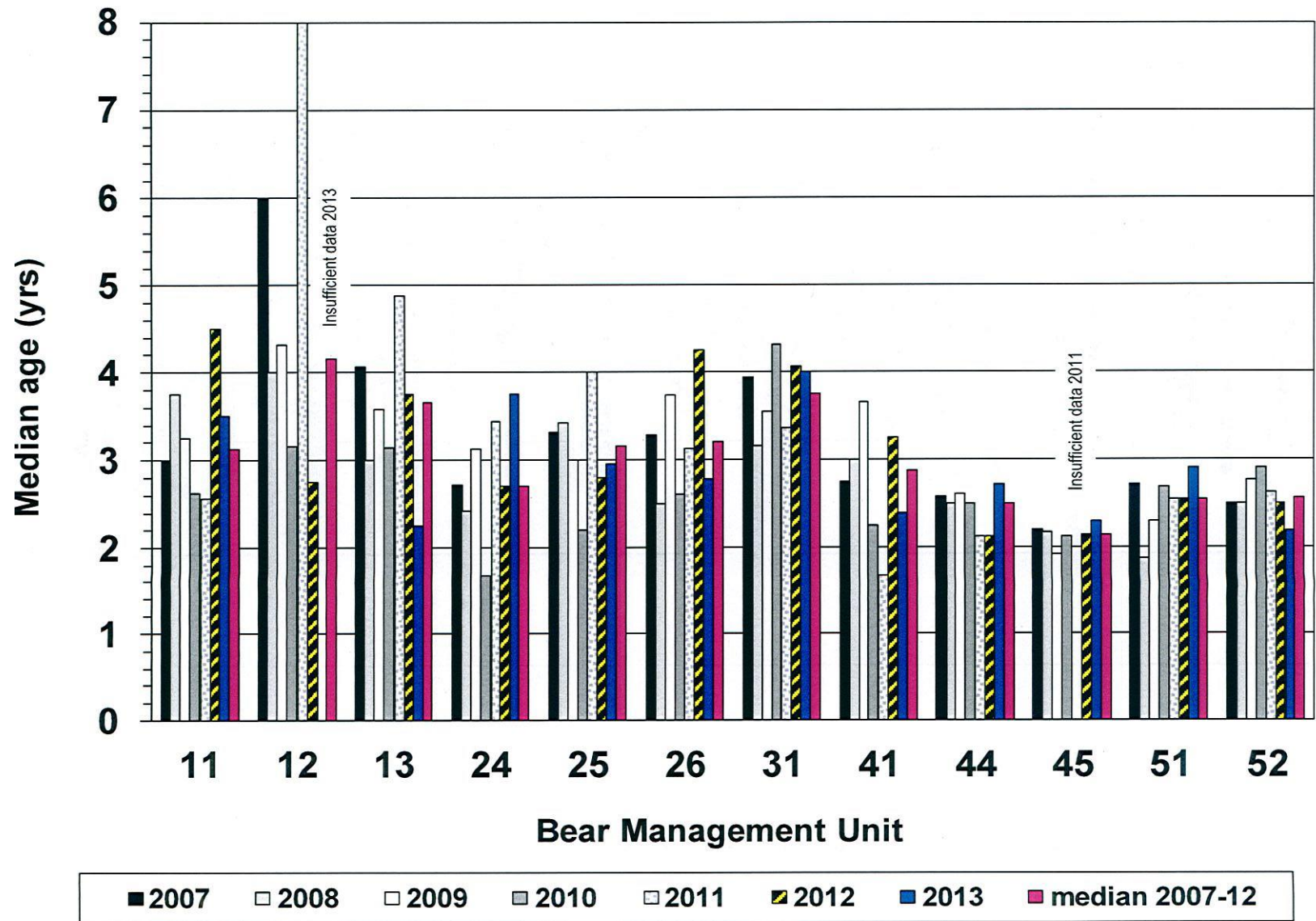


Figure 10. Statewide harvest structure: median ages (yrs) by sex, 1982-2013.

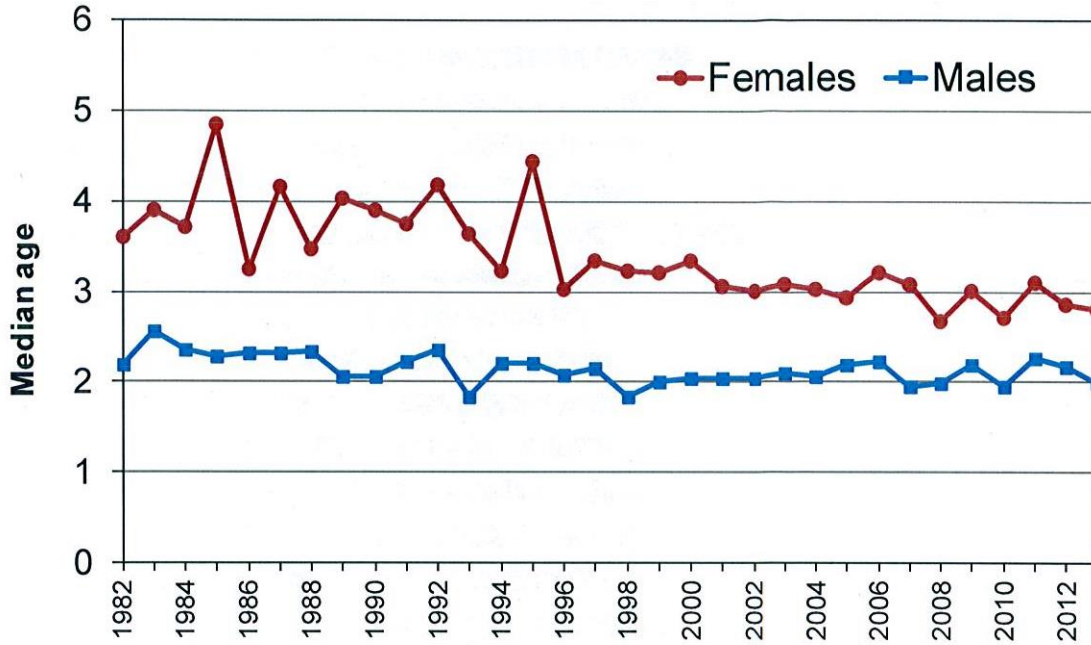


Figure 11. Statewide harvest structure: proportions of each sex in age category, 1982-2013. Trend lines are significant.

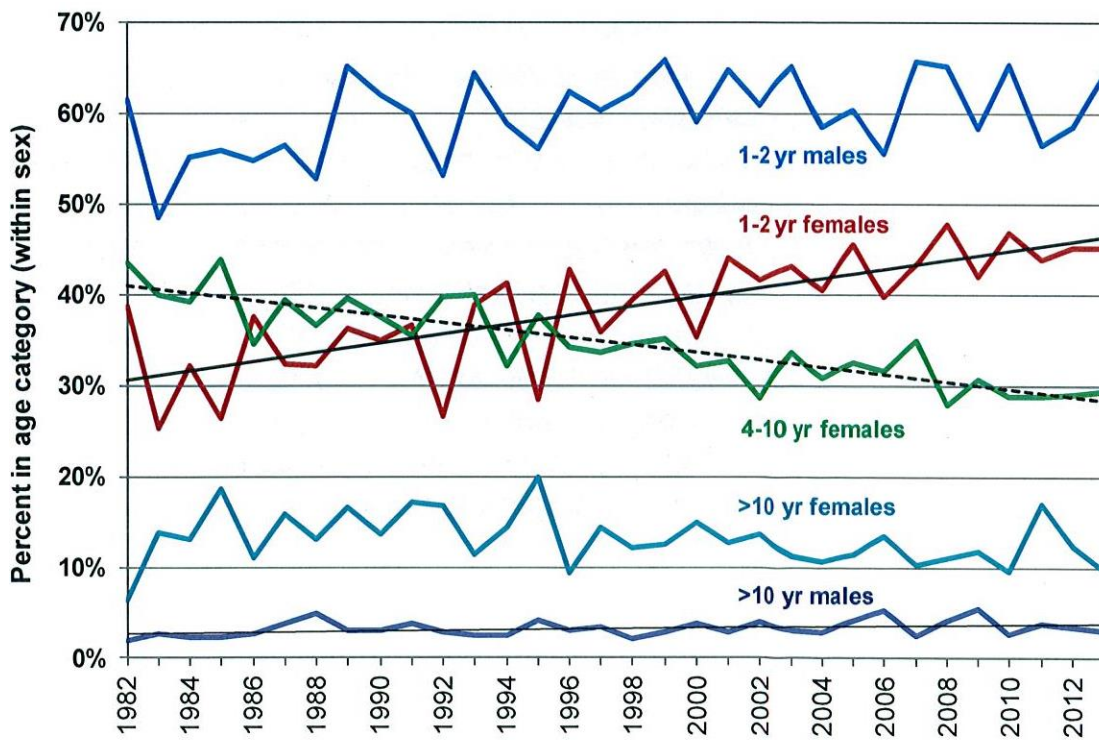


Figure 12. Percent of hunters submitting bear teeth for aging (now vital for population reconstruction, see Figure 14). Cooperation levels exceeded 80% when registration stations were paid to extract teeth (this practice ended in 1993) and when non-compliant hunters were sent a reminder and second tooth envelope (2009).

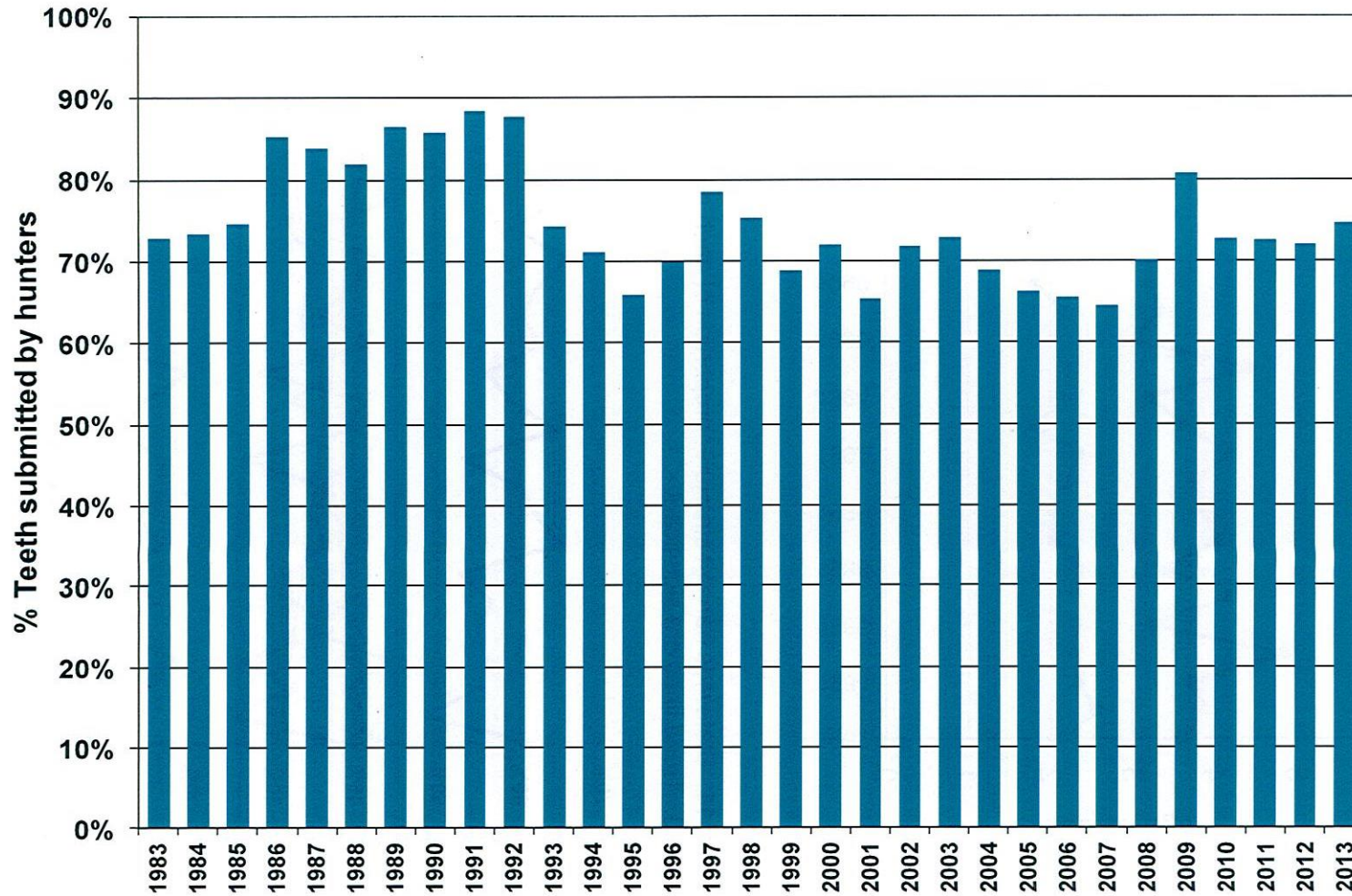


Figure 13. Percent of hunters who submitted a bear tooth in 2013, by method of registration (top panel) and by BMU (bottom panel). For the first time, in 2013, hunters could register their bear by phone or internet, but to complete the registration process they were supposed to go to a registration station and obtain a tooth envelope.

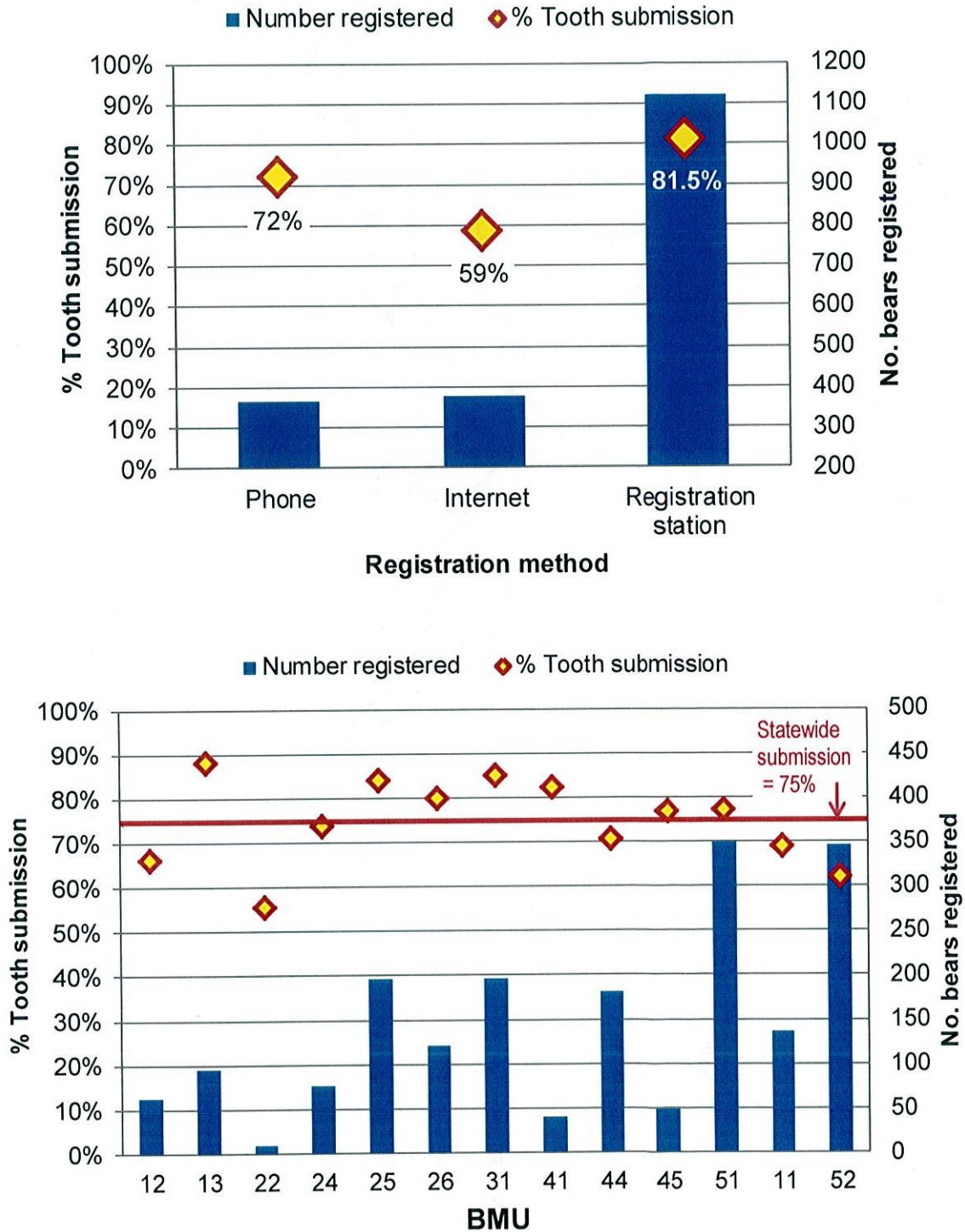
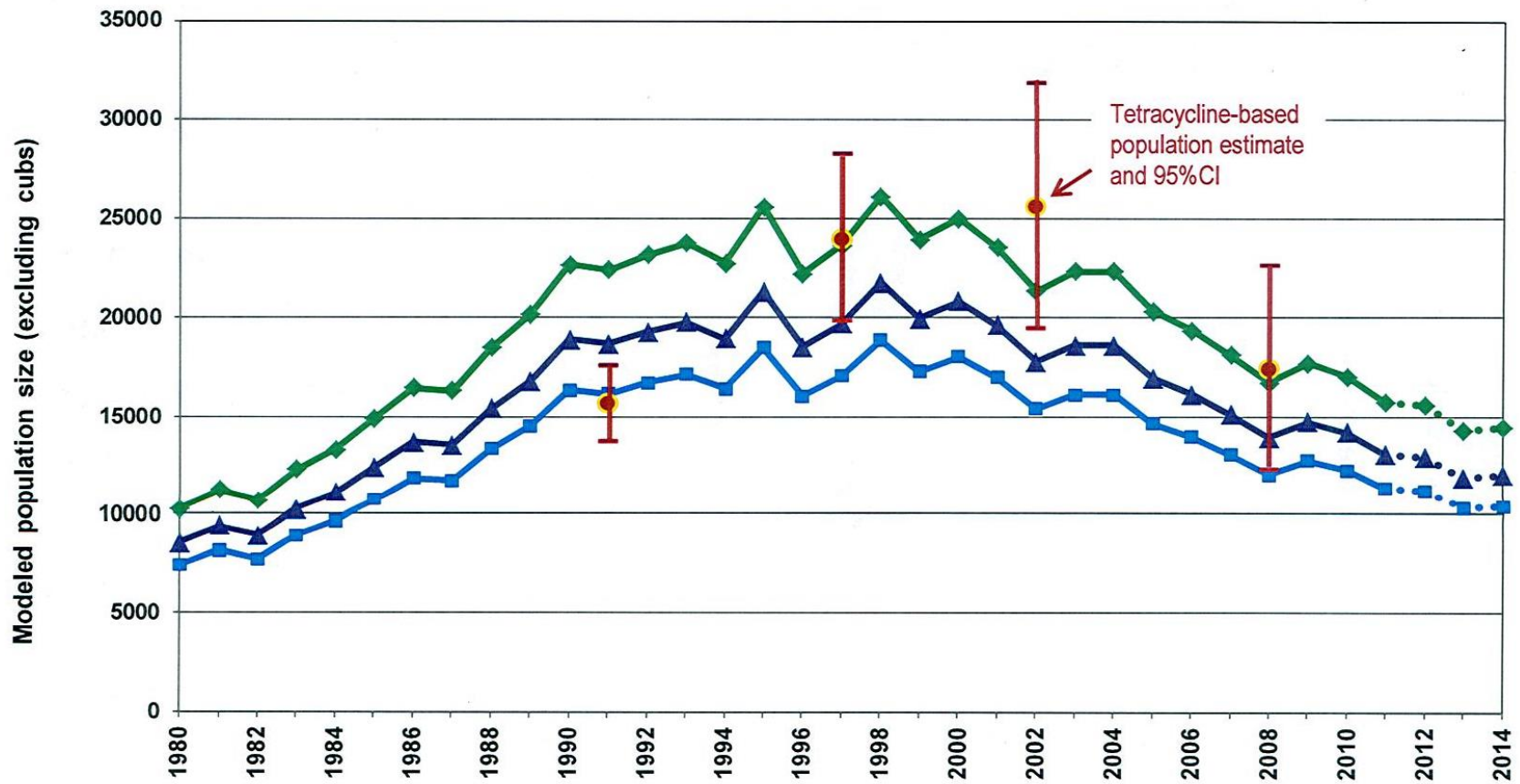


Figure 14. Statewide population trend derived from Downing reconstruction using the harvest age structures from 1980-2013. Curves were scaled (elevated) to various degrees to attempt to match the tetracycline-based mark-recapture estimates. Estimates for 2012-2014 were derived from population growth rates extrapolated from the reconstruction analyses (hence the break in the curves).





2013 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 2013, hunters registered 172,781 deer.

METHODS

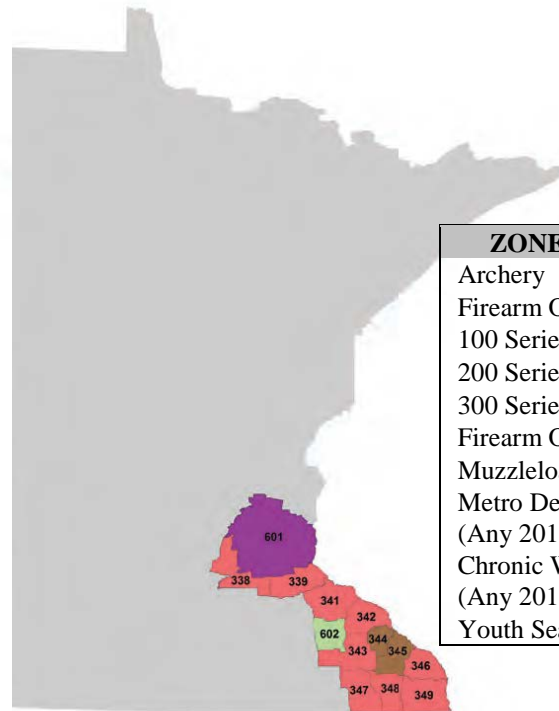
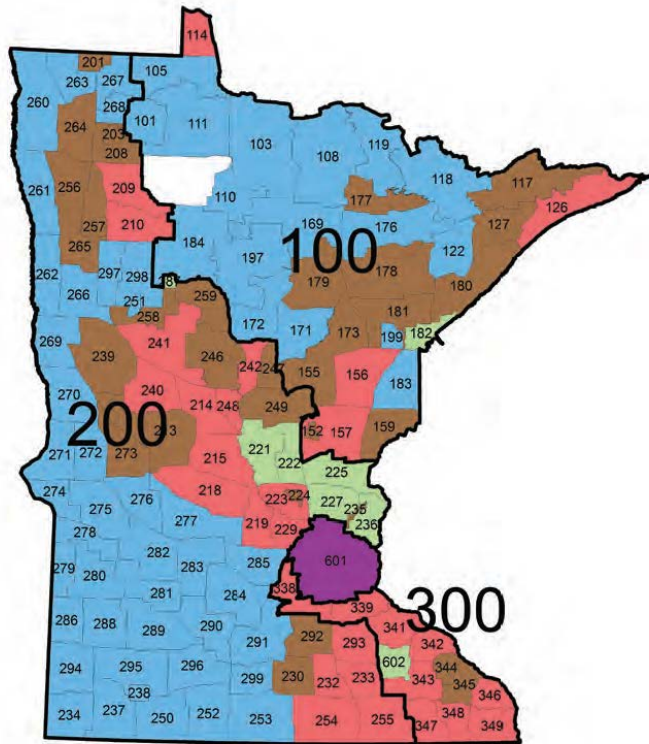
Every deer taken by hunting in Minnesota must be registered. In 2013, hunters were required to register deer within 48 hours of harvest and before processing. Deer may be registered at any of the 825 to nearly 900 "Big Game Registration" stations available throughout the state. Starting in 2011, deer could also be registered using the internet and telephone except in areas under Disease Management tag restrictions (PA 602). Implementation of electronic licensing (ELS) has improved the efficiency and accuracy of deer harvest estimates and provides a more timely release of harvest information. Registered deer are recorded as adult buck, fawn buck, adult doe, or fawn doe. Additional information gathered at time of registration includes date of kill, deer permit area, and season.

RESULTS

Outcomes of the 2013 deer harvest are presented in the following tables.

STATEWIDE (A) LICENSE

LATE SOUTHEAST (B) LICENSE



KEY

Blue	Lottery - 1 deer limit
Brown	Hunter Choice - 1 deer limit
Red	Managed - 2 deer limit
Green	Intensive - 5 deer limit
Purple	No Limit Antlerless

2013 Minnesota Deer Seasons

ZONE	DATES
Archery	Sept 14-Dec 31
Firearm Option Statewide (A)*	
100 Series	Nov. 9-24
200 Series	Nov. 9-17
300 Series	Nov. 9-17
Firearm Option Late Southeast (B)**	Nov. 23-Dec 1
Muzzleloader****	Nov. 30-Dec. 15
Metro Deer Management Area (601)***	
(Any 2013 firearms or muzzleloader.)	Nov. 9-Dec 1
Chronic Wasting Disease Area (602)***	
(Any 2013 firearms or muzzleloader.)	Nov. 9-Dec 1
Youth Season	Oct. 17-20

Figure 1. 2013 Firearms and Archery Deer Seasons.

Table 1. Statewide Firearms, Archery, and Muzzleloader Harvest, License Sales, and Success Rates, 2002-2013.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
REGULAR FIREARMS												
Resident License Sales	367,964	344,875	309,698	291,298	299,774	285,286	376,006	377,077	379,866	382,668	391,822	391,967
Non-Resident License Sales	10,835	11,334	12,036	12,523	12,520	12,520	11,883	11,759	11,908	11,955	12,483	12,496
Bonus Permit Sales	105,699	194,201	183,186	184,566	167,343	145,522	190,156	140,920	143,763	142,049	89,750	97,402
Multi-Zone Buck License Sales	35,658	32,929	32,359	28,233	15,984	15,051	N/A	N/A	N/A	N/A	N/A	N/A
Youth License Sales	2,884	34,463	51,347	50,501	49,599	49,242	50,397	56,678	59,726	60,943	62,949	64,748
All Season Deer License Sales	22,125	30,998	46,008	59,090	75,511	76,385	N/A	N/A	N/A	N/A	N/A	N/A
Total License Sales	545,165	648,800	634,634	626,211	620,731	584,006	628,442	586,434	595,263	597,615	557,004	566,613
Registered Buck Harvest ¹	101,333	110,440	116,612	95,594	95,695	97,528	85,646	83,820	88,027	76,003	84,729	77,564
Antlerless Permits Offered	365,667	31,625	30,760	28,830	18,925	18,830	32,325	60,100	60,083	15,252	33,340	36,816
Antlerless Permits Issued	192,907	25,386	24,111	25,656	18,925	18,830	32,325	60,100	60,083	60,083	33,340	36,816
Antlerless Permits App.	202,086	30,253	28,454	31,403	31,403	31,403	31,403	90,882	86,783	86,783	72,236	68,811
Registered AL Harvest ¹	102,280	147,420	123,278	119,363	135,981	118,860	98,147	78,525	78,525	88,197	71,140	67,885
Registered Total Harvest ¹	203,613	257,860	239,890	214,957	231,676	216,388	183,793	162,345	174,104	164,200	155,869	145,449
Registered % Successful ²	37.3	39.7	37.8	34.3	37.3	37.1	35.1	32.1	35.6	32.9	32.0	29.7
ARCHERY												
Resident License Sales	57,532	59,339	50,601	50,293	49,595	52,780	87,872	88,707	91,156	90,252	95,259	92,717
Non-Resident License Sales	1,275	1,428	1,144	1,207	1,286	1,509	1,509	1,610	1,638	1,718	1,814	1,952
Youth Archery Sales	N/A	3,748	7,261	7,489	7,688	7,663	9,005	9,157	9,577	10,306	11,276	12,212
Mgmt Permit License Sales	18,126	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total License Sales	76,933	60,767	59,006	58,989	58,569	61,952	99,033	99,474	102,371	102,276	108,349	106,881
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	N/A
Total Archery Harvest	14,744	21,691	20,726	23,538	25,360	24,161	22,632	20,629	22,057	20,444	21,605	19,388
Registered % Successful ²	19.2	22.3	29.2	24.6	24.8	24.3	18.5	17.5	17.8	17.0	18.8	14.5
MUZZLELOADER												
Total Muzzleloader License Sales	11,764	9,142	10,512	9,226	10,781	9,867	64,673	63,282	55,640	59,384	58,363	51,092
Estimated All-Season Hunters	--	12,020	14,168	23,293	23,293	26,813	N/A	N/A	N/A	N/A	N/A	N/A
Total Muzzleloader Harvest	3,505	9,466	9,289	15,421	13,507	12,138	9,572	7,929	9,023	7,416	7,779	7,045
Registered % Successful ²	29.8	44.7	37.6	47.4	39.6	28.2	13.4	11.3	16.2	12.4	12.4	12.7
Antlerless Permits Offered									5,792	1,997	1,635	2,144
Antlerless Permits App.									7,260	2,615	4,629	3,544
TOTAL Registered Harvest	222,050	290,525	260,604	255,736	270,778	260,434	221,837	194,186	207,313	192,331	186,634	172,781

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, 2013.

Firearms/Zone	Hunters	Harvest			Overall Success
		Bucks	Antlerless	Total	
1	179,148	29,042	20,114	49,156	26.8%
2	238,975	42,172	38,156	80,328	31.6%
3A	25,235	4,211	4,133	8,344	30.1%
3B	12,408	867	3,292	4,159	29.9%
CWD	1,946	489	856	1,345	53.7%
Free Landowner ¹	4,781	0	1,416	1,416	29.7%
Depredation ¹	124	0	230	230	73.4%
Muzzleloader ²	51,092	2,449	4,596	7,045	12.7%
Archery ³	106,881	7,460	11,928	19,388	14.5%
TOTAL⁴	509,547	87,865	84,916	172,781	31.1%

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, 2013. 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	330	3	20	0	353	496	0.67	0.05	0.71
103	1A	691	21	115	11	838	1,824	0.38	0.08	0.46
105	1A	876	20	105	14	1,015	932	0.94	0.15	1.09
108	1A	910	22	146	17	1,095	1,701	0.53	0.11	0.64
110	1A	837	72	369	61	1,339	530	1.58	0.95	2.52
111	1A	444	11	57	4	516	1,440	0.31	0.05	0.36
114	1A	41	2	17	3	63	412	0.10	0.05	0.15
117	1A	37	2	8	0	47	1,129	0.03	0.01	0.04
118	1A	569	13	41	4	627	1,445	0.39	0.04	0.43
119	1A	577	10	89	8	684	946	0.61	0.11	0.72
122	1A	333	13	75	3	424	622	0.54	0.15	0.68
126	1A	383	33	225	17	658	979	0.39	0.28	0.67
127	1A	85	3	46	6	140	587	0.14	0.09	0.24
152	1A	76	25	73	18	192	62	1.23	1.88	3.12
155	1A	1294	242	910	156	2,602	639	2.03	2.05	4.07
156	1A	1335	343	1138	248	3,064	834	1.60	2.07	3.67
157	1A	2164	583	1832	430	5,009	904	2.39	3.15	5.54
159	1A	1093	208	724	150	2,175	575	1.90	1.88	3.78
169	1A	1315	140	613	82	2,150	1,202	1.09	0.69	1.79
171	1A	1023	110	435	85	1,653	729	1.40	0.86	2.27
172	1A	1476	168	596	114	2,354	786	1.88	1.12	2.99
173	1A	695	144	454	91	1,384	617	1.13	1.12	2.24
176	1A	1412	60	294	44	1,810	1,150	1.23	0.35	1.57
177	1A	810	98	455	72	1,435	553	1.47	1.13	2.60
178	1A	1750	229	1051	160	3,190	1,325	1.32	1.09	2.41
179	1A	1539	269	1088	162	3,058	939	1.64	1.62	3.26
180	1A	806	63	382	36	1,287	999	0.81	0.48	1.29
181	1A	964	136	599	77	1,776	746	1.29	1.09	2.38
182	1A	433	96	322	68	919	280	1.55	1.74	3.28
183	1A	1157	123	508	75	1,863	675	1.71	1.05	2.76
184	1A	2580	260	952	165	3,957	1,318	1.96	1.04	3.00
197	1A	910	64	284	54	1,312	1,343	0.68	0.30	0.98
199	1A	88	8	34	2	132	152	0.58	0.29	0.87
201	2A	94	9	46	13	162	169	0.56	0.40	0.96
203	2A	64	3	26	4	97	132	0.49	0.25	0.74
208	2A	187	23	78	12	300	379	0.49	0.30	0.79
209	2A	457	105	364	90	1,016	641	0.71	0.87	1.58
210	2A	738	122	502	111	1,473	635	1.16	1.16	2.32
213	2A	1583	341	797	212	2,933	1,161	1.36	1.16	2.53
214	2A	1330	381	1014	358	3,083	566	2.35	3.10	5.45
215	2A	1196	327	752	277	2,552	730	1.64	1.86	3.49
218	2A	965	263	682	165	2,075	912	1.06	1.22	2.28
219	2A	596	119	349	106	1,170	427	1.40	1.34	2.74
221	2A	1072	346	785	329	2,532	647	1.66	2.26	3.91
222	2A	836	287	655	236	2,014	413	2.03	2.85	4.88
223	2A	581	115	281	118	1,095	385	1.51	1.33	2.84
224	2A	87	10	49	3	149	49	1.77	1.26	3.04
225	2A	1270	387	943	321	2,921	635	2.00	2.60	4.60
227	2A	847	217	559	162	1,785	491	1.72	1.91	3.63

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	225	38	99	28	390	313	0.72	0.53	1.24
230	2A	246	47	132	35	460	464	0.53	0.46	0.99
232	2A	218	64	162	29	473	380	0.57	0.67	1.24
233	2A	194	23	89	23	329	386	0.50	0.35	0.85
234	2A	191	19	85	11	306	637	0.30	0.18	0.48
235	2A	61	5	23	6	95	37	1.66	0.92	2.58
236	2A	546	120	337	77	1,080	404	1.35	1.32	2.68
237	2A	246	22	89	9	366	737	0.33	0.16	0.50
238	2A	70	4	22	11	107	98	0.72	0.38	1.10
239	2A	1223	240	739	177	2,379	1,110	1.10	1.04	2.14
240	2A	1474	388	1054	301	3,217	694	2.12	2.51	4.64
241	2A	2778	746	2250	591	6,365	1,047	2.65	3.43	6.08
242	2A	503	130	446	97	1,176	307	1.64	2.19	3.83
246	2A	1670	361	1150	247	3,428	860	1.94	2.04	3.99
247	2A	572	140	482	79	1,273	263	2.17	2.66	4.83
248	2A	360	84	260	72	776	229	1.58	1.82	3.40
249	2A	1024	280	686	199	2,189	729	1.40	1.60	3.00
250	2A	320	21	115	9	465	730	0.44	0.20	0.64
251	2A	81	10	22	6	119	68	1.19	0.56	1.75
252	2A	314	29	131	12	486	735	0.43	0.23	0.66
253	2A	434	35	140	16	625	987	0.44	0.19	0.63
254	2A	533	67	290	51	941	946	0.56	0.43	0.99
255	2A	416	71	239	63	789	774	0.54	0.48	1.02
256	2A	452	69	206	50	777	654	0.69	0.50	1.19
257	2A	325	36	198	23	582	426	0.76	0.60	1.37
258	2A	769	134	471	108	1,482	381	2.02	1.87	3.89
259	2A	1300	260	849	173	2,582	546	2.38	2.35	4.73
260	2A	307	17	69	10	403	1,252	0.25	0.08	0.32
261	2A	174	10	32	3	219	796	0.22	0.06	0.28
262	2A	177	22	71	15	285	677	0.26	0.16	0.42
263	2A	346	14	79	12	451	513	0.67	0.20	0.88
264	2A	620	70	329	48	1,067	672	0.92	0.67	1.59
265	2A	442	62	239	54	797	495	0.89	0.72	1.61
266	2A	332	26	107	28	493	625	0.53	0.26	0.79
267	2A	188	6	30	4	228	472	0.40	0.08	0.48
268	2A	293	7	24	6	330	239	1.22	0.15	1.38
269	2A	192	17	60	11	280	652	0.29	0.14	0.43
270	2A	171	15	44	8	238	758	0.23	0.09	0.31
271	2A	222	25	86	16	349	646	0.34	0.20	0.54
272	2A	204	9	59	10	282	544	0.38	0.14	0.52
273	2A	445	79	211	66	801	634	0.70	0.56	1.26
274	2A	200	17	85	16	318	381	0.53	0.31	0.84
275	2A	350	30	130	24	534	777	0.45	0.24	0.69
276	2A	493	50	211	28	782	575	0.86	0.50	1.36
277	2A	1174	135	531	107	1,947	876	1.34	0.88	2.22
278	2A	328	24	150	26	528	422	0.78	0.47	1.25
279	2A	222	25	127	13	387	346	0.64	0.48	1.12

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	251	21	141	16	429	676	0.37	0.26	0.63
281	2A	447	42	126	24	639	579	0.77	0.33	1.10
282	2A	114	5	22	3	144	780	0.15	0.04	0.18
283	2A	284	19	70	18	391	640	0.44	0.17	0.61
284	2A	315	33	129	14	491	853	0.37	0.21	0.58
285	2A	368	47	145	29	589	580	0.63	0.38	1.01
286	2A	283	43	175	29	530	458	0.62	0.54	1.16
287	2A	100	41	130	23	294	51	1.97	3.83	5.80
288	2A	401	35	215	23	674	630	0.64	0.43	1.07
289	2A	182	17	91	24	314	820	0.22	0.16	0.38
290	2A	412	43	186	35	676	666	0.62	0.40	1.02
291	2A	665	80	274	48	1,067	832	0.80	0.48	1.28
292	2A	450	92	203	43	788	517	0.87	0.65	1.52
293	2A	466	112	306	69	953	512	0.91	0.95	1.86
294	2A	324	32	141	16	513	689	0.47	0.27	0.75
295	2A	477	23	145	22	667	855	0.56	0.22	0.78
296	2A	329	24	126	11	490	675	0.49	0.24	0.73
297	2A	149	6	48	6	209	449	0.33	0.13	0.47
298	2A	558	37	113	14	722	677	0.82	0.24	1.07
299	2A	269	21	112	13	415	389	0.69	0.37	1.07
338	3A	160	38	121	25	344	472	0.34	0.39	0.73
338	3B	27	16	57	10	110	472	0.06	0.18	0.23
339	3A	166	38	120	28	352	406	0.41	0.46	0.87
339	3B	18	21	54	14	107	406	0.04	0.22	0.26
341	3A	406	91	272	60	829	483	0.84	0.88	1.72
341	3B	81	75	215	60	431	483	0.17	0.72	0.89
342	3A	404	82	286	45	817	374	1.08	1.10	2.18
342	3B	90	61	252	76	479	374	0.24	1.04	1.28
343	3A	354	74	235	57	720	486	0.73	0.75	1.48
343	3B	71	36	157	47	311	486	0.15	0.49	0.64
344	3A	292	42	209	41	584	190	1.54	1.54	3.08
344	3B	51	26	113	28	218	190	0.27	0.88	1.15
345	3A	306	38	136	21	501	335	0.91	0.58	1.49
345	3B	64	44	130	38	276	335	0.19	0.63	0.82
346	3A	607	103	386	89	1,185	328	1.85	1.76	3.61
346	3B	138	86	300	80	604	328	0.42	1.42	1.84
347	3A	324	59	218	36	637	434	0.75	0.72	1.47
347	3B	81	51	171	34	337	434	0.19	0.59	0.78
348	3A	466	73	347	43	929	332	1.40	1.39	2.79
348	3B	70	40	186	32	328	332	0.21	0.78	0.99
349	3A	726	115	488	110	1,439	499	1.45	1.43	2.88
349	3B	176	144	486	124	930	499	0.35	1.51	1.86

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	1281	434	1518	299	3,532	1,756	0.73	1.28	2.01
602	CWD	489	218	495	143	1,345	304	4.21	7.40	11.62
Total		77,564	13,312	44,734	9,839	145,449	83,265	0.93	0.82	1.75

Table 4. Firearm Harvest using Bonus and Disease Management Permits, 2013.
Managed Permit Areas.

Permit Area	Zone	Fawn Male	Adult Female	Fawn Female	Total
114	1A	1	8	2	11
126	1A	21	139	12	172
156	1A	183	579	135	897
157	1A	290	938	230	1,458
209	2A	55	219	59	333
210	2A	68	294	63	425
214	2A	184	467	189	840
215	2A	157	376	136	669
218	2A	105	296	73	474
219	2A	53	169	57	279
223	2A	45	155	57	257
229	2A	17	49	12	78
232	2A	31	69	11	111
233	2A	12	44	17	73
240	2A	189	524	161	874
241	2A	366	1,198	312	1,876
242	2A	73	244	59	376
248	2A	30	128	31	189
254	2A	35	141	26	202
255	2A	35	122	33	190

Permit Area	Zone	Fawn Male	Adult Female	Fawn Female	Total
293	2A	50	147	43	240
338	3A	18	62	18	98
338	3B	4	22	3	29
339	3A	27	73	15	115
339	3B	9	30	8	47
341	3A	58	170	39	267
341	3B	36	120	32	188
342	3A	48	204	32	284
342	3B	36	137	42	215
343	3A	44	154	39	237
343	3B	20	89	29	138
346	3A	62	248	64	374
346	3B	38	137	39	214
347	3A	38	136	24	198
347	3B	22	92	21	135
348	3A	46	225	29	300
348	3B	19	78	14	111
349	3A	74	308	69	451
349	3B	63	235	67	365
Total		2,662	8,826	2,302	13,790

Intensive Permit Areas

Permit Area	Zone	Fawn Male	Adult Female	Fawn Female	Total
182	1A	65	211	50	326
221	2A	221	512	222	955
222	2A	176	412	165	753
225	2A	248	581	204	1,033
227	2A	152	383	120	655
236	2A	81	232	52	365
287	2A	34	86	19	139
601	Metro	105	339	80	524
602	CWD	117	261	90	468
Total		1,199	3,017	1,002	5,218

Table 5. Early Antlerless Season Harvest by Permit Area, 2013.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
345	7	27	7	41
346	16	66	15	97
Total	23	93	22	138

Table 6. Summary of Firearms Special Hunts, 2013. Includes regular, youth, and bonus permits.

Area	Dates	Permits Issued	Harvest				Total
			Adult Male	Fawn Male	Adult Female	Fawn Female	
900 - Cascade River State Park ¹	11/9-11/24	NA*	0	0	1	7	8
901 - Rice Lake Nat. Wildlife Refuge ¹	11/16-11/24	40*	6	0	4	7	17
902 - St. Croix State Park ¹	11/15-11/18	400*	63	13	58	7	141
903 - Savanna Portage State Park ¹	11/16-11/18	20*	1	0	1	7	9
904 - Gooseberry Falls State Park ¹	11/9-11/24	40*	2	2	6	7	17
905 - Split Rock Lighthouse State Park ¹	11/9-11/24	30*	4	0	7	7	18
906 - Tettegouche State Park ¹	11/9-11/24	125*	7	0	7	7	21
907 - Scenic State Park ¹	11/9-11/24	30*	2	1	0	7	10
908 - Hayes Lake State Park ¹	11/9-11/24	75*	3	0	2	7	12
909 - Lake Bemidji State Park ¹	11/9-11/24	30**	0	1	7	7	15
910 - Zippel Bay State Park ¹	11/9-11/24	55**	0	5	6	7	18
911 - Judge CR Magney State Park ¹	11/9-11/24	N/A*	1	0	1	7	9
912 - Schoolcraft State Park ¹	11/9-11/24	N/A*	0	2	0	7	9
913 - Lake Carlos State Park ¹	11/9-11/10	20**	0	2	5	7	14
914 - William O'Brien State Park ¹	11/9-11/10	60*	13	2	13	7	35
915 - Lake Bronson State Park ¹	11/9-11/10	30*	4	2	3	7	16
916 - Maplewood State Park ¹	11/9-11/12	100*	25	5	7	7	44
917 - Old Mill State Park ¹	11/9-11/12	10*	2	0	1	7	10
918 - Lake Alexander SNA ¹	11/9-11/17	40*	1	3	7	7	18
919 - Glacial Lakes State Park ¹	11/14-11/17	30**	2	5	9	7	23
920 - Zumbro Falls Woods SNA - A ¹	11/9-11/17	12**	0	1	4	7	12
921 - Forestville/Mystery Cave State Park ¹	11/9-11/10	130 [#]	18	11	33	7	69
392 - Lake Louise State Park ¹	11/16-11/17	25***	2	3	9	7	21
923 - Zumbro Falls Woods SNA -B ¹	11/23-12/1	12**	0	0	8	7	15
924 - Whitewater State Game Refuge ¹	11/9-11/11	50**	0	1	0	7	8
925 - Vermillion Highlands WMA ¹	11/9-11/22	25*	4	1	1	7	13
926 - Carver Park Reserve ¹	11/16-11/17	110*	5	1	3	7	16
927 - Whitewater State Park ¹	11/23-11/24	50 [#]	7	6	37	7	57
929 - Frontenac State Park - B ¹	11/23-11/25	60 [#]	6	6	20	7	39
931 - City of Grand Rapids ¹	11/9-11/24	N/A*	9	4	10	7	30
932 - Lake Elmo Park Reserve ¹	11/9-11/11; 11/16-11/17	50*	21	2	22	7	52
933 - Murphy-Hanrehan Park Reserve ¹	11/23-11/24	80*	4	3	9	7	23
934 - Whitewater State Game Refuge - B ¹	11/23-12/1	75***	0	0	18	7	25
Total			212	82	319	231	844

¹ Bonus permits available

*Either sex

**Antlerless Only

*** Earn-A-Buck

[#]Antler Point Restriction

Table 7. Free Landowner Firearms Harvest by Permit Area, 2013.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
155	0	6	0	6
156	1	14	2	17
157	6	29	10	45
159	1	4	1	6
173	1	3	1	5
177	1	10	0	11
178	5	13	1	19
179	3	13	2	18
180	0	3	1	4
181	1	9	0	10
201	1	1	0	2
208	2	4	0	6
209	7	5	4	16
210	3	13	1	17
213	22	44	13	79
214	12	61	22	95
215	10	26	9	45
218	5	5	3	13
219	1	3	1	5
221	9	19	12	40
222	5	4	2	11
223	0	2	4	6
225	4	17	3	24
227	2	4	1	7
229	0	1	1	2
230	0	1	0	1
232	2	4	0	6
233	1	2	1	4
236	0	2	1	3
239	8	21	9	38
240	10	38	13	61
241	28	65	17	110
242	0	0	1	1
246	5	38	4	47
247	1	3	1	5
248	2	1	2	5
249	14	48	13	75
254	0	2	1	3
255	0	5	2	7
256	3	13	0	16
257	1	17	4	22
258	0	5	2	7
259	2	9	2	13
264	4	11	2	17
265	1	8	4	13
273	1	1	0	2
292	3	7	5	15
293	2	2	1	5
338	1	0	0	1
339	1	2	0	3
341	3	10	3	16
342	3	24	5	32
343	1	9	1	11
344	5	7	3	15
345	6	20	6	32
346	4	39	6	49
347	0	5	2	7
348	3	13	2	18
349	10	35	14	59
602	3	4	0	7
Total	230	784	221	1,235

Table 8. Archery Harvest by Permit Area, 2013.

Includes Regular, Youth, and Bonus Permits. Does not include most 900-series hunts.

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
101	7	0	2	0	9
103	3	0	0	0	3
105	15	0	10	1	26
108	10	2	18	2	32
110	17	5	10	0	32
111	2	2	3	0	7
114	1	0	4	0	5
117	0	1	5	0	6
118	15	1	21	0	37
119	5	1	13	1	20
122	3	0	8	0	11
126	11	2	19	1	33
127	1	0	2	2	5
152	4	1	2	1	8
155	42	6	55	7	110
156	50	8	101	12	171
157	112	29	162	33	336
159	50	8	25	4	87
169	20	4	36	3	63
171	20	8	13	0	41
172	47	10	52	8	117
173	16	0	14	3	33
176	46	4	24	0	74
177	15	5	15	0	35
178	55	6	41	6	108
179	64	6	74	9	153
180	29	2	35	1	67
181	43	9	42	6	100
182	136	104	418	81	739
183	37	4	42	1	84
184	93	8	71	6	178
197	16	3	23	4	46
199	3	0	3	0	6
201	2	1	1	1	5
203	0	0	1	0	1
208	1	1	3	0	5
209	24	10	41	5	80
210	23	6	63	10	102
213	197	9	92	13	311
214	90	10	150	16	266
215	156	25	203	28	412
218	127	39	242	35	443
219	126	26	148	22	322
221	96	66	275	61	498
222	68	36	190	37	331
223	173	36	153	28	390
224	24	2	5	0	31

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
225	150	73	266	50	539
227	219	85	381	74	759
229	64	17	65	10	156
230	47	3	20	1	71
232	40	6	32	5	83
233	49	7	78	3	137
234	29	1	15	1	46
235	9	2	14	1	26
236	206	68	271	55	600
237	26	0	13	4	43
238	10	0	5	1	16
239	61	10	46	6	123
240	85	10	151	19	265
241	157	45	312	32	546
242	84	30	165	23	302
246	49	17	30	5	101
247	56	10	43	12	121
248	35	8	54	8	105
249	66	13	46	7	132
250	52	4	28	0	84
251	4	1	3	1	9
252	51	3	27	2	83
253	70	2	33	2	107
254	82	11	77	11	181
255	90	16	103	14	223
256	14	1	9	0	24
257	10	1	8	0	19
258	28	5	29	4	66
259	42	7	22	3	74
260	6	0	3	0	9
261	12	0	9	1	22
262	33	1	19	2	55
263	10	0	3	0	13
264	22	0	8	2	32
265	17	1	8	0	26
266	15	3	13	2	33
267	6	1	5	1	13
268	5	0	7	0	12
269	16	2	14	0	32
270	20	0	8	0	28
271	20	0	16	0	36
272	19	0	8	1	28
273	32	3	29	3	67
274	21	3	10	1	35
275	34	2	17	0	53
276	52	1	43	3	99
277	169	13	106	11	299

Table 8. (Continued)

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
278	39	3	22	2	66
279	18	0	11	1	30
280	15	1	23	1	40
281	46	2	42	5	95
282	27	1	13	1	42
283	46	5	28	3	82
284	44	6	23	2	75
285	74	3	51	3	131
286	31	3	18	3	55
288	53	5	57	2	117
289	29	2	25	1	57
290	58	5	38	2	103
291	128	17	99	8	252
292	91	11	40	6	148
293	113	18	113	20	264
294	21	1	18	3	43
295	47	8	51	3	109
296	40	7	25	3	75
297	1	0	1	0	2

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
298	10	2	4	1	17
299	65	11	46	5	127
338	67	12	91	11	181
339	66	11	80	11	168
341	114	16	172	25	327
342	108	19	149	19	295
343	153	30	219	38	440
344	62	4	23	9	98
345	83	5	29	6	123
346	149	23	168	13	353
347	70	14	100	19	203
348	102	18	136	12	268
349	170	14	135	28	347
601	639	278	1010	193	2,120
602	79	51	153	32	315
970	58	24	81	18	181
971	55	10	49	13	127
Total	7,460	1,632	8,945	1,351	19,388

970 = Camp Ripley First Hunt
 971 = Camp Ripley Second Hunt

Table 9. Archery Harvest using Bonus and Disease Management Permits by Permit Area, 2013.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
114	0	3	0	3
126	2	15	1	18
156	5	78	9	92
157	17	113	23	153
182	96	386	76	558
209	8	30	5	43
210	5	53	4	62
214	5	126	11	142
215	20	153	21	194
218	24	188	26	238
219	17	112	16	145
221	57	246	51	354
222	31	174	34	239
223	26	118	21	165
225	65	228	44	337
227	70	328	67	465
229	9	47	6	62
232	3	26	5	34
233	4	61	3	68

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
236	60	244	51	355
240	5	118	12	135
241	30	252	24	306
242	20	115	20	155
248	4	37	6	47
254	5	55	8	68
255	13	75	9	97
293	11	92	15	118
338	11	71	8	90
339	7	69	10	86
341	14	150	20	184
342	15	126	16	157
343	25	183	31	239
346	19	141	11	171
347	12	85	15	112
348	13	120	8	141
349	12	114	24	150
601	250	905	176	1331
602	44	143	31	218
Total	1,034	5,580	918	7,532

Table 10. Summary of Archery Special Hunts, 2013. Includes Regular, Youth, and Bonus Permits.

Area	Dates	Permits Issued	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
970 - Camp Ripley	10/26 - 10/27	2,500	58	81	24	18	181
971 - Camp Ripley	11/2 - 11/3	2,500	55	49	10	13	127
972 - Crow-Hassan Park Reserve	11/8- 11/10	130	0	1	0	0	1
973 - Murphy-Hanrehan Park Reserve	11/8- 11/10	180	0	1	1	0	2
974 - Cleary Lake Regional Park	11/8- 11/10	55	0	0	0	0	0
975 - Vermillion Highlands WMA	9/14-11/3	65	0	2	1	0	3
976 - City of New Ulm	10/19 - 12/31	50	2	22	3	5	32
977 - City of Red Wing	9/14 - 12/31	Unl.	4	24	6	8	42
978 - City of Sandstone	9/14 - 12/31	Unl.	1	3	1	0	5
979 - City of Fergus Falls	9/14 - 12/31	30	2	12	2	1	17
981 - City of Mankato	9/14 - 12/31	40	0	0	0	1	1
982 - City of Granite Falls	9/14 - 12/31	10	0	0	0	0	0
983 - City of Ortonville	9/14 - 12/31	30	1	11	2	1	15
984 - City of Canby	9/14 - 12/31	20	0	1	1	0	2
985 - City of Bemidji	9/14 - 12/31	40	1	14	6	0	21
987 - Greenleaf State SRA	9/14 - 12/31	Unl.	0	0	0	0	0
988 - City of Tower	11/30 - 12/15	5	0	1	0	0	1
989 - Cedar Mountain SNA	9/14 - 12/31	Unl.	0	0	0	0	0
991 - East Minnesota River Refuge	9/14 - 12/31	Unl.	2	5	0	0	7
992 - City of Hallock	9/14 - 12/31	30	0	3	1	1	5
993 - City of Cook	9/14 - 12/31	25	1	7	1	2	11
994 - Camp Ripley Deployed Soldier	9/30 - 10/2	300	0	0	0	0	0
995 - City of Grand Rapids	9/14 - 12/31	Unl.	2	38	9	8	57
Total			129	275	68	58	530

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

Table 11. Free Landowner Archery Harvest by Permit Area, 2013.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total	Permit Area	Fawn Male	Adult Female	Fawn Female	Total
155	0	1	0	1	215	1	4	1	6
178	1	0	0	1	219	0	2	0	2
213	0	7	0	7	240	1	4	0	5
239	1	0	0	1	241	1	3	1	5
249	2	3	0	5	255	0	1	1	2
258	0	1	0	1	293	0	1	0	1
265	0	2	0	2	338	0	1	0	1
292	0	1	2	3	341	0	1	0	1
344	0	1	0	1	342	1	1	1	3
345	2	6	0	8	343	0	3	0	3
221	1	0	0	1	346	0	5	0	5
225	0	1	1	2	347	0	1	0	1
227	0	1	0	1	348	0	2	1	3
236	1	0	0	1	349	0	4	3	7
157	0	3	0	3					
214	0	1	0	1	Total	12	61	11	84

Table 12. Muzzleloader Harvest by Permit Area, 2013.
Includes Regular, Muzzleloader, Youth, and Bonus permits. Does not include Park hunts.

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
117	0	0	4	0	4
118	22	0	5	0	27
119	4	0	3	0	7
122	3	0	1	0	4
126	9	4	17	3	33
127	1	1	2	0	4
152	0	0	3	0	3
155	14	4	24	5	47
156	14	5	27	6	52
157	27	14	55	7	103
159	2	1	11	1	15
169	10	1	12	0	23
171	8	1	10	1	20
172	20	6	13	5	44
173	6	2	9	4	21
176	11	2	5	1	19
177	5	0	10	2	17
178	14	1	23	5	43
179	25	3	35	6	69
180	14	1	8	3	26
181	10	1	11	2	24
182	2	2	10	3	17
183	10	2	10	3	25
184	34	4	28	9	75
197	8	1	6	0	15
199	1	0	1	0	2
201	5	1	7	1	14
203	2	0	2	0	4
208	7	1	6	0	14
209	15	3	33	4	55
210	12	2	26	4	44
213	60	19	95	20	194
214	43	23	61	12	139
215	38	25	100	22	185
218	46	22	97	16	181
219	38	22	75	10	145
221	34	26	76	15	151
222	33	9	60	11	113
223	22	6	41	6	75
224	0	0	2	0	2
225	31	26	70	15	142
227	29	21	64	10	124
229	15	5	14	5	39
230	8	3	17	2	30

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
232	18	10	32	6	66
233	16	5	28	5	54
234	15	5	7	2	29
235	3	1	6	2	12
236	16	12	38	16	82
237	33	1	11	1	46
238	2	0	2	0	4
239	39	6	44	5	94
240	31	13	62	14	120
241	51	23	142	32	248
242	13	11	44	5	73
246	24	8	40	10	82
247	10	5	23	8	46
248	14	8	15	3	40
249	28	9	36	7	80
250	20	1	21	2	44
251	3	0	3	0	6
252	18	4	8	1	31
253	24	2	31	2	59
254	32	9	60	5	106
255	18	0	37	5	60
256	16	1	9	1	27
257	14	2	12	3	31
258	13	8	20	3	44
259	25	10	61	12	108
260	26	1	1	2	30
261	19	0	2	0	21
262	15	0	4	1	20
263	27	1	4	0	32
264	31	2	26	5	64
265	15	4	21	1	41
266	25	5	9	0	39
267	10	0	2	0	12
268	13	0	2	1	16
269	24	1	6	1	32
270	23	2	5	1	31
271	17	1	11	0	29
272	10	0	2	0	12
273	25	4	22	1	52
274	19	1	14	2	36
275	34	4	20	0	58
276	42	5	30	4	81
277	65	7	58	7	137
278	38	4	20	2	64

Table 12. (Continued).

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total	Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
279	17	1	12	0	30	296	23	1	14	2	40
280	16	3	8	0	27	297	3	0	1	0	4
281	27	4	23	0	54	298	10	0	0	0	10
282	16	0	0	0	16	299	18	0	21	1	40
283	19	1	8	2	30	338	5	7	34	2	48
284	27	0	14	1	42	339	5	5	16	2	28
285	19	1	17	1	38	341	18	15	56	11	100
286	16	3	21	2	42	342	22	16	74	14	126
287	5	3	20	0	28	343	30	12	52	7	101
288	41	1	27	0	69	344	18	10	40	3	71
289	22	0	10	1	33	345	11	2	10	4	27
290	33	7	23	1	64	346	29	10	78	15	132
291	39	8	29	4	80	347	20	4	50	10	84
292	17	12	24	2	55	348	14	9	52	8	83
293	34	13	43	5	95	349	31	15	103	19	168
294	34	3	16	2	55	601	8	8	42	9	67
295	48	2	27	2	79	602	7	21	37	12	77
						TOTAL	2,449	665	3,261	541	6,916

Table 13. Muzzleloader Harvest using Bonus and Disease Management Permits by Permit Area, 2013.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total	Permit Area	Fawn Male	Adult Female	Fawn Female	Total
214	9	28	6	43	293	6	21	2	29
215	17	58	9	84	338	3	20	0	23
218	15	58	7	80	339	2	11	2	15
219	14	31	3	48	341	10	35	8	53
221	15	52	9	76	342	9	52	10	71
222	9	35	8	52	343	7	32	5	44
223	4	23	4	31	346	6	45	10	61
225	15	39	7	61	347	2	27	4	33
227	16	39	5	60	348	6	28	7	41
229	1	6	2	9	349	6	60	15	81
232	4	16	3	23	601	6	26	8	40
233	3	16	4	23	602	21	35	12	68
236	9	25	10	44	293	6	21	2	29
240	8	37	8	53					
					TOTAL	267	1,111	215	1,593

Table 14. Summary of Muzzleloader Special Hunts, 2013.
Includes Regular, Youth, All-Season, and Bonus Permits.

Area	Dates	Permits Issued	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
935 - Jay Cook SP ¹	12/7-12/11	120*	2	3	9	0	14
936 - Crow Wing SP ¹	12/13-12/15	40***	1	4	3	0	8
937 - Soudan Mine and Lake Vermilion SP ¹	11/30-12/15	20*	1	1	3	0	5
938 - City of Tower ¹	11/30-12/15	20*	0	0	0	0	0
939 - Lake Shetek SP ¹	12/7-12/8	15**	0	3	3	3	9
941 - Nerstrand Big Woods SP ¹	12/7-12/8	50***	0	5	3	7	15
942 - Sibley SP ¹	11/30-12/1	50**	1	0	6	1	8
943 - Myre Big Island Lake ¹	11/30-12/1	40**	1	3	18	3	25
944 - Vermillion Highlands WMA ¹	11/30-12/15	25*	1	2	1	1	5
945 - Camp Ripley ¹	12/2-12/4	100*	15	3	11	5	34
946 - City of Grand Rapids ¹	11/30-12/15	Unl.*	1	0	1	0	2
947 - Lake Bemidji State Park ¹	12/6-12/8	30*	1	0	1	2	4
Total			24	24	59	22	129

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

Table 15. Free Landowner Muzzleloader Harvest by Permit Area, 2013.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
157	0	1	0	1
173	0	1	0	1
179	0	1	0	1
208	0	1	0	1
213	3	10	2	15
214	2	2	1	5
215	0	4	0	4
218	0	1	0	1
221	3	0	0	3
225	0	2	0	2
233	0	1	0	1
240	0	3	0	3
241	1	4	4	9
246	0	1	0	1
249	1	2	0	3

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
255	0	0	1	1
256	0	1	0	1
257	0	2	0	2
264	0	3	2	5
265	0	1	0	1
292	0	1	0	1
339	0	1	0	1
341	1	5	0	6
342	0	5	1	6
343	0	1	0	1
344	0	1	0	1
346	1	9	1	11
347	0	3	1	4
348	0	2	0	2
349	0	2	1	3
Total	12	71	14	97

Table 16. Summary of Youth Hunts and Youth Season, 2013

Area	Dates	Permits Issued	Harvest				Total
			Adult Male	Adult Female	Fawn Male	Fawn Female	
950 - Camp Ripley Archery	10/11-10/13	175	4	3	1	2	10
951 - Afton SP	11/9-11/10	20	6	7	2	3	18
952 - Sibley SP	10/26-10/27	10	1	3	3	1	8
953 - Zipple Bay SP	10/12-10/13	20	0	0	0	0	0
954 - Lake Bemidji SP	10/19-10/20	20	1	3	0	1	5
955 - Lake Alexander Preserve	10/11 - 10/13	20	0	2	1	0	3
956 - St. Croix SP	11/2-11/3	100	10	1	1	0	12
957 - Rydell NWR	10/19-10/20	20	0	1	0	0	1
958 - Savanna Portage SP	10/26-10/27	20	2	1	0	1	4
959 - Buffalo River SP	11/9-11/10	14	2	1	0	0	3
960 - Tettegouche SP	10/19-10/20	10	0	1	0	0	1
961 - Itasca SP	10/12-10/13	75	0	2	1	2	5
962 - Great River SP	10/26-10/27	30	0	0	0	0	0
965 - Banning SP	11/2-11/3	6	0	3	1	0	4
966 - Blue Mounds SP	12/7-12/8	5	1	0	1	0	2
967 - Camden SP	11/2-11/3	10	3	1	1	0	5
968 - Lake Shetek SP	10/26-10/27	10	4	0	0	1	5
969 - Twin Lakes SNA	10/19 - 10/20	3	0	0	0	0	0
Total		568	34	29	12	11	86

Youth Deer Season - October 17 - 20, unlimited permits

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
101	6	5	2	1	14
105	25	15	3	5	48
111	4	11	1	1	17
201	6	0	1	0	7
203	3	2	0	0	5
208	11	9	3	1	24
209	14	22	1	0	37
256	19	12	3	0	34
257	15	9	3	2	29
260	15	9	4	3	31
263	13	16	4	1	34
264	23	29	5	4	61
267	9	12	2	1	24
268	9	5	2	1	17
299	1	0	0	0	1
338	7	6	1	1	15
339	5	3	3	3	14
341	23	14	6	5	48
342	11	12	4	2	29
343	19	7	3	1	30
344	15	13	5	4	37
345	16	9	5	5	35
346	23	17	8	3	51
347	12	11	4	5	32
348	14	11	3	2	30
349	23	11	9	4	47
601	11	9	7	1	28
602	11	16	4	4	35
Total	363	295	96	60	814

Table 17. Total Deer Harvest by Permit Area, 2013.
Includes all license types, permits, and special hunts.

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
101	354	31	5	1	391
103	699	120	22	11	852
105	927	131	23	22	1,103
108	934	166	24	19	1,143
110	865	385	78	61	1,389
111	457	72	14	5	548
114	44	21	2	3	70
117	37	17	3	0	57
118	606	67	14	4	691
119	586	105	11	9	711
122	339	84	13	3	439
126	403	261	39	21	724
127	87	50	4	8	149
152	80	78	26	19	203
155	1350	989	252	168	2,759
156	1399	1266	356	266	3,287
157	2303	2049	626	470	5,448
159	1145	760	217	155	2,277
169	1345	661	145	85	2,236
171	1051	458	119	86	1,714
172	1543	661	184	127	2,515
173	717	477	146	98	1,438
176	1469	323	66	45	1,903
177	830	480	103	74	1,487
178	1819	1115	236	171	3,341
179	1628	1197	278	177	3,280
180	849	425	66	40	1,380
181	1017	652	146	85	1,900
182	571	750	202	152	1,675
183	1204	560	129	79	1,972
184	2707	1051	272	180	4,210
197	934	313	68	58	1,373
199	92	38	8	2	140
201	107	54	12	15	188
203	69	31	3	4	107
208	206	96	28	13	343
209	510	460	119	99	1,188
210	773	591	130	125	1,619
213	1840	984	369	245	3,438
214	1463	1225	414	386	3,488
215	1390	1055	377	327	3,149
218	1138	1021	324	216	2,699
219	760	572	167	138	1,637
221	1202	1136	438	405	3,181
222	937	905	332	284	2,458
223	776	475	157	152	1,560
224	111	56	12	3	182
225	1451	1279	486	386	3,602
227	1095	1004	323	246	2,668
229	304	178	60	43	585
230	301	169	53	38	561
232	276	226	80	40	622
233	259	195	35	31	520
234	235	107	25	14	381
235	73	43	8	9	133
236	768	646	200	148	1,762
237	305	113	23	14	455
238	82	29	4	12	127
239	1323	829	256	188	2,596
240	1590	1267	411	334	3,602
241	2986	2704	814	655	7,159
242	600	655	171	125	1,551
246	1743	1220	386	262	3,611
247	638	548	155	99	1,440
248	409	329	100	83	921
249	1118	768	302	213	2,401
250	392	164	26	11	593
251	88	28	11	7	134
252	383	166	36	15	600
253	528	204	39	20	791
254	647	427	87	67	1,228
255	524	379	87	82	1,072
256	501	236	74	51	862
257	364	227	42	28	661
258	810	520	147	115	1,592
259	1367	932	277	188	2,764
260	354	82	22	15	473
261	205	43	10	4	262
262	225	94	23	18	360
263	396	102	19	13	530
264	696	392	77	59	1,224
265	474	268	67	55	864
266	372	129	34	30	565
267	213	49	9	6	277
268	320	38	9	8	375
269	232	80	20	12	344
270	214	57	17	9	297
271	259	113	26	16	414
272	233	69	9	11	322
273	502	262	86	70	920
274	240	109	21	19	389
275	418	167	36	24	645
276	587	284	56	35	962
277	1408	695	155	125	2,383
278	405	192	31	30	658
279	257	150	26	14	447
280	282	172	25	17	496
281	520	191	48	29	788

Table 17. (Continued).

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
282	157	35	6	4	202
283	349	106	25	23	503
284	386	166	39	17	608
285	461	213	51	33	758
286	330	214	49	34	627
287	108	151	44	23	326
288	495	299	41	25	860
289	233	126	19	26	404
290	503	247	55	38	843
291	832	402	105	60	1,399
292	558	267	115	51	991
293	613	462	143	94	1,312
294	379	175	36	21	611
295	572	223	33	27	855
296	392	165	32	16	605
297	153	50	6	6	215
298	578	117	39	15	749
299	353	179	32	19	583
338	266	309	74	49	698
339	260	273	78	58	669
341	642	729	203	161	1,735
342	635	784	185	158	1,762
343	627	670	155	150	1,602
344	438	398	87	85	1,008
345	480	390	107	90	1,067
346	946	1081	262	226	2,515
347	507	550	132	104	1,293
348	666	732	143	97	1,638
349	1126	1267	305	290	2,988
392	2	9	3	4	18
601	1281	1518	434	299	3,532
602	489	495	218	143	1,345
900	0	1	0	0	1
901	6	4	0	1	11
902	63	58	13	16	150
903	1	1	0	0	2
904	2	6	2	2	12
905	4	7	0	0	11
906	7	7	0	0	14
907	2	0	1	0	3
908	3	2	0	0	5
909	0	7	1	2	10
910	0	6	5	3	14
911	1	1	0	0	2
912	0	0	2	0	2
913	0	5	2	1	8
914	13	13	2	6	34
915	4	3	2	0	9
916	25	7	5	1	38
917	2	1	0	0	3
918	1	7	3	2	13
919	2	9	5	2	18
920	0	4	1	1	6
921	18	33	11	7	69
923	0	8	0	1	9
924	0	0	1	0	1
925	4	1	1	1	7
926	5	3	1	2	11
927	7	37	6	8	58
929	6	20	6	8	40
931	9	10	4	4	27
932	21	22	2	4	49
933	4	9	3	3	19
934	0	18	0	1	19
935	2	9	3	0	14
936	1	3	4	0	8
937	1	3	1	0	5
939	0	3	3	3	9
941	0	3	5	7	15
942	1	6	0	1	8
943	1	18	3	3	25
944	1	1	2	1	5
945	15	11	3	5	34
946	1	1	0	0	2
947	1	1	0	2	4
950	4	3	1	2	10
951	6	7	2	3	18
952	1	3	3	1	8
954	1	3	0	1	5
955	0	2	1	0	3
956	10	1	1	0	12
957	0	1	0	0	1
958	2	1	0	1	4
959	2	1	0	0	3
960	0	1	0	0	1
961	0	2	1	2	5
965	0	3	1	0	4
966	1	0	1	0	2
967	3	1	1	0	5
968	4	0	0	1	5
970	58	81	24	18	181
971	55	49	10	13	127
972	0	1	0	0	1
973	0	1	1	0	2
975	0	2	1	0	3
976	2	22	3	5	32
977	4	24	6	8	42
978	1	3	1	0	5
979	2	12	2	1	17
981	0	0	0	1	1

Table 17. (Continued).

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
983	1	11	2	1	15
984	0	1	1	0	2
985	1	14	6	0	21
988	0	1	0	0	1
991	2	5	0	0	7
992	0	3	1	1	5

Permit Area	Adult Male	Adult Female	Fawn Male	Fawn Female	Total
993	1	7	1	2	11
995	2	38	9	8	57
999	6	2	1	0	9
TOTAL	87,865	57,281	15,763	11,872	172,781

Table 18. Estimated firearm hunter numbers, density, and harvest by Permit Area, 2013.
Excludes data from all 900-series hunts.

Permit Area	Firearm Hunters	Area Size (sq mi)	Hunters/mile ²	Harvest/mile ²
101	1,961	496	4.0	0.7
103	3,152	1,824	1.7	0.5
105	3,963	932	4.3	1.1
108	4,863	1,701	2.9	0.6
110	4,301	530	8.1	2.5
111	2,676	1,440	1.9	0.4
114	212	412	0.5	0.2
117	174	1,129	0.2	0.0
118	3,349	1,445	2.3	0.4
119	3,520	946	3.7	0.7
122	1,984	622	3.2	0.7
126	2,088	979	2.1	0.7
127	637	587	1.1	0.2
152	939	62	15.2	3.1
155	7,823	639	12.2	4.1
156	9,587	834	11.5	3.7
157	13,643	904	15.1	5.5
159	7,284	575	12.7	3.8
169	9,415	1,202	7.8	1.8
171	6,712	729	9.2	2.3
172	10,732	786	13.6	3.0
173	4,855	617	7.9	2.2
176	7,487	1,150	6.5	1.6
177	4,286	553	7.8	2.6
178	10,657	1,325	8.0	2.4
179	9,929	939	10.6	3.3
180	5,922	999	5.9	1.3
181	6,440	746	8.6	2.4
182	2,616	280	9.3	3.3
183	7,773	675	11.5	2.8
184	14,312	1,318	10.9	3.0
197	5,717	1,343	4.3	1.0
199	559	152	3.7	0.9
201	549	169	3.2	1.0
203	336	132	2.6	0.7
208	1,201	379	3.2	0.8
209	2,799	641	4.4	1.6
210	4,558	635	7.2	2.3
213	8,931	1,161	7.7	2.5
214	7,900	566	14.0	5.4
215	6,694	730	9.2	3.5
218	5,561	912	6.1	2.3
219	3,551	427	8.3	2.7

Permit Area	Firearm Hunters	Area Size (sq mi)	Hunters/mile ²	Harvest/mile ²
221	5,405	647	8.4	3.9
222	5,132	413	12.4	4.9
223	3,219	385	8.4	2.8
224	721	49	14.7	3.0
225	7,051	635	11.1	4.6
227	4,859	491	9.9	3.6
229	1,525	313	4.9	1.2
230	1,507	464	3.2	1.0
232	1,405	380	3.7	1.2
233	1,094	386	2.8	0.9
234	874	637	1.4	0.5
235	324	37	8.8	2.6
236	3,212	404	8.0	2.7
237	1,174	737	1.6	0.5
238	317	98	3.2	1.1
239	7,701	1,110	6.9	2.1
240	7,493	694	10.8	4.6
241	14,809	1,047	14.1	6.1
242	3,001	307	9.8	3.8
246	11,512	860	13.4	4.0
247	3,695	263	14.0	4.8
248	2,183	229	9.6	3.4
249	6,190	729	8.5	3.0
250	1,558	730	2.1	0.6
251	568	68	8.3	1.7
252	1,445	735	2.0	0.7
253	2,204	987	2.2	0.6
254	2,719	946	2.9	1.0
255	1,931	774	2.5	1.0
256	2,541	654	3.9	1.2
257	1,926	426	4.5	1.4
258	4,348	381	11.4	3.9
259	7,665	546	14.0	4.7
260	1,921	1,252	1.5	0.3
261	788	796	1.0	0.3
262	1,066	677	1.6	0.4
263	1,846	513	3.6	0.9
264	3,685	672	5.5	1.6
265	2,106	495	4.3	1.6
266	2,203	625	3.5	0.8
267	1,068	472	2.3	0.5
268	1,310	239	5.5	1.4
269	1,311	652	2.0	0.4

Table 18. (Continued).

Permit Area	Firearm Hunters	Area Size (sq mi)	Hunters/mile ²	Harvest/mile ²
270	1,040	758	1.4	0.3
271	1,074	646	1.7	0.5
272	1,169	544	2.1	0.5
273	2,890	634	4.6	1.3
274	1,071	381	2.8	0.8
275	2,170	777	2.8	0.7
276	3,172	575	5.5	1.4
277	6,355	876	7.3	2.2
278	2,028	422	4.8	1.3
279	1,168	346	3.4	1.1
280	1,563	676	2.3	0.6
281	2,441	579	4.2	1.1
282	849	780	1.1	0.2
283	1,610	640	2.5	0.6
284	1,689	853	2.0	0.6
285	2,491	580	4.3	1.0
286	1,527	458	3.3	1.2
287	656	51	12.9	5.8
288	1,899	630	3.0	1.1
289	1,062	820	1.3	0.4
290	2,340	666	3.5	1.0
291	3,920	832	4.7	1.3

Permit Area	Firearm Hunters	Area Size (sq mi)	Hunters/mile ²	Harvest/mile ²
292	2,904	517	5.6	1.5
293	2,644	512	5.2	1.9
294	1,257	689	1.8	0.7
295	2,277	855	2.7	0.8
296	1,753	675	2.6	0.7
297	1,084	449	2.4	0.5
298	3,618	677	5.3	1.1
299	1,574	389	4.0	1.1
338	2,097	472	4.4	1.0
339	1,900	406	4.7	1.1
341	4,364	483	9.0	2.6
342	4,061	374	10.9	3.5
343	3,222	486	6.6	2.1
344	2,944	190	15.5	4.2
345	3,026	335	9.0	2.3
346	4,470	328	13.6	5.5
347	3,086	434	7.1	2.2
348	3,832	332	11.5	3.8
349	5,953	499	11.9	4.7
601	2,976	1,756	1.7	2.0
602	1,968	304	6.5	4.4
Total	465,454	83,265	5.6	1.8

Table 19. Deer harvest per square mile by season, 2013.

Permit Area	Area Size (sq mi)	Archery Harvest/mi ²	Firearm Harvest/mi ²	Muzz. Harvest/mi ²	EA Harvest/mi ²	Youth Harvest/mi ³	Total Harvest/mi ²
101	496	0.02	0.71	0.03		0.03	0.79
103	1,824	0.00	0.46	0.01			0.47
105	932	0.03	1.09	0.02		0.05	1.18
108	1,701	0.02	0.64	0.01			0.67
110	530	0.06	2.52	0.03			2.62
111	1,440	0.00	0.36	0.01		0.01	0.38
114	412	0.01	0.15	0.00			0.17
117	1,129	0.01	0.04	0.00			0.05
118	1,445	0.03	0.43	0.02			0.48
119	946	0.02	0.72	0.01			0.75
122	622	0.02	0.68	0.01			0.71
126	979	0.03	0.67	0.03			0.74
127	587	0.01	0.24	0.01			0.25
152	62	0.13	3.12	0.05			3.29
155	639	0.17	4.07	0.07			4.32
156	834	0.20	3.67	0.06			3.94
157	904	0.37	5.54	0.11			6.03
159	575	0.15	3.78	0.03			3.96
169	1,202	0.05	1.79	0.02			1.86
171	729	0.06	2.27	0.03			2.35
172	786	0.15	2.99	0.06			3.20
173	617	0.05	2.24	0.03			2.33
176	1,150	0.06	1.57	0.02			1.66
177	553	0.06	2.60	0.03			2.69
178	1,325	0.08	2.41	0.03			2.52
179	939	0.16	3.26	0.07			3.49
180	999	0.07	1.29	0.03			1.38
181	746	0.13	2.38	0.03			2.55
182	280	2.64	3.28	0.06			5.98
183	675	0.12	2.76	0.04			2.92
184	1,318	0.14	3.00	0.06			3.19
197	1,343	0.03	0.98	0.01			1.02
199	152	0.04	0.87	0.01			0.92
201	169	0.03	0.96	0.08		0.04	1.11
203	132	0.01	0.74	0.03		0.04	0.81
208	379	0.01	0.79	0.04		0.06	0.91
209	641	0.12	1.58	0.09		0.06	1.85
210	635	0.16	2.32	0.07			2.55
213	1,161	0.27	2.53	0.17			2.96
214	566	0.47	5.45	0.25			6.16
215	730	0.56	3.49	0.25			4.31
218	912	0.49	2.28	0.20			2.96
219	427	0.75	2.74	0.34			3.84
221	647	0.77	3.91	0.23			4.92
222	413	0.80	4.88	0.27			5.96
223	385	1.01	2.84	0.19			4.05
224	49	0.63	3.04	0.04			3.71
225	635	0.85	4.60	0.22			5.67
227	491	1.54	3.63	0.25			5.43

Table 19. (Continued).

Permit Area	Area Size (sq mi)	Archery Harvest/mi ²	Firearm Harvest/mi ²	Muzz. Harvest/mi ²	EA Harvest/mi ²	Youth Harvest/mi ³	Total Harvest/mi ²
229	313	0.50	1.24	0.12			1.87
230	464	0.15	0.99	0.06			1.21
232	380	0.22	1.24	0.17			1.64
233	386	0.35	0.85	0.14			1.35
234	637	0.07	0.48	0.05			0.60
235	37	0.71	2.58	0.33			3.62
236	404	1.49	2.68	0.20			4.37
237	737	0.06	0.50	0.06			0.62
238	98	0.16	1.10	0.04			1.30
239	1,110	0.11	2.14	0.08			2.34
240	694	0.38	4.64	0.17			5.19
241	1,047	0.52	6.08	0.24			6.84
242	307	0.98	3.83	0.24			5.05
246	860	0.12	3.99	0.10			4.20
247	263	0.46	4.83	0.17			5.47
248	229	0.46	3.40	0.18			4.03
249	729	0.18	3.00	0.11			3.29
250	730	0.12	0.64	0.06			0.81
251	68	0.13	1.75	0.09			1.97
252	735	0.11	0.66	0.04			0.82
253	987	0.11	0.63	0.06			0.80
254	946	0.19	0.99	0.11			1.30
255	774	0.29	1.02	0.08			1.38
256	654	0.04	1.19	0.04		0.05	1.32
257	426	0.04	1.37	0.07		0.07	1.55
258	381	0.17	3.89	0.12			4.18
259	546	0.14	4.73	0.20			5.06
260	1,252	0.01	0.32	0.02		0.02	0.38
261	796	0.03	0.28	0.03			0.33
262	677	0.08	0.42	0.03			0.53
263	513	0.03	0.88	0.06		0.07	1.03
264	672	0.05	1.59	0.10		0.09	1.82
265	495	0.05	1.61	0.08			1.75
266	625	0.05	0.79	0.06			0.90
267	472	0.03	0.48	0.03		0.05	0.59
268	239	0.05	1.38	0.07		0.07	1.57
269	652	0.05	0.43	0.05			0.53
270	758	0.04	0.31	0.04			0.39
271	646	0.06	0.54	0.04			0.64
272	544	0.05	0.52	0.02			0.59
273	634	0.11	1.26	0.08			1.45
274	381	0.09	0.84	0.09			1.02
275	777	0.07	0.69	0.07			0.83
276	575	0.17	1.36	0.14			1.67
277	876	0.34	2.22	0.16			2.72
278	422	0.16	1.25	0.15			1.56
279	346	0.09	1.12	0.09			1.29

Table 19. (Continued).

Permit Area	Area Size (sq mi)	Archery Harvest/mi ²	Firearm Harvest/mi ²	Muzz. Harvest/mi ²	EA Harvest/mi ²	Youth Harvest/mi ³	Total Harvest/mi ²
280	676	0.06	0.63	0.04			0.73
281	579	0.16	1.10	0.09			1.36
282	780	0.05	0.18	0.02			0.26
283	640	0.13	0.61	0.05			0.79
284	853	0.09	0.58	0.05			0.71
285	580	0.23	1.01	0.07			1.31
286	458	0.12	1.16	0.09			1.37
287	51	0.08	5.80	0.55			6.43
288	630	0.19	1.07	0.11			1.37
289	820	0.07	0.38	0.04			0.49
290	666	0.15	1.02	0.10			1.27
291	832	0.30	1.28	0.10			1.68
292	517	0.29	1.52	0.11			1.92
293	512	0.52	1.86	0.19			2.56
294	689	0.06	0.75	0.08			0.89
295	855	0.13	0.78	0.09			1.00
296	675	0.11	0.73	0.06			0.90
297	449	0.00	0.47	0.01			0.48
298	677	0.03	1.07	0.01			1.11
299	389	0.33	1.07	0.10			1.49
338	472	0.38	0.96	0.10		0.03	1.48
339	406	0.41	1.13	0.07		0.03	1.65
341	483	0.68	2.61	0.21		0.10	3.59
342	374	0.79	3.46	0.34		0.08	4.67
343	486	0.91	2.12	0.21		0.06	3.30
344	190	0.52	4.23	0.37		0.19	5.31
345	335	0.37	2.32	0.08	0.12	0.10	2.99
346	328	1.08	5.46	0.40	0.30	0.16	7.39
347	434	0.47	2.25	0.19		0.07	2.98
348	332	0.81	3.78	0.25		0.09	4.93
349	499	0.70	4.75	0.34		0.09	5.87
601	1,756	0.00	2.01	0.00			2.01
602	304	0.00	4.42	0.00			4.42
Total	83,265	0.20	1.76	0.08	0.00	0.01	2.05

Note: This table excludes harvest data from all 900-series special hunts.

Table 20. Harvest using Depredation Permits, by Permit Area, 2013.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
342	3	11	2	16
345	6	49	9	64
346	16	66	11	93
349	8	44	5	57
TOTAL	33	170	27	230

Table 21. 2013 Firearm Lottery Distribution Report.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
101	1	553	1	548	5	49	0.0%
	2	35	0	0	35		
	3	7	0	0	7		
	5	2	0	0	2		
		597	1	548	49		
103	1	489	0	489	0	243	0.0%
	2	825	0	700	125		
	3	115	0	0	115		
	4	2	0	0	2		
	5	1	0	0	1		
	1,432	0	1,189	243			
103	1	1,489	1	1,354	135	196	0.0%
	2	49	0	0	49		
	3	8	0	0	8		
	4	1	0	0	1		
	5	1	0	0	1		
	9	2	0	0	2		
	1,550	1	1,354	196			
108	1	317	0	317	0	98	0.0%
	2	341	1	341	0		
	3	332	0	332	0		
	4	312	0	312	0		
	5	203	0	106	97		
	9	1	0	0	1		
	1,506	1	1,408	98			
110	1	1,877	0	24	1,853	1,970	0.0%
	2	106	1	0	106		
	3	9	1	0	9		
	4	2	0	0	2		
	1,994	2	24	1,970			
118	1	271	0	271	0	24	0.0%
	2	306	1	306	0		
	3	322	0	322	0		
	4	63	0	39	24		
	962	1	938	24			
119	1	335	0	335	0	97	0.0%
	2	560	0	560	0		
	3	514	0	495	19		
	4	77	0	0	77		
	5	1	0	0	1		
	1,487	0	1,390	97			

Table 21. Continued.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
122	1	567	0	500	67	248	0.0%
	2	169	0	0	169		
	3	10	0	0	10		
	4	1	0	0	1		
	5	1	0	0	1		
		748	0	500	248		
169	1	3,407	2	1,991	1,416	2,953	0.0%
	2	1,497	2	0	1,497		
	3	30	0	0	30		
	4	9	0	0	9		
	5	1	0	0	1		
		4,944	4	1,991	2,953		
171	1	1,948	5	1,921	27	1,471	0.0%
	2	1,429	1	0	1,429		
	3	11	0	0	11		
	4	3	0	0	3		
	9	1	0	0	1		
		3,392	6	1,921	1,471		
172	1	2,952	0	2,952	0	1,954	0.0%
	2	2,347	3	675	1,672		
	3	279	0	0	279		
	4	2	0	0	2		
	9	1	0	0	1		
		5,581	3	3,627	1,954		
176	1	1,454	7	1,454	0	985	0.0%
	2	1,123	0	297	826		
	3	153	0	0	153		
	4	3	0	0	3		
	9	3	0	0	3		
		2,736	7	1,751	985		
183	1	2,850	5	619	2,231	2,422	0.0%
	2	174	3	0	174		
	3	17	2	0	17		
		3,041	10	619	2,422		
184	1	5,581	5	1,285	4,296	5,387	0.0%
	2	1,067	1	0	1,067		
	3	20	0	0	20		
	4	3	0	0	3		
	5	1	0	0	1		
		6,672	6	1,285	5,387		
197	1	1,761	1	1,069	692	1,478	0.0%
	2	770	0	0	770		
	3	16	0	0	16		
		2,547	1	1,069	1,478		

Table 21. Continued.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
199	1	175	0	46	129	148	0.0%
	2	18	0	0	18		
	3	1	0	0	1		
		194	0	46	148		
234	1	272	1	45	227	270	0.0%
	2	42	0	0	42		
	3	1	0	0	1		
		315	1	45	270		
237	1	141	0	141	0	184	0.0%
	2	183	1	16	167		
	3	15	0	0	15		
	4	1	0	0	1		
	5	1	0	0	1		
	341	1	157	184			
238	1	65	0	29	36	96	0.0%
	2	55	0	0	55		
	3	5	0	0	5		
		125	0	29	96		
250	1	261	1	261	0	358	0.0%
	2	345	0	23	322		
	3	34	0	0	34		
	4	1	0	0	1		
	5	1	0	0	1		
	642	1	284	358			
251	1	220	0	93	127	193	0.0%
	2	66	0	0	66		
		286	0	93	193		
252	1	218	0	218	0	357	0.0%
	2	254	0	17	237		
	3	118	0	0	118		
	4	1	0	0	1		
	5	1	0	0	1		
	592	0	235	357			
253	1	500	1	500	0	174	0.6%
	2	310	0	193	117		
	3	52	0	0	52		
	4	4	0	0	4		
	866	1	693	173			
258	1	282	0	282	0	429	0.0%
	2	416	0	138	278		
	3	149	0	0	149		
	4	2	0	0	2		
	849	0	420	429			
260	1	418	0	317	101	294	0.0%
	2	193	1	0	193		
		611	1	317	294		

Table 21. Continued.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
261	1	146	0	49	97	137	0.0%
	2	39	0	0	39		
	3	1	0	0	1		
		186	0	49	137		
262	1	286	0	100	186	276	0.0%
	2	89	0	0	89		
	3	1	0	0	1		
		376	0	100	276		
263	1	442	1	409	33	289	0.0%
	2	256	2	0	256		
		698	3	409	289		
266	1	578	0	338	240	471	0.0%
	2	230	0	0	230		
	3	1	0	0	1		
		809	0	338	471		
267	1	343	1	261	82	96	0.0%
	2	14	0	0	14		
		357	1	261	96		
268	1	478	3	415	63	97	0.0%
	2	29	0	0	29		
	3	4	0	0	4		
	5	1	0	0	1		
		512	3	415	97		
269	1	342	3	318	24	229	0.0%
	2	199	1	0	199		
	3	4	0	0	4		
	4	2	0	0	2		
	547	4	318	229			
270	1	172	0	172	0	182	0.0%
	2	190	0	25	165		
	3	16	0	0	16		
	4	1	0	0	1		
	379	0	197	182			
271	1	255	0	114	141	273	0.0%
	2	117	0	0	117		
	3	13	0	0	13		
	4	1	0	0	1		
	5	1	0	0	1		
	387	0	114	273			
272	1	255	1	255	0	236	0.0%
	2	229	0	13	216		
	3	17	0	0	17		
	4	2	0	0	2		
	9	1	0	0	1		
	504	1	268	236			

Table 21. Continued.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
274	1	199	0	199	0	217	0.0%
	2	244	0	66	178		
	3	38	0	0	38		
	4	1	0	0	1		
		482	0	265	217		
275	1	332	1	332	0	459	0.0%
	2	347	1	24	323		
	3	122	0	0	122		
	4	13	0	0	13		
	5	1	0	0	1		
	815	2	356	459			
276	1	726	0	318	408	1,180	0.0%
	2	727	0	0	727		
	3	40	0	0	40		
	4	4	0	0	4		
	5	1	0	0	1		
	1,498	0	318	1,180			
277	1	1,336	2	871	465	2,285	0.0%
	2	1,780	1	0	1,780		
	3	34	0	0	34		
	4	5	0	0	5		
	5	1	0	0	1		
	3,156	3	871	2,285			
278	1	399	4	399	0	515	0.0%
	2	532	0	124	408		
	3	97	2	0	97		
	4	7	0	0	7		
	5	1	0	0	1		
9	2	0	0	2			
	1,038	6	523	515			
279	1	297	0	68	229	483	0.0%
	2	231	0	0	231		
	3	19	0	0	19		
	4	3	0	0	3		
	9	1	0	0	1		
	551	0	68	483			
280	1	216	0	195	21	366	0.0%
	2	286	0	0	286		
	3	57	0	0	57		
	4	1	0	0	1		
	9	1	0	0	1		
	561	0	195	366			

Table 21. Continued.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
281	1	374	0	374	0	427	0.0%
	2	542	0	171	371		
	3	50	0	0	50		
	4	6	0	0	6		
		972	0	545	427		
282	1	74	0	74	0	23	0.0%
	2	76	0	76	0		
	3	43	0	24	19		
	4	4	0	0	4		
		197	0	174	23		
283	1	243	0	243	0	183	0.0%
	2	283	0	204	79		
	3	98	0	0	98		
	4	6	0	0	6		
		630	0	447	183		
284	1	207	0	207	0	277	0.0%
	2	277	0	239	38		
	3	152	0	0	152		
	4	85	0	0	85		
	5	2	0	0	2		
		723	0	446	277		
285	1	732	0	215	517	1,012	0.0%
	2	479	0	0	479		
	3	12	0	0	12		
	4	4	0	0	4		
		1,227	0	215	1,012		
286	1	229	1	121	108	541	0.0%
	2	277	0	0	277		
	3	143	0	0	143		
	4	13	0	0	13		
		662	1	121	541		
288	1	284	0	233	51	541	0.0%
	2	282	0	0	282		
	3	148	0	0	148		
	4	59	0	0	59		
	9	1	0	0	1		
		774	0	233	541		
289	1	136	0	133	3	265	0.0%
	2	150	0	0	150		
	3	86	0	0	86		
	4	25	0	0	25		
	5	1	0	0	1		
		398	0	133	265		

Table 21. Continued.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
290	1	390	0	390	0	515	0.0%
	2	561	0	221	340		
	3	173	0	0	173		
	4	2	0	0	2		
		1,126	0	611	515		
291	1	798	0	798	0	873	0.0%
	2	830	0	144	686		
	3	182	0	0	182		
	4	2	0	0	2		
	5	2	0	0	2		
	9	1	0	0	1		
	1,815	0	942	873			
294	1	233	0	40	193	451	0.0%
	2	232	0	0	232		
	3	24	0	0	24		
	4	2	0	0	2		
		491	0	40	451		
295	1	394	0	394	0	350	0.0%
	2	457	0	270	187		
	3	158	0	0	158		
	4	5	0	0	5		
		1,014	0	664	350		
296	1	235	0	235	0	361	0.0%
	2	276	0	162	114		
	3	240	1	0	240		
	4	6	0	0	6		
	9	1	0	0	1		
		758	1	397	361		
297	1	229	0	130	99	192	0.0%
	2	91	0	0	91		
	3	2	0	0	2		
		322	0	130	192		
298	1	867	0	846	21	585	0.0%
	2	550	0	0	550		
	3	11	0	0	11		
	4	3	0	0	3		
		1,431	0	846	585		
299	1	285	0	285	0	351	0.0%
	2	302	0	59	243		
	3	108	0	0	108		
		695	0	344	351		
TOTAL		68,811	71	32,633	36,178	36,816	

Table 22. 2013 Muzzleloader Lottery Distribution Report.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
101	1	6	0	6	0	1	0.0%
	2	1	0	0	1		
		7	0	6	1		
103	1	24	0	24	0	7	14.3%
	2	17	0	11	6		
	3	1	0	0	1		
		42	0	35	6		
105	1	30	0	27	3	4	0.0%
	2	1	0	0	1		
		31	0	27	4		
108	1	9	0	9	0	2	0.0%
	2	10	0	10	0		
	3	3	0	3	0		
	4	4	0	2	2		
		26	0	24	2		
110	1	26	0	0	26	30	0.0%
	2	4	0	0	4		
		30	0	0	30		
118	1	8	0	8	0	1	0.0%
	2	9	0	9	0		
	3	7	0	7	0		
	4	1	0	0	1		
		25	0	24	1		
119	1	8	0	8	0	3	0.0%
	2	17	0	17	0		
	3	19	0	16	3		
		44	0	41	3		
122	1	5	0	3	2	2	0.0%
		5	0	3	2		
169	1	64	0	31	33	47	0.0%
	2	14	0	0	14		
		78	0	31	47		
171	1	49	0	37	12	29	0.0%
	2	17	0	0	17		
		66	0	37	29		
172	1	82	0	82	0	46	0.0%
	2	46	0	0	46		
		128	0	82	46		
176	1	27	0	27	0	15	0.0%
	2	13	0	0	13		
	3	2	0	0	2		
		42	0	27	15		
183	1	79	0	24	55	65	0.0%
	2	10	0	0	10		
		89	0	24	65		
184	1	121	0	24	97	113	0.0%
	2	16	0	0	16		
		137	0	24	113		

Table 22. Continued.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
197	1	32	0	16	16	22	0.0%
	2	6	0	0	6		
		38	0	16	22		
199	1	2	0	0	2	2	0.0%
		2	0	0	2		
234	1	29	0	1	28	30	0.0%
	2	2	0	0	2		
		31	0	1	30		
237	1	18	0	12	6	16	0.0%
	2	10	0	0	10		
		28	0	12	16		
238	1	2	0	1	1	4	0.0%
	2	3	0	0	3		
		5	0	1	4		
250	1	34	0	25	9	42	0.0%
	2	33	0	0	33		
		67	0	25	42		
251	1	8	0	3	5	7	0.0%
	2	2	0	0	2		
		10	0	3	7		
252	1	31	0	20	11	43	0.0%
	2	31	0	0	31		
	3	1		0	1		
		63	0	20	43		
253	1	65	0	50	15	71	0.0%
	2	52	0	0	52		
	3	4	0	0	4		
		121	0	50	71		
260	1	11	0	6	5	6	0.0%
	2	1	0	0	1		
		12	0	6	6		
261	1	15	0	3	12	13	0.0%
	2	1	0	0	1		
		16	0	3	13		
262	1	22	0	6	16	24	0.0%
	2	8	0	0	8		
		30	0	6	24		
263	1	21	0	15	6	11	0.0%
	2	5	0	0	5		
		26	0	15	11		
266	1	38	0	18	20	29	0.0%
	2	9	0	0	9		
		47	0	18	29		
267	1	14	0	11	3	4	0.0%
	2	1	0	0	1		
		15	0	11	4		

Table 22. Continued.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
268	1	16	0	14	2	3	0.0%
	3	1	0	0	1		
	17	0	14	3			
269	1	37	0	26	11	21	0.0%
	2	10	0	0	10		
	47	0	26	21			
270	1	21	0	16	5	18	0.0%
	2	13	0	0	13		
	34	0	16	18			
271	1	27	0	8	19	27	0.0%
	2	8	0	0	8		
	35	0	8	27			
272	1	19	0	15	4	14	0.0%
	2	10	0	0	10		
	29	0	15	14			
274	1	43	0	31	12	33	0.0%
	2	20	0	0	20		
	3	1	0	0	1		
		64	0	31	33		
275	1	36	0	26	10	41	0.0%
	2	31	0	0	31		
	67	0	26	41			
276	1	83	0	18	65	120	0.0%
	2	52	0	0	52		
	3	3	0	0	3		
		138	0	18	120		
277	1	156	0	56	100	215	0.0%
	2	113	0	0	113		
	3	1	0	0	1		
	9	1	0	0	1		
		271	0	56	215		
278	1	75	0	61	14	85	0.0%
	2	70	0	0	70		
	3	1	0	0	1		
		146	0	61	85		
279	1	48	0	0	48	67	0.0%
	2	18	0	0	18		
	3	1	0	0	1		
		67	0	0	67		
280	1	24	0	13	11	34	0.0%
	2	23	0	0	23		
	47	0	13	34			
281	1	82	0	69	13	73	0.0%
	2	58	0	0	58		
	3	2	0	0	2		
		142	0	69	73		

Table 22. Continued.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
282	1	4	0	4	0	2	0.0%
	2	6	0	6	0		
	3	3	0	1	2		
	13	0	11	2			
283	1	25	0	25	0	17	0.0%
	2	25	0	12	13		
	3	4	0	0	4		
	54	0	37	17			
284	1	25	0	25	0	23	0.0%
	2	22	0	7	15		
	3	8	0	0	8		
	55	0	32	23			
285	1	62	0	10	52	88	0.0%
	2	36	0	0	36		
	98	0	10	88			
286	1	33	0	6	27	59	0.0%
	2	27	0	0	27		
	3	5	0	0	5		
	65	0	6	59			
288	1	40	0	17	23	59	0.0%
	2	28	0	0	28		
	3	7	0	0	7		
	9	1	0	0	1		
	76	0	17	59			
289	1	23	0	11	12	35	0.0%
	2	19	0	0	19		
	3	3	0	0	3		
	4	1	0	0	1		
	46	0	11	35			
290	1	65	0	65	0	85	0.0%
	2	92	0	9	83		
	3	1	0	0	1		
	4	1	0	0	1		
	159	0	74	85			
291	1	129	0	103	26	127	0.0%
	2	99	0	0	99		
	3	2	0	0	2		
	230	0	103	127			
294	1	26	0	0	26	49	2.0%
	2	22	0	0	22		
	48	0	0	48			
295	1	67	0	67	0	50	0.0%
	2	57	0	10	47		
	3	3	0	0	3		
	127	0	77	50			

Table 22. Continued.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available	% Under-Subscribed
		Total	Rejected				
296	1	26	0	26	0	39	0.0%
	2	37	0	9	28		
	3	11	0	0	11		
		74	0	35	39		
297	1	10	0	5	5	8	0.0%
	2	3	0	0	3		
		13	0	5	8		
298	1	28	0	20	8	15	0.0%
	2	7	0	0	7		
		35	0	20	15		
299	1	47	0	37	10	49	0.0%
	2	37	0	0	37		
	3	2	0	0	2		
		86	0	37	49		
TOTAL		3,544	0	1,400	2,143	2,144	

Table 23. 2013 Special Permit Areas for Firearms Hunters.

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
392 - Lake Louise State Park	1	53	0	53	0	25
	2	42	0	19	23	
	3	1	0	0	1	
	4	1	0	0	1	
		97	0	72	25	
901 - Rice Lake NWR	1	53	0	38	15	40
	2	24	0	0	24	
	3	1	0	0	1	
		78	0	38	40	
902 - Saint Croix State Park	1	611	0	452	159	400
	2	221	0	0	221	
	3	16	0	0	16	
	4	4	0	0	4	
		852	0	452	400	
903 - Savanna Portage State Park	1	22	0	11	11	20
	2	8	0	0	8	
	3	1	0	0	1	
		31	0	11	20	
904 - Gooseberry Falls State Park	1	47	0	11	36	40
	2	4	0	0	4	
		51	0	11	40	
905 - Split Rock Lighthouse State Park	1	25	0	0	25	30
	2	2	0	0	2	
	3	1	0	0	1	
		28	0	0	28	
906 - Tettegouche State Park	1	73	0	0	73	125
	2	5	0	0	5	
	3	2	0	0	2	
		80	0	0	80	
907 - Scenic State Park	1	33	0	6	27	30
	2	3	0	0	3	
		36	0	6	30	
908 - Hayes Lake State Park	1	28	0	0	28	75
		28	0	0	28	
909 - Lake Bemidji State Park	1	25	0	0	25	30
	2	1	0	0	1	
		26	0	0	26	
910 - Zippel Bay State Park	1	48	0	0	48	55
	2	5	0	0	5	
		53	0	0	53	
913 - Lake Carlos State Park	1	22	0	5	17	20
	2	2	0	0	2	
	3	1	0	0	1	
		25	0	5	20	

Table 23. Continued.

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
914 - William O'Brien State Park	1	104	0	83	21	60
	2	40	0	0	40	
	3	2	0	0	2	
		146	0	83	63	
915 - Lake Bronson State Park	1	31	0	12	19	30
	2	10	0	0	10	
	3	1	0	0	1	
		42	0	12	30	
916 - Maplewood State Park	1	151	0	151	0	100
	2	112	0	112	0	
	3	120	0	48	72	
	4	27	0	0	27	
	9	1	0	0	1	
	411	0	311	100		
917 - Old Mill State Park	1	23	0	22	1	10
	2	9	0	0	9	
		32	0	22	10	
918 - Lake Alexander Woods SNA	1	84	0	71	13	40
	2	26	0	0	26	
	9	1	0	0	1	
		111	0	71	39	
919 - Glacial Lakes State Park	1	30	0	5	25	30
	2	5	0	0	5	
	3	1	0	0	1	
		36	0	5	31	
920 - Zumbro Falls SNA	1	13	0	1	12	12
		13	0	1	12	
921 - Forestville/Mystery Cave State Park	1	175	0	89	86	130
	2	40	0	0	40	
	3	6	0	0	6	
		221	0	89	132	
923 - Zumbro Falls SNA	1	5	0	0	5	12
	2	7	0	0	7	
		12	0	0	12	
924 - Whitewater State Game Refuge	1	9	0	0	9	50
	2	9	0	0	9	
		18	0	0	18	
925 - Vermillion Highlands Research, Recreation, and WMA	1	25	0	25	0	22
	2	24	0	17	7	
	3	16	0	0	16	
		65	0	42	23	
926 - Carver Park Reserve	1	263	0	263	0	110
	2	154	0	62	92	
	3	19	0	0	19	
	4	2	0	0	2	
		438	0	325	113	

Table 23. Continued.

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
927 - Whitewater State Park	1	90	0	78	12	50
	2	34	0	0	34	
	3	3	0	0	3	
	4	1	0	0	1	
		128	0	78	50	
929 - Frontenac State Park - B	1	68	0	32	36	60
	2	24	0	0	24	
		92	0	32	60	
932 - Lake Elmo Park Reserve	1	100	0	97	3	50
	2	43	0	0	43	
	3	6	0	0	6	
		149	0	97	52	
933 - Murphy-Hanrehan Park Reserve	1	122	0	84	38	80
	2	37	0	0	37	
	3	7	0	0	7	
		166	0	84	82	
934 - Whitewater State Game Refuge	1	82	0	18	64	75
	2	11	0	0	11	
		93	0	18	75	
Total		3,558	0	1,865	1,692	1,811

Table 24. 2013 Special Permit Areas for Muzzleloader Hunts.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
935 - Jay Cooke SP	1	159	0	132	27	120
	2	78	0	0	78	
	3	14	0	0	14	
	4	1	0	0	1	
		252	0	132	120	
936 - Crow Wing SP	1	52	0	52	0	40
	2	54	0	54	0	
	3	36	0	20	16	
	4	23	0	0	23	
	5	1	0	0	1	
	9	2	0	0	2	
	168	0	126	42		
937 - Soudan Underground Mine and Lake Vermilion SP	1	17	0	4	13	20
	2	7	0	0	7	
		24	0	4	20	
938 - City of Tower	1	10	0	0	10	20
		10	0	0	10	
939 - Lake Shetek SP	1	30	0	30	0	15
	2	16	0	6	10	
	3	7	0	0	7	
		53	0	36	17	
941 - Nerstrand Big Woods SP	1	110	0	110	0	50
	2	81	0	71	10	
	3	37	0	0	37	
	4	3	0	0	3	
	9	1	0	0	1	
	232	0	181	51		
942 - Sibley SP	1	60	0	60	0	50
	2	60	0	11	49	
	3	1	0	0	1	
		121	0	71	50	
943 - Myre Big Island SP	1	30	0	30	0	40
	2	54	0	16	38	
	3	2	0	0	2	
		86	0	46	40	
944 - Vermilion Highlands WMA	1	32	0	32	0	25
	2	43	0	33	10	
	3	16	0	0	16	
		91	0	65	26	
947 - Lake Bemidji State Park	1	14	0	0	14	25
	2	7	0	0	7	
	3	4	0	0	4	
		25	0	0	25	
TOTAL		1,062	0	661	401	405

GRAND TOTAL		76,975	71	36,559	40,414	41,176
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2013 MINNESOTA ELK HARVEST REPORT

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

INTRODUCTION

A limited number of licenses are offered to Minnesota residents to hunt elk. In 2013, there were two established zones: 1) Zone 20 - Kittson County Central and 2) Zone 30 - Kittson County Northeast (Figure 1). Zone 10 near Grygla, Minnesota, was closed in 2013 because the population was below goal (Figure 2). In 2013, there were four regular season hunts (September 14-22; September 28 – October 6; December 7-15; January 11-19, 2014). Hunts were held during the first season in both zones and during the remaining seasons only in zone 20. The early hunts are structured so that they fall within the breeding season when bull elk are most vulnerable and elk can be located by vocalizations. The later seasons are 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.

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 974 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 2013, a total of 12 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, 2013.

Zone	Either-Sex	Antlerless	Bull-only	Total	Total Applicants
20 – Kittson Central	0	15	6	21	787
30 – Kittson NE	0	0	2	2	187
Total	0	15	8	23	974

Table 2. Distribution of the 2013 Minnesota elk harvest. License allocation totals represent the actual number sold, not the number authorized through rule.

Kittson County Central Hunt Zone (20)					
Season	Bulls-only Licenses	Antlerless Licenses	Bulls taken	Antlerless taken	Total elk taken
September 14-22	2	3	2	2	4
Sept 28 –Oct 6	2	4	1	2	3
December 7-15	1	5	0	1	1
January 11-19	1	3	1	1	2
Total	3	13	4	6	10

Kittson County Northeast Hunt Zone (30)			
Season	Bulls-only Licenses	Bulls taken	Total elk taken
September 14-22	2	2	2
Total	2	1	2

Table 3. Grygla and Kittson County elk harvests, 1987-2013.

Grygla				
Year	Bulls (or Either-Sex)		Antlerless	
	Permits	Harvest	Permits	Harvest
1987	2	1	2	1
1996	2	2	7 (1 alternate)	6
1997	5 (2 alternate)	1	5 (2 alternate)	2
1998	4 (2 alternate)	2	0	0
2004	1	1	4	2
2005	1	0	4	0
2006	2	2	6	2
2007	0	0	6	6
2008	2	2	10	6
2009	2	3*	12	11
2010	2	1	5	3
2011	3	2	2	0
2012	2	1	3	0
2013	Closed	0	Closed	0
Total	28	19	66	39

Kittson County (Combined)				
Year	Bulls (or Either-Sex)		Antlerless	
	Permits	Harvest	Permits	Harvest
2008	1	1	10	10
2009	1	9 ^a	4	5
2010	1	1	3	3
2011	2	3 ^b	8 ^c	4
2012	5	4 ^d	13	3
2013	8	6	15	6
Total	29	24	53	31

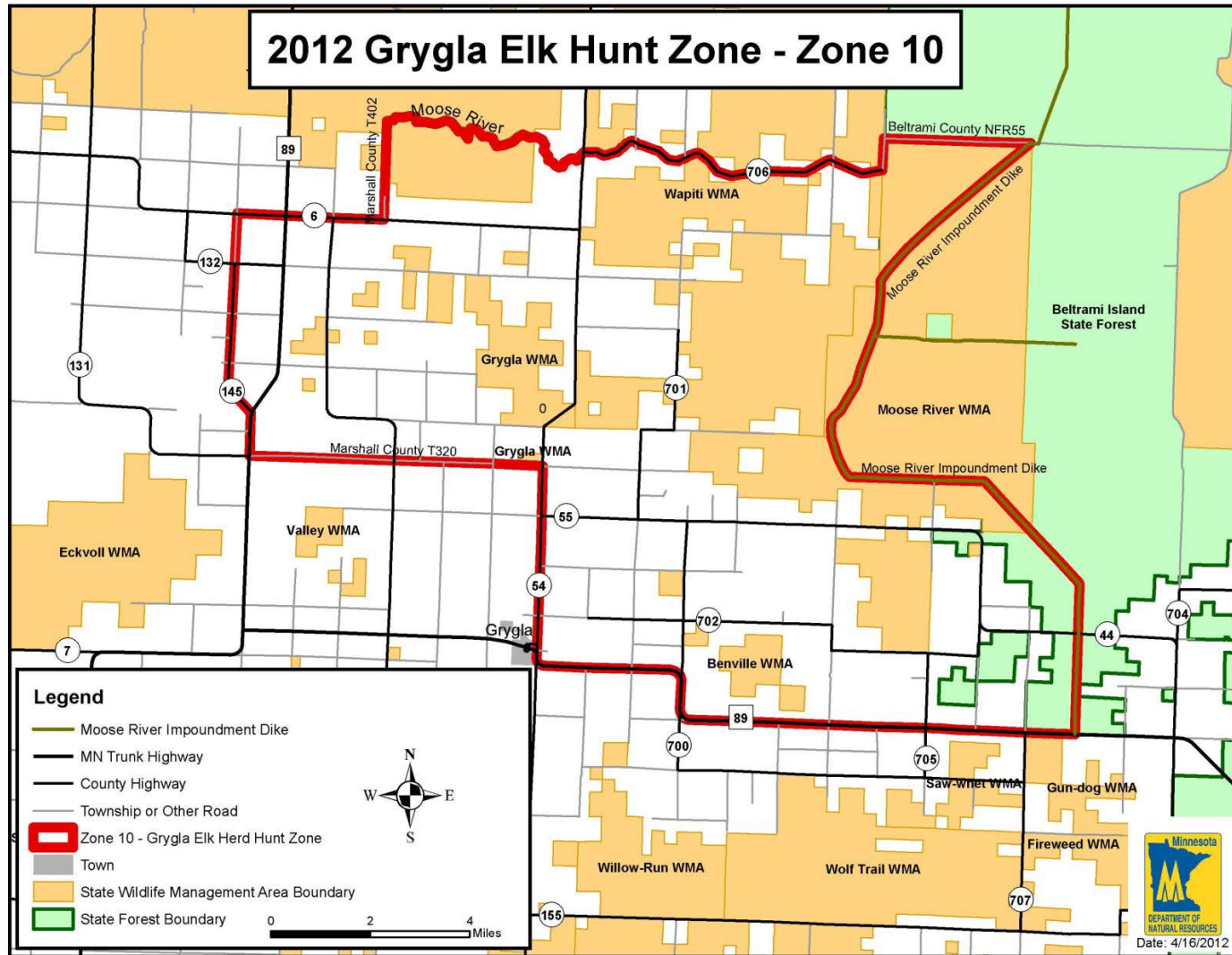
^a One additional bull (6x7) was wounded but not retrieved in 2009. It was found dead later and is counted in the total.

^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 2. Grygla Hunt Zone.





MINNESOTA SANDHILL CRANE HARVEST REPORT, 2013

MNDNR

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. In 2013 the season was 14 September – 20 October. The daily bag limit remained at 2 per day but the possession limit increased from 4 to 6. 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. 2014. 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. 41pp.)
<http://www.fws.gov/migratorybirds/NewReportsPublications/PopulationStatus.html>

Table 1. Sandhill crane permit sales, estimated number of active hunters and harvest for NW Minnesota, 2010-2013. (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
2013	1,086	485	378

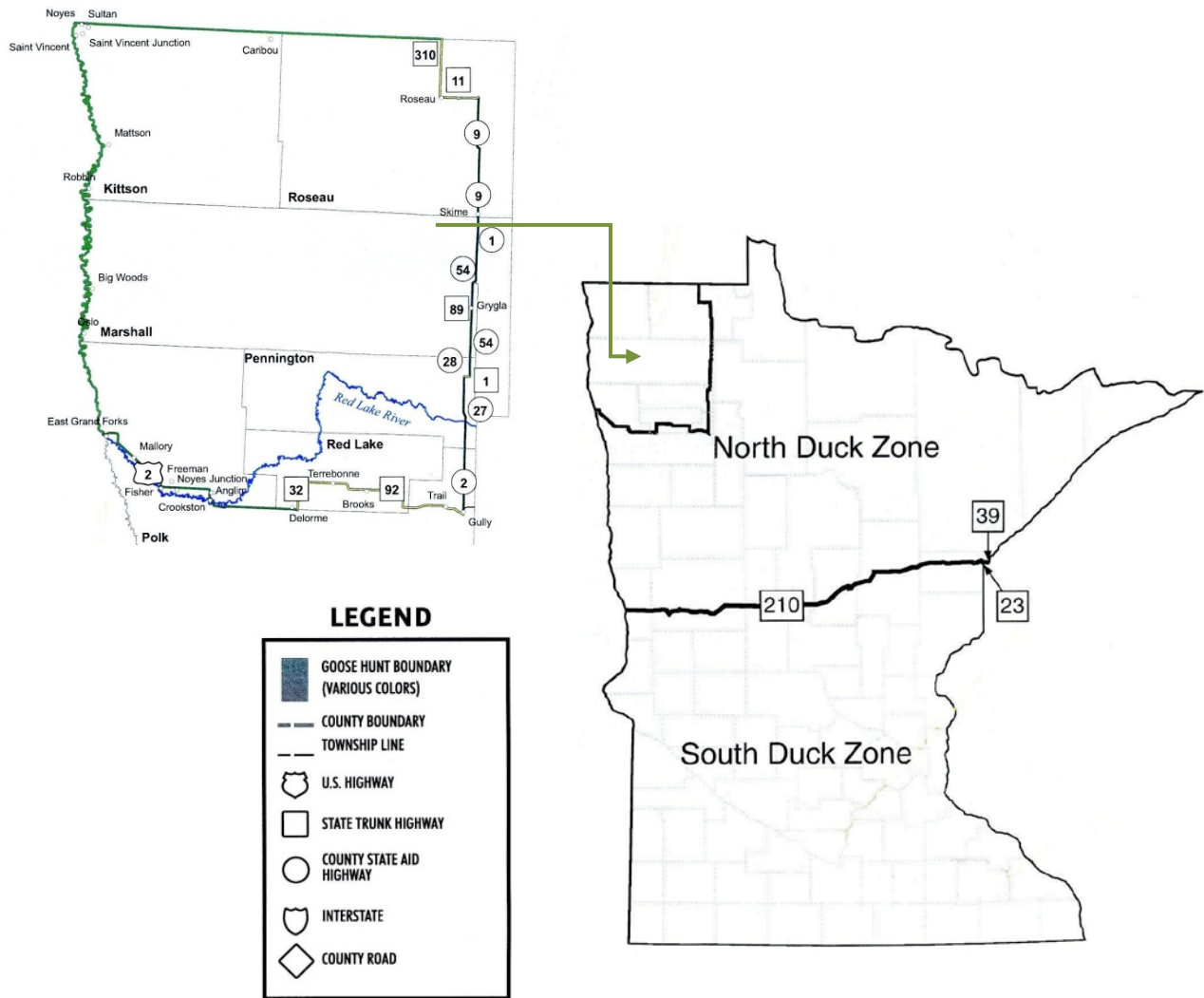


Figure 1. Sandhill crane hunting zone in Minnesota, 2010-2014.