HUNTING HARVEST STATISTICS

Division of Fish and Wildlife
500 Lafayette Road, Box 20
Saint Paul, MN 55155 - 4020
(651) 259-5207

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2017 SMALL GAME HUNTER MAIL SURVEY

Margaret Dexter, Wildlife Research Unit

INTRODUCTION

The Minnesota Department of Natural Resources (DNR), Division of Fish and Wildlife, Wildlife Research unit annually conducts a mail survey of small game hunters. The small game mail survey was initiated in 1976 as a means to gather small game harvest information, which is used to inform our constituency and guide decisions about hunting regulations and season structure.

METHODS

A postcard survey (Fig. 1) was mailed in early March following the close of the small game hunting season. Hunters who returned it within three weeks were eliminated from a follow-up mailing to non-respondents. The sampling frame consisted of individuals who purchased a small game hunting license (any type) for the 2017-18 small game hunting season (N=243,130). A stratified random sample (n=7,000, 2.9%), allocated proportionally by license type, was drawn from the Minnesota DNR electronic licensing system (ELS) database. Small game license types included: 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=236,276) and “Nonresident” (N=6,854) (Fig. 2). A free youth license was added to the sampling frame for 2010-13 but that license has since been discontinued. Estimates for those years have been recalculated without the youth license so harvest estimates and license sales are comparable among years. Also, beginning in 2017, license holders <18-yrs old at the time of the survey were excluded from the sampling frame but included in the overall expansion for sampling. This group comprised <3% of license holders and thus estimates should be comparable among years.

Recipients were asked if they hunted small game in 2017-18 and if not, they were instructed to return the survey. Respondents who hunted were asked: (1) total number of days they hunted small game, (2) number bagged by species, (3) number of days hunted by species and (4) the county in which they hunted most for each species listed. 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 Program R (ver. 3.5.0; R Development Core Team 2018).

RESULTS

License sales and survey response rate are shown in Figure 2. Of the 7,000 mailed surveys, 102 surveys were returned as undeliverable; 4,163 surveys were completed and returned for an adjusted response rate of 60%. The percent of respondents who said they hunted or did not hunt is reported in Table 1. This year marks the first time in the history of this survey that the percentage of license holders who indicated they hunted was <70% whereas those who bought a license but did not hunt was >30% (Table 1). Harvest trends for the four most sought-after

small game species (ducks - all species, Canada geese, pheasants, and ruffed grouse) in Minnesota since 2002 are shown in Figure 3. Overall, small game license sales declined 3.8% from the previous year (Fig. 2, Table 5). The estimated number of hunters increased for Canada goose, crows, raccoons, red foxes, gray foxes, and coyotes but declined for most other species (Table 2). Likewise, the estimated harvest per active hunter showed increases for crows (6.6 in 2016 to 9.5 in 2017), mourning doves (7.7 in 2016 to 9.9 in 2017), and raccoons (3.8 in 2016 to 7.7 in 2017) but remained relatively stable for all other species (Table 3). Mean harvest for successful hunters was up slightly for ducks (12.5 in 2017 compared to 10.9 in 2016) and raccoons (8.2 in 2017 compared to 4.1 in 2016) but all other species remained similar to 2016-2017 (Table 4). Hunter success rates showed no statistically significant changes from last year (Table 4). License sales and estimated hunter harvest are presented in Table 5. License sales continue to trend downward and are at their lowest level since 1976. Estimated harvest for ducks (all species) was 688,225. Canada goose harvest (267,192) was higher than it has been in four years. The crow harvest was estimated at 110,034 birds, and was the third highest harvest since 1989 when the season was established. Raccoon harvest was estimated at 68,685 animals, the highest it has been since 2010-11. Ring-necked pheasant harvest declined 14% with 171,883 roosters harvested in 2017-18 compared to 196,141 roosters the previous year. Ruffed grouse harvest declined slightly from 308,955 grouse in 2016 to 285,180 in 2017. Overall, nonresident license sales remained steady compared to 2016-17, as did the number of nonresident duck hunters and pheasant hunters (Table 6). Estimated nonresident hunters targeting Canada geese (1,730 hunters) were the highest since 2005 when there were 1,818 estimated hunters. Nonresident Canada goose harvest (6,994) surpassed the 1999 record harvest of 6,960. Ring-necked pheasant harvest by nonresidents was also up from the previous year (7,274 roosters in 2017 compared to 4,040 roosters taken in 2016) despite a similar number of estimated hunters.

ACKNOWLEDGMENTS

This project was funded in part by the Federal Aid in Wildlife Restoration Program.

Dear Small Game Hunter:

You have been selected at random from among Minnesota's small game hunting license buyers to assist us in evaluating the 2017-2018 small game hunting season **(March 2017-February 2018)**. We need information to estimate the season's harvest and to help set future small game seasons. Answer only for your Minnesota 2017 hunting experience.

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

Please fill out the attached questionnaire and mail as soon as possible. A reminder will be sent to individuals not returning the questionnaire within three weeks. No envelope or stamp is necessary; just tear along the perforation and drop into a mailbox.

THANK YOU FOR YOUR COOPERATION

Lou Cornicelli, Wildlife Research Program Manager
Division of Fish and Wildlife
Department of Natural Resources

2017 Small Game Hunter Report

1. Did you hunt small game, listed below, in Minnesota this year (March 2017 - Feb 2018)? ☐No ☐Yes (Please check box)
2. Indicate the **total number of days** spent hunting small game of all species listed below, in Minnesota. _____
3. For the species you hunted indicate your harvest, number of days hunted, and county in which you hunted most for each species, even if **None** were bagged. Report only game **you personally** bagged and retrieved in Minnesota. **Do not** include birds taken on shooting preserves or game farms.

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

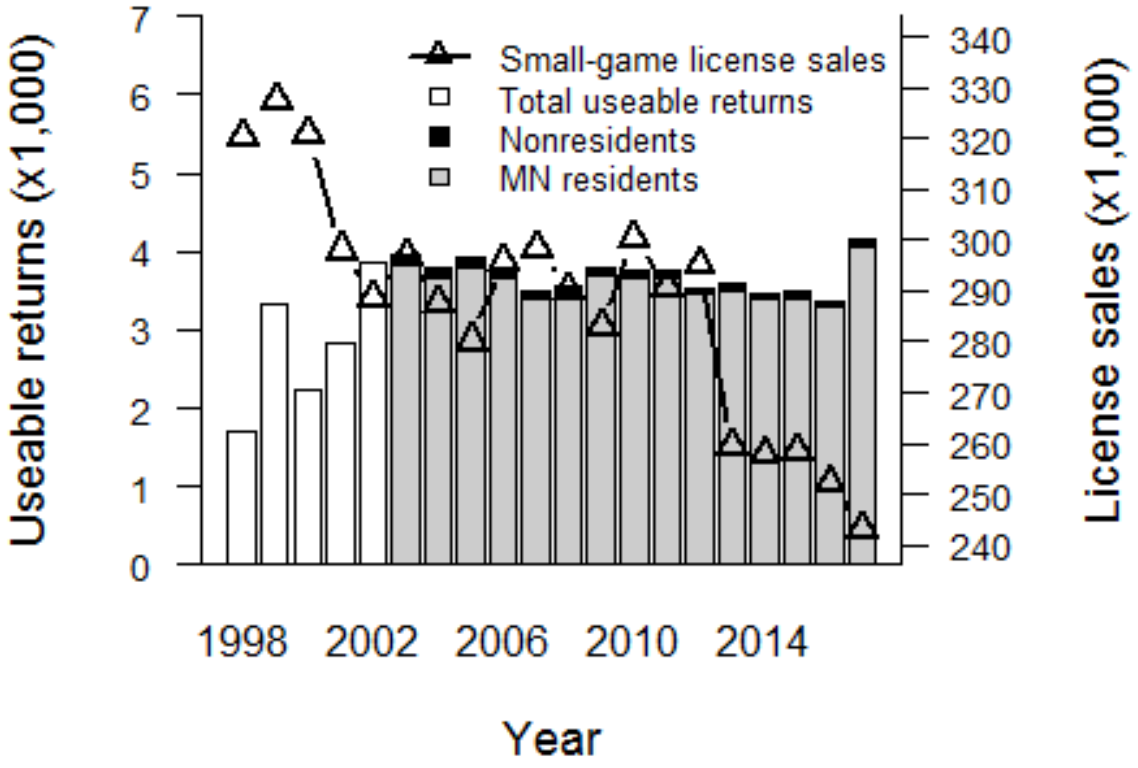

Figure 2. Number of Minnesota small game licenses sold and usable returned surveys, 1990-2017. Includes resident and non-resident licenses, and excludes duplicate and free licenses.

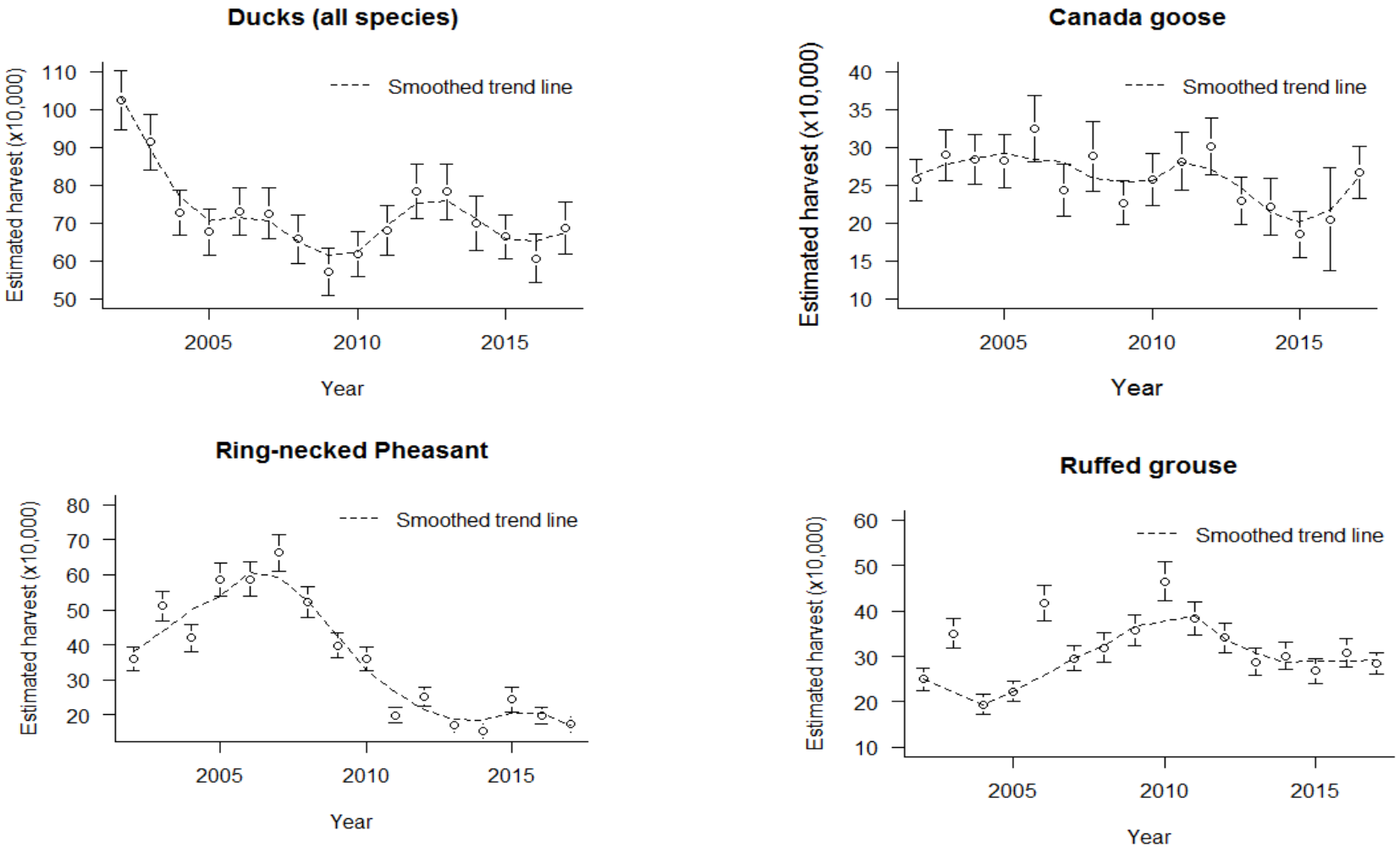

Figure 3. Harvest trends for top four small game species harvested in Minnesota, 2002-2017.

Table 1. Percent of respondents who hunted small game, 2007-08 through 2017-2018[a].

		Returns from mail survey	Projections from license sales
2007-08	Hunted Did not hunt	2,894 (78%) 822 (22%) 3,716 (100.0%)	232,505 65,961 298,467
2008-09	Hunted Did not hunt	2,678 (75%) 873 (25%) 3,551 (100.0%)	218,753 71,311 290,064
2009-10	Hunted Did not hunt	2,850 (75%) 952 (25%) 3,802 (100.0%)	212,126 70,857 282,983
2010-11	Hunted Did not hunt	2,824 (75%) 953 (25%) 3,777 (100.0%)	210,129 70,911 281,040
2011-12	Hunted Did not hunt	2,761 (74%) 987 (26%) 3,748 (100.0%)	214,137 76,549 290,686
2012-13	Hunted Did not hunt	2,669 (76%) 851 (24%) 3,520 (100%)	223,808 71,360 295,168
2013-14	Hunted Did not hunt	2,586 (72%) 1,003 (28%) 3,589 (100%)	186,317 72,264 258,581
2014-15	Hunted Did not hunt	2,476 (72%) 975 (28%) 3,451 (100%)	185,186 72,923 258,109
2015-16	Hunted Did not hunt	2,505 (72%) 980 (28%) 3,485 (100%)	185,604 72,612 258,216
2016-17	Hunted Did not hunt	2,426 (72%) 945 (28%) 3,371 (100%)	181,614 70,744 252,358
2017-18	Hunted Did not hunt	2,768 (66%) 1,395 (34%) 4,163 (100%)	161,658 81,472 243,130

[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, 2007-08 through 2017-18.

	2007-08	2008-09	2009-10	2010-11	2011-12[a]	2012-13[a]	2013-14	2014-15	2015-16	2016-17	2017-18
Ducks	87,468	81,358	77,480	72,770	76,090	80,770	76,950	75,170	76,243	67,301	63,426
Canada goose	62,649	59,222	55,520	53,430	57,220	58,900	51,160	48,240	45,938	40,950	44,678
Other geese	3,695	4,411	3,280	3,650	2,710	3,830	2,810	2,770	2,520	2,321	2,512
American coot	3,454	4,166	4,090	4,610	3,480	3,990	3,820	4,410	3,261	3,519	3,446
Common snipe	1,928	1,797	1,340	1,340	1,160	1,160	1,370	820	667	899	1,285
Rails / gallinules	482	408	370	220	230	500	140	300	445	75	234
Crow[b]	8,514	10,047	10,640	9,380	10,360	11,480	8,570	7,400	7,410	7,412	11,564
American woodcock	10,843	12,171	11,760	10,790	9,430	13,310	12,030	9,650	12,596	12,877	12,615
Mourning dove[c]	13,172	11,599	10,500	10,640	8,970	9,230	10,380	9,950	8,966	7,636	8,878
Ring-necked pheasant	118,311	106,763	99,440	89,140	72,840	76,950	62,110	57,590	63,350	59,965	45,263
Ruffed grouse	90,600	86,505	87,230	92,490	88,620	91,260	81,130	83,020	79,058	82,348	80,654
Spruce grouse	10,602	8,332	9,750	8,860	10,210	7,400	10,810	10,320	8,225	9,658	8,819
Sharp-tailed grouse	6,827	6,616	5,510	7,140	6,190	6,570	6,700	5,460	5,113	6,214	5,198
Gray partridge	6,667	4,411	4,240	3,720	2,400	3,080	2,450	2,540	2,075	2,097	2,103
Gray squirrel	25,863	22,382	22,260	23,740	23,280	24,710	21,690	21,240	22,303	23,806	20,967
Fox squirrel	14,779	13,233	13,180	15,630	12,060	14,220	12,030	12,790	13,411	13,625	11,798
Eastern cottontail	19,598	17,644	16,300	15,030	12,300	16,390	14,550	13,160	11,633	16,096	14,368
White-tailed jackrabbit	2,891	2,451	1,790	2,230	2,320	1,750	1,220	1,350	890	1,423	643
Snowshoe hare	4,257	4,574	3,500	3,800	3,250	4,820	3,750	4,560	4,076	3,369	4,439
Raccoon	9,558	7,433	7,300	8,260	8,040	8,570	7,640	6,880	5,632	5,840	8,936
Red fox	5,783	5,800	7,820	7,220	6,030	5,820	5,910	4,560	4,150	3,594	5,549
Gray fox	1,928	1,879	1,790	1,640	1,390	1,580	1,730	1,050	1,186	899	2,103
Coyote	16,064	19,278	19,280	19,420	17,940	21,050	17,650	17,580	18,302	15,871	22,193
Badger	482	490	370	600	310	330	500	80	297	375	701

[a] Estimates from these years were recomputed without license type 99- free youth license to be consistent with other years of data.
[b] Crow season added in 1989.
[c] Mourning dove season added in 2004.

Table 3. Estimated harvest per active hunter by species, 2007-08 through 2017-18.

	2007-08	2008-09	2009-10	2010-11	2011-12[a]	2012-13[a]	2013-14	2014-15	2015-16	2016-17	2017-18
Ducks	8.1	8.1	7.4	8.5	9.0	9.7	10.2	9.3	8.7	9.0	10.9
Canada geese	3.9	4.9	4.1	4.8	4.9	5.1	4.5	4.6	4.0	5.0	6.0
Other geese	2.1	3.2	1.9	1.1	1.8	2.3	2.5	2.4	1.8	3.1	3.2
American coot	4.6	5.7	3.6	5.7	3.0	4.2	4.0	3.9	4.9	6.1	5.8
Common snipe	2.0	1.2	1.1	1.4	1.2	1.2	1.7	0.6	0.3	2.2	1.5
Rails/gallinules	5.3	0.4	0.8	0.3	1.7	0.2	0.5	0.2	2.3	n.a.[b]	7.2
Crow[c]	6.4	5.2	5.3	6.1	7.9	7.9	7.9	7.6	7.8	6.6	9.5
American woodcock	2.6	2.4	3.0	2.8	2.6	2.3	2.7	2.7	3.0	3.6	3.1
Mourning dove[d]	7.7	11.4	10.5	9.4	8.2	10.0	7.8	10.4	10.8	7.7	9.9
Ring-necked pheasant	5.5	4.9	4.0	4.0	2.7	3.3	2.7	2.7	3.8	3.3	3.8
Ruffed grouse	3.2	3.7	4.1	5.0	4.3	3.7	3.6	3.6	3.4	3.8	3.5
Spruce grouse	1.7	2.0	2.0	1.7	1.8	1.6	1.2	1.4	1.2	1.6	1.4
Sharp-tailed grouse	2.0	2.1	1.7	2.4	1.9	1.6	1.1	1.6	1.6	1.4	2.1
Gray partridge	1.6	2.2	1.9	2.5	1.6	1.7	1.0	1.4	1.5	1.8	2.2
Gray squirrel	5.2	5.4	4.9	5.9	5.0	5.1	3.9	4.3	4.3	4.0	5.0
Fox squirrel	3.2	3.9	4.1	3.9	4.0	3.5	2.8	3.2	3.5	2.9	3.6
Eastern cottontail	4.0	4.5	3.5	3.6	2.8	3.9	2.8	2.9	3.6	3.1	3.3
White-tailed jackrabbit	3.3	2.6	1.5	3.2	2.2	1.1	1.5	0.8	0.8	0.8	0.9
Snowshoe hare	1.4	2.5	1.5	1.8	2.6	3.5	1.7	1.7	1.6	1.8	2.4
Raccoon	4.9	9.7	9.1	9.4	5.5	5.6	6.1	7.7	6.8	3.8	7.7
Red fox	1.1	0.8	1.3	1.2	1.2	1.4	0.9	0.7	0.9	0.6	1.7
Gray fox	0.3	1.3	1.0	1.5	0.8	0.2	0.2	0.6	0.7	0.2	1.8
Coyote	2.1	2.4	2.4	2.3	1.9	2.5	1.3	1.0	1.9	1.5	2.5
Badger	0.3	1.0	2.0	1.0	0.8	1.0	0.6	1.0	0.5	1.0	1.1

[a] Estimates from these years were recomputed without license type 99- free youth license to be consistent with other years of data.
[b] Only 1 respondent indicated they hunted rails and they reported 0 bagged.
[c] Crow season added in 1989.
[d] Mourning dove season added in 2004.

Table 4. Mean harvest for successful hunters and hunter success rates (%), 2007-08 through 2017-18.

	2007-08	2008-09	2009-10	2010-11	2011-12[a]	2012-13[a]	2013-14	2014-15	2015-16	2016-17	2017-18
Ducks	9.5 (85)	9.8 (83)	9.2(80)	10.3 (83)	10.5 (85)	11.1 (87)	11.7 (87)	11.0 (85)	10.6 (82)	10.9 (83)	12.5 (87)
Canada geese	5.5 (71)	6.4 (77)	5.6 (73)	6.1 (80)	6.3 (78)	6.5 (78)	5.8 (77)	6.6 (69)	5.7 (71)	7.1 (70)	7.4 (81)
Other geese	4.2 (50)	6.3 (50)	3.5 (55)	2.6 (41)	3.4 (51)	4.4 (52)	5.5 (46)	4.3 (54)	4.0 (44)	8.0 (39)	8.6 (37)
American coot	6.3 (74)	6.9 (82)	5.5 (65)	7.2 (79)	4.4 (69)	5.2 (81)	5.2 (75)	5.0 (78)	6.7 (73)	7.6 (81)	8.1 (71)
Common snipe	2.9 (71)	1.7 (73)	1.8 (61)	2.2 (67)	1.6 (73)	2.1 (57)	2.1 (79)	1.4 (45)	1.0 (33)	3.2 (67)	2.5 (59)
Rails / gallinules	6.4 (83)	1.0 (40)	1.3 (60)	1.0 (33)	5.0 (33)	1.0 (17)	1.0 (50)	1.0 (25)	3.5 (67)	n.a.[b]	14.5 (50)
Crow[c]	7.3 (88)	5.9 (88)	5.9 (90)	6.7 (91)	8.9 (88)	8.8 (90)	9.4 (84)	8.7 (87)	8.3 (94)	7.6 (86)	11.0 (86)
American woodcock	3.7 (69)	3.3 (74)	4.1 (73)	3.6 (76)	3.8 (70)	3.4 (68)	3.8 (70)	4.2 (64)	4.4 (67)	5.4 (67)	4.5 (69)
Mourning dove[d]	9.8 (79)	13.2 (87)	11.4 (92)	11.1 (85)	10.5 (78)	12.5 (80)	9.2 (85)	12.5 (83)	13.3 (81)	10.3 (75)	11.6 (86)
Ring-necked pheasant	7.1 (78)	6.4 (77)	5.8 (69)	5.6 (72)	4.4 (63)	4.9 (67)	4.2 (64)	4.3 (61)	5.4 (71)	5.0 (65)	5.5 (69)
Ruffed grouse	4.7 (69)	5.0 (74)	5.5 (74)	6.6 (76)	5.9 (74)	5.2 (71)	5.2 (68)	5.1 (71)	4.9 (69)	5.3 (70)	4.8 (73)
Spruce grouse	3.1 (54)	3.0 (68)	3.1 (64)	2.4 (71)	3.0 (61)	2.8 (57)	2.4 (51)	2.5 (56)	2.4 (50)	2.7 (58)	2.4 (57)
Sharp-tailed grouse	4.4 (46)	3.2 (64)	3.0 (58)	3.5 (68)	3.1 (61)	3.4 (48)	3.2 (33)	3.8 (41)	3.1 (51)	2.9 (47)	4.0 (53)
Gray partridge	3.0 (55)	3.4 (65)	3.3 (58)	4.2 (58)	3.2 (52)	3.1 (54)	2.5 (38)	4.4 (32)	2.7 (57)	3.3 (54)	4.3 (50)
Gray squirrel	5.9 (88)	6.2 (88)	5.8 (86)	7.0 (84)	6.3 (78)	6.3 (80)	5.0 (77)	5.5 (78)	5.3 (81)	5.1 (79)	5.7 (89)
Fox squirrel	3.9 (83)	4.6 (83)	4.8 (85)	4.6 (86)	5.4 (74)	4.4 (80)	3.7 (75)	4.3 (75)	4.9 (71)	3.8 (76)	4.3 (83)
Eastern cottontail	4.8 (84)	5.3 (85)	4.3 (83)	4.4 (81)	4.1 (69)	5.5 (71)	3.5 (79)	4.1 (73)	5.0 (72)	4.0 (77)	4.0 (3)
White-tailed jackrabbit	4.5 (72)	3.8 (70)	2.1 (71)	4.6 (70)	3.5 (63)	2.3 (48)	5.2 (29)	1.8 (44)	2.0 (42)	1.9 (42)	1.7 (55)
Snowshoe hare	2.2 (62)	3.5 (71)	2.6 (60)	2.6 (69)	3.8 (69)	5.0 (69)	2.9 (58)	3.0 (57)	3.0 (53)	3.2 (56)	3.9 (63)
Raccoon	5.4 (90)	10.6 (91)	9.6 (95)	10.0 (94)	6.1 (89)	6.1 (93)	6.9 (89)	8.5 (90)	7.7 (88)	4.1 (92)	8.2 (93)
Red fox	2.3 (46)	1.5 (49)	2.4 (54)	2.3 (54)	2.4 (49)	2.7 (50)	2.0 (44)	1.7 (41)	1.6 (57)	1.4 (44)	2.6 (63)
Gray fox	1.0 (29)	3.3 (39)	2.5 (42)	4.0 (36)	2.5 (33)	1.0 (16)	1.5 (17)	2.0 (29)	1.4 (50)	1.0 (25)	2.8 (64)
Coyote	4.4 (49)	4.4 (54)	4.6 (52)	4.0 (57)	4.0 (47)	5.1 (49)	2.7 (50)	2.4 (41)	3.4 (57)	3.1 (49)	4.3 (59)
Badger	1.0 (33)	1.2 (83)	2.5 (80)	1.0 (100)	1.5 (50)	1.0 (100)	1.0 (57)	1.0 (100)	1.0 (50)	1.2 (80)	1.6 (67)

[a] Estimates from these years were recomputed without license type 99- free youth license to be consistent with other years of data.
[b] Only 1 respondent indicated they hunted rails and they reported 0 bagged.
[c] Crow season added in 1989.
[d] Mourning dove season added in 2004.

Table 5[a]. Statewide (resident and non-resident) small game hunting license sales and estimated hunter harvest, 2007-08 through 2017-18.

	2007-08	2008-09	2009-10	2010-11	2011-12[b]	2012-13[b]	2013-14	2014-15	2015-16	2016-17	2017-18
Small game license sales[c]	298,467	290,064	282,983	282,227	271,768	264,063	258,581	258,109	258,208	252,358	243,130
State duck stamp sales	100,134	95,675	89,942	88,069	89,681	90,052	93,412	94,265	92,176	88,905	86,258
Pheasant stamp sales	129,315	123,270	110,456	104,286	86,868	90,541	77,597	74,295	77,750	76,920	71,925
Estimated harvest[d]											
Ducks	708,491	658,186	572,220	619,600	681,550	784,360	782,810	699,620	663,811	606,458	688,225
Canada geese	243,705	288,411	227,160	257,530	281,630	301,550	229,120	221,620	185,012	204,825	267,192
Other geese	7,723	13,895	6,250	3,940	4,800	8,820	7,130	6,510	4,448	7,188	8,062
American coot	16,061	23,871	14,810	26,340	10,520	16,720	15,130	17,050	15,861	21,564	19,976
Common snipe	3,933	2,210	1,490	1,940	1,390	1,420	2,310	520	223	1,948	1,928
Rails / gallinules	2,569	163	300	80	390	80	70	80	1,039	n.a.[e]	1,697
Crow[f]	54,319	51,742	56,350	57,300	81,500	90,260	67,440	56,020	57,576	48,590	110,034
American woodcock	27,866	29,210	35,430	29,770	24,980	30,360	31,920	25,810	37,270	46,867	38,546
Mourning dove[g]	101,161	132,577	109,940	100,230	74,000	92,760	80,480	103,370	96,552	58,618	88,021
Ring-necked pheasant	655,443	522,071	398,130	359,400	198,500	250,140	169,100	152,800	243,176	196,141	171,883
Ruffed grouse	293,544	318,338	357,420	465,580	383,150	341,320	288,410	301,190	267,997	308,955	285,180
Spruce grouse	17,705	16,997	19,130	14,960	18,640	11,980	13,110	14,590	9,856	15,348	12,032
Sharp-tailed grouse	13,790	13,695	9,530	16,820	11,600	10,650	7,130	8,530	7,929	8,610	11,097
Gray partridge	11,000	9,660	8,040	9,150	3,950	5,160	2,380	3,590	3,187	3,745	4,557
Gray squirrel	133,194	121,534	109,790	138,920	115,840	126,110	84,010	91,250	96,400	95,374	105,712
Fox squirrel	47,736	51,079	53,970	61,690	48,100	49,750	33,940	40,840	46,383	39,603	41,994
Eastern cottontail	78,588	79,927	57,760	53,870	34,640	64,140	40,710	38,820	41,716	49,187	47,135
White-tailed jack rabbit	9,482	6,446	2,610	7,220	5,180	1,910	1,870	1,050	742	1,124	585
Snowshoe hare	5,789	11,343	5,360	6,770	8,430	16,800	6,200	7,860	6,374	5,990	10,864
Raccoon	46,739	72,026	66,700	77,690	44,080	48,340	46,690	52,800	38,387	22,312	68,685
Red fox	6,188	4,408	10,270	8,780	7,120	7,990	5,190	3,220	3,780	2,247	9,229
Gray fox	559	2,443	1,860	2,380	1,160	250	430	600	816	225	3,798
Coyote	34,377	45,689	46,070	44,050	33,410	51,990	23,630	17,430	35,123	24,481	56,184
Badger	159	490	750	600	230	330	290	80	149	375	760

[a] Harvest estimates in this table, and the number of hunters and mean take per hunter in Table 4, 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 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.

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

[c] Includes all types of Small game licenses. Duplicate and free licenses not included.

[d] Estimates based upon response of hunters to questionnaires.

[e] Only 1 respondent indicated they hunted rails and they reported 0 bagged.

[f] Crow season added in 1989.

[g] Mourning dove season added in 2004.

Table 6. Mail survey results of nonresident small game hunters, 2007-08 through 2017-18.

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Nonresident licenses issued[a]	7,858	7,114	6,934	6,695	6,312	6,456	6,031	6,056	6,755	6,701	6,854
Questionnaires:											
Number mailed	185	226	196	163	169	166	162	165	169	190	200
Number not delivered	11	15	10	6	11	11	10	12	5	15	19
Number (percent) returned	101 (58)	89 (42)	105 (54)	107 (66)	91 (54)	71 (43)	81 (50)	70 (42)	73 (43)	78 (41)	99 (50)
Estimated nonresidents and (percent) of all licensed nonresidents hunting:											
Ducks	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)	2,340 (38.6)	1,850 (27.4)	2,320 (34.6)	2,350 (34.3)
Canada goose	934 (12)	1,587(22)	726 (10)	1,314 (19.6)	1,620 (25.6)	1,360 (21.1)	1,270 (21.0)	1,300 (21.4)	650 (9.6)	770 (11.5)	1,730 (25.3)
Ruffed grouse	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)	2,600 (42.9)	2,870 (42.5)	3,520 (52.6)	2,280 (33.3)
Ring-necked pheasant	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)	1,380 (22.9)	1,480 (21.9)	1,550 (23.1)	1,520 (22.2)
Raccoon[b,c]	78 (1.0)	0 (0)	0 (0)	63 (0.9)	0 (0)	0 (0)	80 (1.2)	0 (0)	0 (0)	170 (2.6)	70 (1.0)
Estimated nonresident take:											
Ducks	22,718	15,463	11,755	17,055	13,840	20,380	20,410	13,060	16,863	17,701	15,717
Canada goose	3,501	5,762	3,698	6,334	4,050	2,270	3,650	2,680	1,484	1,462	6,994
Ruffed grouse	7,236	6,938	8,651	12,600	8,980	10,090	4,990	9,090	13,805	11,772	6,994
Ring-necked pheasant	17,661	10,642	6,274	8,076	4,860	6,820	3,430	3,720	6,581	4,040	7,274
Raccoon [b, c]	3,268	0	0	593	0	0	1,280	0	0	172	770

[a] Excludes duplicate licenses and nonresident shooting preserve licenses.
[b] In 2008, 2009, 2011, 2012, 2014, and 2015 no non-residents reported hunting/harvesting raccoons.
[c] In 2013 and 2017 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 2016 - 2017 and 2017-18 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland, U.S.A. The entire report is available on-line at https://www.fws.gov/migratorybirds/pdf/surveys-and-data/HarvestSurveys/MBHActivityHarvest2016-17and2017-18.pdf

Table 1. Species composition of the Minnesota waterfowl harvest, 2016 and 2017. (from: Raftovich, R.V., S.C. Chandler, and K.K. Fleming. 2018. Migratory bird hunting activity and harvest during the 2016-17 and 2017-18 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland. USA August, 2018. 71 pp).

	Minnesota Harvest					Mississippi Flyway Harvest		
Species	2016	% of Harvest	2017	% of Harvest	Percent change in Harvest 16-17	2016	2017	Percent change Harvest 16-17
Mallard	135,643	26.03	159,718	25.36	18	1,826,180	1,643,472	-11
Domestic mallard	0	0.00	0			1,186	1,184	0
American black duck	0	0.00	308	0.05		25,959	17,855	-45
Black x mallard	0	0.00	0			1,664	477	-249
Gadwall	8,198	1.57	29,543	4.69	260	662,309	623,532	-6
American wigeon	13,788	2.65	11,386	1.81	-17	91,744	108,267	15
Green-winged teal	37,637	7.22	60,317	9.58	60	627,404	717,625	13
Blue-winged /cinnamon teal	73,039	14.02	78,166	12.41	7	255,431	439,383	42
Northern shoveler	6,335	1.22	11,079	1.76	75	193,789	237,247	18
Northern pintail	9,316	1.79	13,541	2.15	45	101,403	134,643	25
Wood duck	115,520	22.17	116,326	18.47	1	582,535	610,542	5
Redhead	13,788	2.65	21,234	3.37	54	60,539	57,348	-6
Canvasback	7,080	1.36	6,155	0.98	-13	45,240	40,087	-13
Greater scaup	373	0.07	2,462	0.39	560	34,564	28,929	-19
Lesser scaup	7,080	1.36	8,617	1.37	22	67,244	185,503	64
Ring-necked duck	62,604	12.02	80,321	12.75	28	188,325	267,900	30
Goldeneye	4,099	0.79	6,770	1.07	65	33,287	31,870	-4
Bufflehead	17,887	3.43	12,925	2.05	-28	55,748	96,285	42
Ruddy duck	0	0.00	615	0.10		15,474	7,142	-117
Scoters	0	0.00	1,231	0.20		6,155	3,451	-78
Hooded merganser	8,571	1.65	8,309	1.32	-3	50,207	47,789	-5
Other mergansers	0	0.00	923	0.15		12,613	11,140	-13
Total Duck Harvest [a]	521,000		629,900			4,962,600	5,339,800	
(retrieved kill)	±14%		±15%		21	±6%	±5%	7

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

Table 2. Top 10 states in number of **adult duck hunters**, 2017, and number of hunter-days and retrieved duck kill. (from: Raftovich, R.V., S.C. Chandler, and K.K. Fleming. 2018. Migratory Bird Hunting activity and harvest during the 2016-17 and 2017-18 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland. USA August 2018. 71 pp).

State	Number of active duck hunters	Duck hunter days afield	Total duck harvest	Seasonal duck harvest per hunter
Texas	86,200 ± 20%	391,800 ± 17%	1,205,100± 26%	14.0 ± 32%
Minnesota	64,800 ± 10%	369,700 ± 13%	629,900 ± 15%	9.7 ± 18%
California	56,100 ± 13%	443,900 ± 13%	1,305,600 ± 15%	23.2 ± 20%
Arkansas	52,100 ± 11%	370,200 ± 14%	1,006,700 ± 11%	19.3 ± 15%
Louisiana	46,900 ± 12%	324,100 ± 14%	1,083,900 ± 18%	23.1 ± 21%
Wisconsin	44,100 ± 13%	286,400 ± 12%	404,600 ± 13%	9.2 ± 19%
Missouri	38,800 ± 11%	219,300 ± 15%	484,100 ± 18%	12.5 ±21%
Michigan	33,200 ± 12%	201,000 ± 14%	297,500 ± 17%	9.0 ± 21%
North Dakota	29,400 ± 7%	143,500 ± 14%	426,400 ± 21%	14.5 ± 22%
North Carolina	26,100 ± 16%	175,700 ± 28%	345,900 ± 24%	13.3 ± 28%
Mississippi Flyway		2,544,600 ± 5%	5,339,800 ± 5%	
United States		5,446,900 ± 3%	12,115,800 ± 4%	

Table 3. Top 10 states in number of **adult goose hunters**, 2017, and number of hunter-days and retrieved goose kill. (from: Raftovich, R.V., S.C. Chandler, and K.K. Fleming. 2018. Migratory Bird Hunting activity and harvest during the 2016-17 and 2017-18 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland. USA August, 2018. 71 pp).

State	Number of active goose hunters	Goose hunter days afield	Total goose harvest	Seasonal goose harvest per hunter
Minnesota	52,200 ± 10%	291,800 ± 15%	212,200 ± 16%	4.1 ± 19%
Texas	48,200 ± 17%	141,100 ± 24%	231,900 ± 36%	4.8 ± 40%
California [b]	43,900 ± 11%	268,200 ± 15%	239,000 ± 16%	5.4 ± 20%
Wisconsin	38,400 ± 10%	238,900 ± 14%	136,000 ± 18%	3.5 ± 20%
Michigan	34,500 ± 13%	209,500 ± 16%	180,500 ± 19%	5.2 ± 23%
Arkansas	28,400 ± 13%	116,000 ± 17%	188,800 ± 21%	6.7 ± 25%
North Dakota	26,700 ± 7%	118,200 ± 9%	220,500 ± 14%	8.2 ± 16%
Maryland [b]	24,500 ± 6%	127,800 ± 11%	185,600 ± 13%	7.6 ± 14%
Illinois	21,700 ± 14%	176,800 ± 19%	151,600 ± 32%	7.0 ± 35%
North Carolina	17,800 ± 21%	70,400 ± 42%	43,600 ± 34%	2.4 ± 40%
Mississippi Flyway		1,590,000 ± 6%	1,350,000 ± 8%	
United States [b]		3,386,000 ± 4%	3,602,500 ± 5%	

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

2018 LIGHT GOOSE CONSERVATION ORDER HARVEST IN MINNESOTA

Steve Cordts, Wildlife Populations and Regulations Unit

Margaret Dexter, Wildlife Populations and Research Unit

INTRODUCTION

This report documents results of the 2018 Light Goose Conservation Order hunter mail questionnaire survey.

METHODS

Minnesota held a light goose Conservation Order harvest from 15 February - 30 April 2018. 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.

RESULTS AND DISCUSSION

A total of 912 permits were issued and 353 responses (43%) to the questionnaire were obtained (Table 1). In calculating harvest estimates, we assumed that the 559 non-respondents participated in the conservation action and took light geese in the same manner as respondents. Three hundred twenty one people attempted to take light geese during the conservation order period. Active participants pursued light geese for 1,204 days and 1,021 light geese were shot and retrieved. This was an average retrieved take of 3.8 geese per active participant. Another 78 light geese were estimated wounded and not retrieved.

ACKNOWLEDGMENTS

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

This project was funded in part by the Wildlife Restoration (Pittman-Robertson) Program.

Figure 1. Light Goose Conservation Order hunter mail questionnaire, 2018.

MINNESOTA 2018 LIGHT GOOSE HARVEST SURVEY
For the Period of February 15 - April 30, 2018 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 February 15 - April 30, 2018. 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 2018 hunting experience.**
THANK YOU! Lou Cornicelli, Wildlife Research Program Manager, Division of Fish and Wildlife, MN DNR.

1. Did you hunt light geese in Minnesota during February 15 - April 30, 2018? 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 February 15 - April 30, 2018? _____

3. How many light geese did you personally shoot and retrieve in Minnesota?_____

4. How many light geese did you personally shoot, but were UNABLE to retrieve?_____

Table 1. Summary of Light Goose Conservation Order harvest in Minnesota, 2006 – 2018.

Statistic	Year												
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total permits sold	1,363	1,292	1,406	1,670	952	994	1,048	1,405	1,278	1,141	1,143	974	912
Useable returns	955	921	910	1,057	671	659	675	810	759	520	491	393	353
Response rate (%)	70.0	71.0	65.0	63.0	72.3	67.1	65.3	58.3	60.0	46	43	41	43
Active hunters (%)	37.3	39.8	54.9	66.0	40.8	45.7	56.9	54.9	44.0	50	47	48	35
Estimated total hunters	516	514	773	1,103	389	455	600	770	560	569	534	471	321
Estimated hunter days	2,665	2,302	3,404	4,647	1,475	1,830	2,270	3,070	2,580	2,434	2,605	1,966	1,204
Mean days/hunter	5.2	4.5	4.4	4.2	3.8	4.0	3.8	4.0	4.6	4	5	4	3.8
Estimated harvest (shot & retrieved)	1,360	1,786	2,409	4,366	559	1,554	2,620	2,430	2,880	3,266	2,121	1,713	1,021
Mean harvest/hunter	2.6	3.5	3.1	4.0	1.4	3.4	4.4	3.2	5.1	6	4	4	3.2
Estimated crippling losses	163	172	302	640	70	145	210	370	210	349	215	298	78
Percent using unplugged guns	42.3	43.6	46.7	46.8	44.9	44.2	43.0	49.4	48.8	NA	NA	NA	NA
Est. number hunters using unplugged guns	215	224	361	516	175	201	260	380	270	NA	NA	NA	NA
Est. number geese **shot** with unplugged guns	689	1,032	1,275	2,413	348	742	1,510	1,670	2,060	NA	NA	NA	NA
Est. harvest with shell 4-5-6	287	277	339	822	131	311	460	620	770	NA	NA	NA	NA
Percent using electronic calls	14.4	17.1	19.1	23.5	25.9	21.3	22.2	24.5	27.8	NA	NA	NA	NA
Est. number hunters using e-calls	73	88	148	260	101	97	130	190	160	NA	NA	NA	NA
Est. harvest while using e-calls	280	329	566	1,171	192	531	460	620	1,710	NA	NA	NA	NA
Percent hunting 1/2-hr after sunset	43.9	38.3	42.3	43.1	39.7	39.7	42.4	33.4	36.2	NA	NA	NA	NA
Est. number hunting after 1/2-hr sunset	223	197	326	475	154	180	250	260	200	NA	NA	NA	NA
Est. harvest 1/2-hr after sunset	246	209	511	713	87	238	240	260	550	NA	NA	NA	NA

MINNESOTA'S WILD TURKEY HARVEST – FALL 2017, SPRING 2018

Lindsey Messinger, Farmland Wildlife Populations and Research Group

SUMMARY OF SEASON STRUCTURE

This report summarizes the fall 2017 and spring 2018 Minnesota wild turkey harvest. The fall turkey season was 30 days in length (September 30 - October 29) and allowed for an unlimited number of hunters to take one wild turkey of either sex in one of 12 pre-selected permit areas (501-512, Figure 1). Fall permits for youth hunters were valid statewide (i.e., no restrictions on permit area); archery and firearms hunters were restricted to a declared permit area.

There were no major changes to the spring turkey season structure in 2018. The spring turkey season was 44 days in length (18 April – 31 May) and allowed hunters to take one bearded wild turkey (tom, jake, or bearded hen). The spring turkey season was divided into six distinct time periods with permits valid during a specified time period (A-F) and permit area (501-512; Figure 1). A restricted number of permits were available through a lottery system in each permit area during time periods A and B (A: April 18-24, and B: April 25-May 1). Permits not sold during the lottery process were available for over-the-counter surplus sales. Permits for the remaining time periods (C: May 2-8, D: May 9-15, E: May 16-22, F: May 23-31) were available over-the-counter in unlimited quantities in each permit area. Hunters possessing a permit unfilled during time periods A-E were permitted to hunt during the final time period (F) in their respective permit area. Permits for archery and youth hunters were valid the entire season and statewide (i.e., no time period or permit area restrictions).

FALL 2017 SEASON

Permits Issued

Permits issued to hunters decreased 10% from 8,469 permits in 2016 to 7,650 permits in 2017 (Table 1, Figure 2). Youth permit sales accounted for 22% of total license sales during the fall 2017 season which was similar to 2016.

Harvest

There were 1,015 harvested turkeys registered during the fall 2017 season which decreased 14% from 1,176 harvested turkeys registered in 2016 (Table 1; Figure 2). Hunter success rate increased slightly (2%) from 2016 to 13% in 2017, and was similar to the 5-year average. The greatest number of permits were issued in permit areas 507, 508, and 501. This effort was reflected in harvest with these three permit areas also registering the highest harvest (Table 2). Statewide, females (hens) represented 50% of the total harvest while juvenile males (jakes) and mature males (toms) represented 16% and 34% of the total harvest respectively (Table 2).

SPRING 2018 SEASON

Permits Issued

There were 45,399 permits issued during the spring 2018 season, including 8,739 general lottery and landowner permits, 9,807 youth permits, 11,200 archery permits, and 15,621 surplus over-the-counter permits (Table 3). The total number of permits purchased decreased 7% in

2018 (Table 4). Youth permit sales composed 22% of total permit sales while archery permits accounted for 25% of total permit sales (Table 3). Archery permits issued in 2018 were similar to 2017 (Table 4) and may indicate archery permit sales are leveling after regulation changes expanded opportunity, allowing archery hunters to hunt statewide during any time period. Purchase of lottery permits declined by 14% from 2017, continuing a declining trend. Surplus permits issued also decreased 6% in 2017. The greatest number of regular gun permits (archery and youth permits are valid state-wide) were issued in permit areas 507, 501, and 508 (in descending order; Table 5). Permit areas 507 and 501 represent core turkey range in Minnesota and permit area 508 represents an area of potentially expanding opportunity as this area was expanded in 2016 to include the entire north-central and north-eastern regions of Minnesota. Permit sales for the first non-lottery time period (C) were the highest state-wide, followed by the lottery time-periods (A & B; Table 6).

Harvest

Hunters registered 10,705 turkeys (Tables 3, 4, 5, & 7), which was below the 5-year average (11,581 turkeys, Figure 3). Although harvest remained the highest in the core turkey range in permit areas 507 (2,826 turkeys) and 501 (2,040 turkeys), harvest in permit area 508 (1,698 turkeys) surpassed 503 (1,168 turkeys) in 2018 for the second year in a row. Youth harvest (1,763 turkeys) and lottery harvest declined 18% and 19%, respectively, from 2017 whereas archery (1,661 turkeys) and surplus (4,211 turkeys) harvest were similar to 2017 (Table 3). These trends may be attributable to weather conditions (see below).

WEATHER SUMMARY

The winter of 2017-2018 was more normal with variable snowfall across the wild turkey range, but with at least one 2-week period where snow depths exceeded 6 inches across much of the core range. However, these conditions were likely not a significant factor beyond normal winter mortality for wild turkeys. Spring weather was wet and cold across much of the turkey range. There were multiple snow events in April with accumulations between 3-8 inches. Late-season snowfall likely delayed nesting activities and vegetation “green up” was later than normal. Likewise, conditions were wet, especially in permit areas 501 and 503, where precipitation was 1 inch or more above normal across much of these areas. Snow was still present across much of the turkey range during period A, despite opening almost a week later than in 2017. These weather conditions likely impacted hunter participation and effort, and therefore harvest, especially for gun hunters during the first lottery period. Warmer than normal conditions late in the season during period F may have also impacted hunter participation, effort, and ultimately harvest.

Table 1. Permits available, number of applicants, permits issued, registered harvest, and hunter success rates for fall wild turkey seasons in Minnesota, 2008-2017.

Year	Permits available	Applicants	Permits issued	Registered harvest	Hunter success (%)[a]
2008	7,560	5,834	4,981	1,187	23.8
2009	9,330	7,738	5,019	1,163	23.2
2010	10,430	6,869	6,607	1,353	20.5
2011	10,430	3,538	5,382	953	17.7
2012[b]	Unlimited	N/A	10,628	1,752	16.5
2013[b]	Unlimited	N/A	8,060	1,137	14.1
2014[b]	Unlimited	N/A	8,236	1,216	14.8
2015[b]	Unlimited	N/A	8,109	1,213	15.0
2016[b]	Unlimited	N/A	8,469	1,176	13.9
2017	Unlimited	N/A	7,650	1,015	13.3

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

[b] Permits issued, registered harvest, and derived hunter success (%) was reviewed and adjusted to address inconsistencies in data query and previous reporting.

Table 2. Permits issued, registered harvest by sex, total registered harvest, regular gun harvest, and gun hunter success rates during the 2017 fall wild turkey season in Minnesota.

Permit Area	Regular permits issued[a]	Toms[b]	Jakes[b]	Hens[b]	Total registered harvest[b]	Regular gun harvest[c]	Regular gun success rates (%)
501	912	62	21	82	165	141	15.5
502	82	1	1	4	6	5	6.1
503	624	35	12	60	107	88	14.2
504	197	6	3	6	15	10	5.1
505	353	18	6	21	45	41	11.6
506	217	5	5	15	25	22	10.1
507	1,509	98	49	151	298	258	17.1
508	1,161	63	43	106	212	181	15.6
509	158	15	8	18	41	24	15.2
510	605	38	16	41	95	88	14.5
511	69	0	0	1	1	1	1.4
512	79	2	1	2	5	5	6.3
TOTAL	**5,968**	**343**	**165**	**507**	**1,015**	**864**	**14.5**

[a] Archery and youth permits were not included (valid in all permit areas).

[b] Total harvest for all license types.

[c] All firearm harvest except youth.

Table 3. Total permits sold, harvest, and success rate by type of permit during the spring 2018 wild turkey season in Minnesota.

	Total permits sold	Harvest	Success (%)[a]
Lottery	8,739	3,070[b]	35.2
Surplus	15,621	4,211	27.0
Youth	9,807	1,763	18.0
Archery	11,200	1,661	14.8
Total	45,367[c]	10,705	23.6

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

[b] Includes military and military disabled veteran permit types.

[c] Does not include military permit types. There were 32 military permits issued in 2018.

Table 4. Permits available, permits issued, registered harvest, and relative success rates from 2009-2018 for all spring wild turkey hunting seasons in Minnesota.

	Permits				Harvest	
Year	Available	Issued	Issued (%)	Archery Permits Issued	Registered harvest	Success (%)[a]
2009[b]	42,328	36,193	85.5		12,210	33.7
2010[b]	55,982	46,548[c]	83.0	2,910	13,467	28.9
2011[b]	Unlimited	43,521[c]	N/A	2,462	10,055	23.1
2012[b,d]	Unlimited	38,155[c]	N/A	3,325	11,276	29.6
2013[b,d]	Unlimited	40,430[c]	N/A	3,885	10,321	25.5
2014[b,d]	Unlimited	42,134[c]	N/A	4,760	11,425	27.1
2015[b,d]	Unlimited	40,824[c]	N/A	4,930	11,694	28.6
2016[b,d]	Unlimited	38,895[c]	N/A	10,132	12,277	31.6
2017[b,d]	Unlimited	37,882[c]	N/A	11,031	11,803	31.2
2018[b]	Unlimited	34,199[c]	N/A	11,200	10,705	31.3

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

[b] Youth hunt data included.

[c] Permits issued to archery hunters were not included (to facilitate comparison to previous years).

[d] Permits issued, derived issued %, registered harvest, and derived hunter success (%) were reviewed and adjusted to address inconsistencies in data query and previous reporting.

Table 5. Permits issued, registered harvest, and hunter success during the 2018 spring wild turkey season in Minnesota.

Permit area	Regular permits issued[a]	Total registered harvest[b]	Regular gun harvest[c]	Regular gun success rates (%)
501	5,855	2,240	1,739	29.7
502	485	139	114	23.5
503	2,981	1,168	823	27.6
504	593	267	167	28.2
505	1,905	780	595	31.2
506	915	346	232	25.4
507	5,946	2,826	1,830	30.8
508	3,469	1,698	1,078	31.1
509	315	201	107	34.0
510	1,715	931	543	31.2
511	136	64	32	23.5
512	77	45	21	27.3
TOTAL	**24,392**	**10,705**	**7,281**	**29.8**

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

[b] Total harvest for all license types.

[c] All lottery, military, and surplus permit harvest, excluding youth and archery licenses.

Table 6. Permits available and issued by license type (resident and non-resident) and time period for the spring 2018 wild turkey season in Minnesota.

Time period	Permits available	General lottery[a]	Surplus	Youth	Archery
A: Apr. 18-24	7,010	5,351	217	Not applicable – Youth and archery permits were valid during all time periods.	
B: Apr. 25-May 1	7,010	3,399	2,542		
C: May 2-8	Unlimited	9	7,508		
D: May 9-15	Unlimited	8	2,989		
E: May 16-22	Unlimited	2	1,818		
F: May 23-31	Unlimited	2	547[b]		
Total[a]	**Unlimited**	**8,771**	**15,621**	**9,807**	**11,119**

[a] Includes landowner and military permits.

[b] Number of surplus licenses sold for this time period. Actual number of hunters in unknown because all unsuccessful hunters from previous time periods were permitted to hunt in the final (F) season.

Table 7. Total harvest by time period during the spring 2018 wild turkey season in Minnesota.

Time period	Total harvest	Harvest (%)
A	2,946	27.5
B	2,672	25.0
C	2,591	24.2
D	1,038	9.7
E	677	6.3
F	781	7.3
Total	**10,705**	**100**

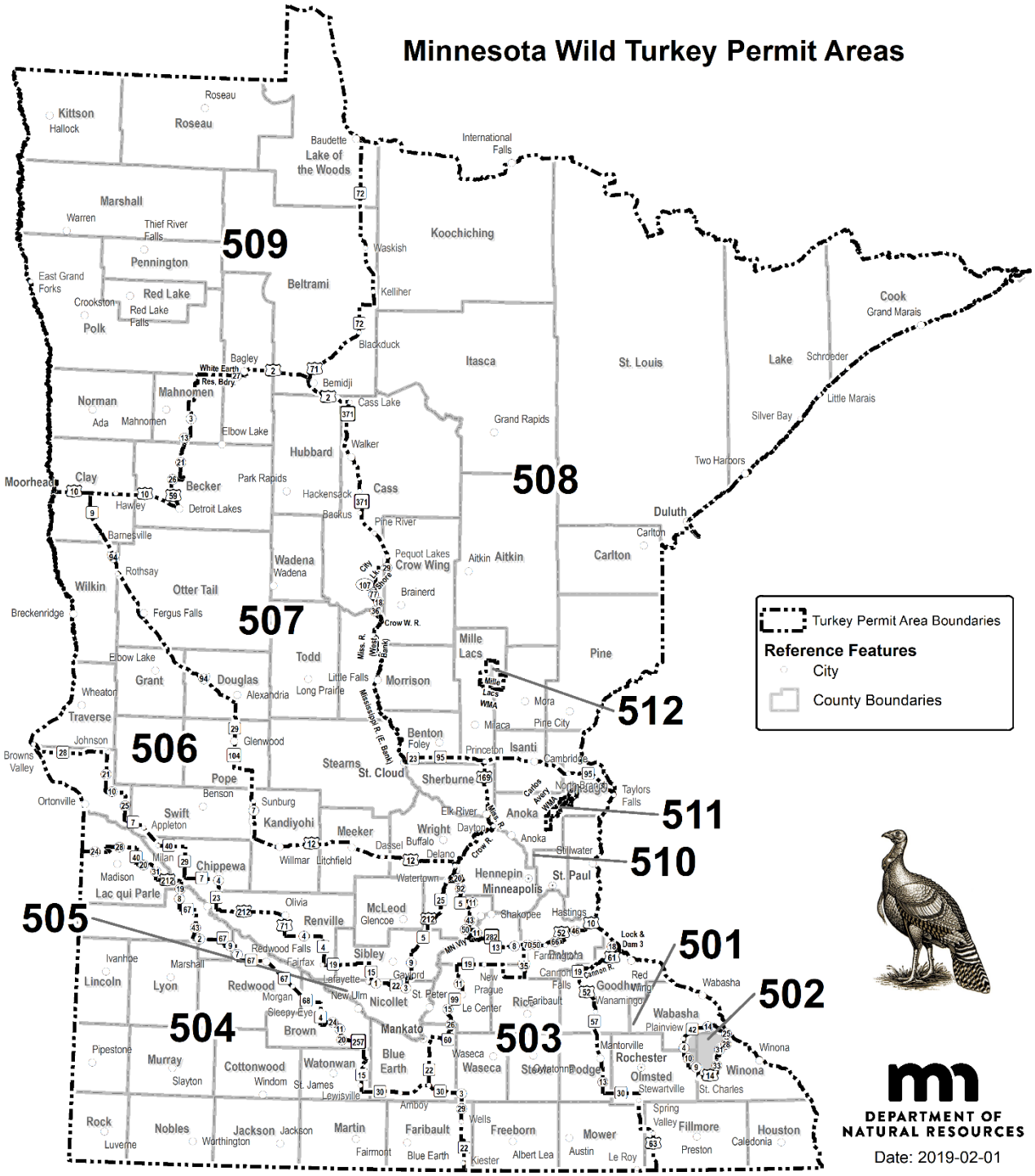

Figure 4. Permit areas open for hunting, fall 2017 and spring 2018 wild turkey seasons in Minnesota.

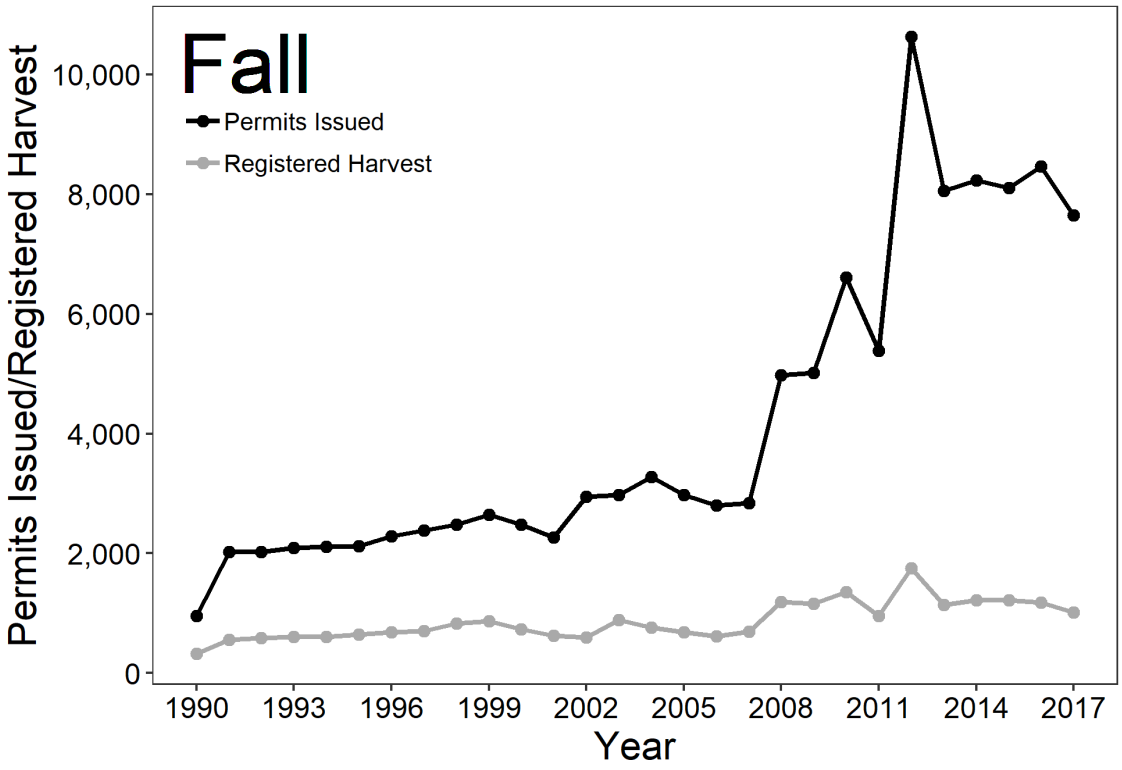

Figure 5. Permits issued and registered harvest for fall wild turkey seasons in Minnesota, 1990-2017.

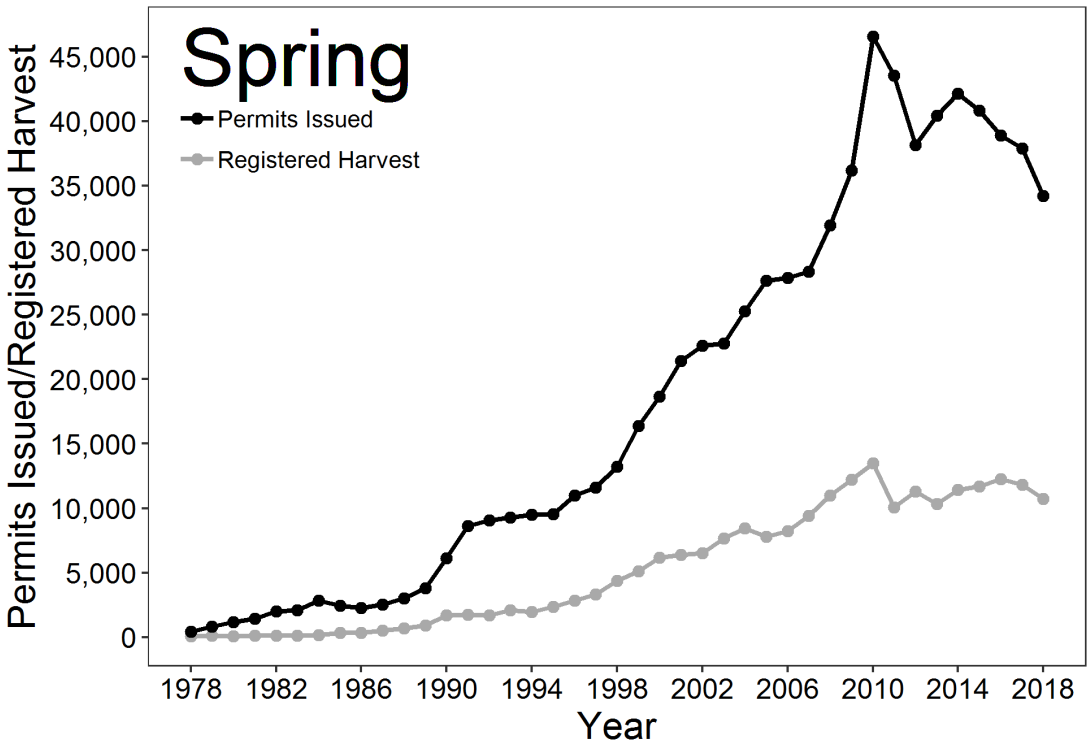

Figure 6. Permits issued and registered harvest for spring wild turkey seasons in Minnesota, 1978-2018.

2017 MINNESOTA PRAIRIE-CHICKEN HARVEST SURVEY

Charlotte Roy, Forest Wildlife Populations and Research Group

SUMMARY OF FINDINGS

The Minnesota DNR conducts a postcard survey of Greater Prairie-chicken (*Tympanuchus cupido pinnatus*) hunters each year to estimate hunter numbers and harvest, and to evaluate hunter success and satisfaction. In 2017, 97 hunters were estimated to have gone afield and harvested 86 prairie-chickens and 21 sharp-tailed grouse (*Tympanuchus phasianellus*) during prairie-chicken hunts. Hunter success (0.55) and satisfaction (4.0 on a scale of 1-5) were similar to recent years and consistent with improvement following changes to the permit areas and season (i.e., longer length and earlier dates) in 2013.

INTRODUCTION

Prairie-chicken (*Tympanuchus cupido pinnatus*) hunting in Minnesota 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 (Figures 1 and 2). 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 was moved from mid-October to open in late-September. The earlier season was an attempt to improve hunter success and satisfaction by providing hunting opportunities before pheasant season opened (to reduce hunter interference and flushing distance). These changes were based on hunter comments received by DNR Wildlife Managers during prior years and input received during a public input survey during March 2013. Responses of surveyed prairie-chicken hunters in 2015 provided additional evidence that the earlier season is preferred by most, although hunter preferences were clearly divided. In 2017, the prairie-chicken season opened 30 September and closed 8 October.

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 U.S. Highway 2 in the western part of the state (i.e., in 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 purchasers were 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. Five weeks later I sent another postcard to people who had not yet responded. Postcards contained 6 questions: did you purchase a permit, 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 in the analysis. I compared responses from the first mailing to responses from the second mailing to examine possible nonresponse bias. I did not detect a bias in the number of hunters, days afield, sharp-tailed grouse harvest, and hunter satisfaction, so I assumed that non-respondents would have had the same response as respondents from both mailings when estimating these metrics. However, a nonresponse bias was detected in the number of birds harvested. Therefore, I calculated the number of birds harvested, birds per harvester, and hunter success for each permit area assuming that non-respondents were more similar to respondents from the second mailing than to those from the first mailing. 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 2017 was 125 permits, and 317 individuals applied in the lottery (Table 1). Of the 127 lottery winners, 99—including 2 landowners—later purchased a permit. Three additional winners who were not on the list of purchasers returned surveys indicating that they hunted, so they were added to the sample of “purchasers” for this analysis and summary. Two permit areas (804A and 813A) had fewer applicants than permits available. The 3 surplus permits were not made available.

Ninety-one permit purchasers (89%, n = 102) responded to the survey; 70 (69%) responded to the first mailing and 21 (21%) to the second mailing. This response rate is similar to survey response rates during 2011 (90%), 2012 (95%), and 2014 (87%), and slightly higher than in 2010 (84%), 2013 (83%), and 2016 (83%). Respondents to the first mailing reported harvesting prairie-chickens at higher rates (69% vs. 25%) and reported harvesting more chickens (1.1 vs. 0.4 birds per hunter). Thus, hunters that were more successful were more likely to respond to the survey. However, respondents to the first mailing were as likely as respondents to the second mailing to have hunted (96% vs. 90% of respondents), they hunted a similar number of days (2.4 vs. 1.9), harvested a similar number of sharp-tailed grouse (0.3 vs. 0.1 birds per hunter), and reported similar satisfaction (mean 4.1 vs. 3.8, median 4 vs. 4), with 88% and 90% of respondents reporting satisfaction scores $\geq$3, respectively.

To correct for the nonresponse bias in harvest this year, I assumed that non-respondents to the survey would have had similar success to respondents to the second mailing (i.e., class method of correction). This assumption may not eliminate nonresponse bias if non-respondents were less successful than respondents to the second mailing, but should more closely approximate the actual harvest than assuming similar responses of non-respondents and all respondents.

Eighty-six respondents reported that they hunted prairie-chickens (Table 2). I estimated the total number of hunters to be 97 (i.e., purchasers who went afield) after accounting for hunting by non-respondents. Hunters reported harvesting 84 prairie-chickens and total harvest after

accounting for non-respondents was estimated as 86 prairie-chickens. An estimated 53 hunters bagged ≥1 chicken. Survey respondents reported harvesting 21 sharp-tailed grouse while hunting prairie-chickens from permit areas 803A, 804A, 805A, and 806A (Figure 1). Although successful hunters reported higher average satisfaction (4.4) than respondents that were not successful (3.4), satisfaction of prairie-chicken hunters was high overall.

Prairie-chicken hunter success and satisfaction during 2017 were similar to 2013-2016, which is consistent with improved success and satisfaction following changes to the season framework in 2013 to accomplish this goal (Table 3). Hunter survey responses in the 2013 Wildlife Public Input Survey and through this postcard survey in 2015 indicated that hunter preferences are split, but that the majority of hunters support the current season framework. Both the 2013 and 2015 surveys asked hunters about their preference for a season opening on the last Saturday in September or an opener on the Saturday nearest 20 October. The majority of respondents to the 2013 survey (64% of respondents who expressed an opinion) indicated a preference for the earlier season. Likewise, in the 2015 survey, 56% of respondents indicated a preference for the earlier season. Supporters of the early season indicated that the birds were less wary early in the season and pheasant hunting did not affect the hunt. Reasons provided in support of a later season included cooler weather for hunters and dogs, better plumage on birds, fewer standing crops, opportunity to harvest pheasants while hunting chickens, and no conflict with the waterfowl opener. Although a large minority still indicated a preference for a later season, the current season meets the timing preferences of the majority of responding prairie-chicken hunters.

ACKNOWLEDGMENTS

This survey was funded in part by the Wildlife Restoration (Pittman-Robertson) Program. 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 commenting on the report. I also sincerely appreciate the efforts of the hunters that submitted samples for the genetics and pesticide studies.

Table 1. Prairie-chicken hunt lottery applicants, winners, and hunting permit purchasers in Minnesota during 2017.

Permit area	Permits available	No. of applicants	Lottery winners		Permit purchasers[a]		Surplus purchasers[c]
			No.[b]	Proportion	No.	Proportion	
803A	8	28	8	0.29	7	0.88	0
804A	10	8	8	1.00	8	1.00	0
805A	10	66	13	0.20	12	0.92	0
806A	12	33	13	0.39	8	0.62	0
807A	20	46	20	0.43	18	0.90	0
808A	20	39	20	0.51	12	0.60	0
809A	15	29	16	0.55	13	0.81	0
810A	15	33	15	0.45	13	0.87	0
811A	5	10	5	0.50	5	1.00	0
812A	5	21	5	0.24	5	1.00	0
813A	5	4	4	1.00	1	0.25	0
All	125	317	127	0.40	102	0.82	0

[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. Surplus permits were not offered in 2017.

Table 2. Prairie-chicken harvest in Minnesota during 2017.

Permit area	No. of hunters[a]		Birds harvested		Birds per harvester[b]	Success rate[c]
	Self-reported	Estimated	Self-reported	Estimated		
803A	5	7	1	2	1.0	0.29
804A	7	8	8	8	1.6	0.63
805A	12	12	12	12	1.3	0.75
806A	7	8	10	10	1.7	0.75
807A	16	17	17	17	1.9	0.53
808A	10	11	15	15	1.9	0.73
809A	10	13	13	14	1.8	0.62
810A	9	10	3	3	1.0	0.30
811A	4	5	1	1	1.0	0.20
812A	5	5	4	4	2.0	0.40
813A	1	1	0	0	NA	0.00
All	86	97[d]	84	86[d]	1.6[d]	0.55[d]

[a] Permit purchasers who hunted.
[b] Estimated number of birds harvested per successful hunter, assuming non-respondents had success similar to that of respondents to the second mailing.
[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 2003–2017.

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]
2014	126	305	102	95	0.54	3.7
2015	126	271	112	103	0.55	3.6
2016	126	304	111	102	0.58	3.8
2017	125	317	97	86[f]	0.55[f]	4.0[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 in 2013 and 2017.

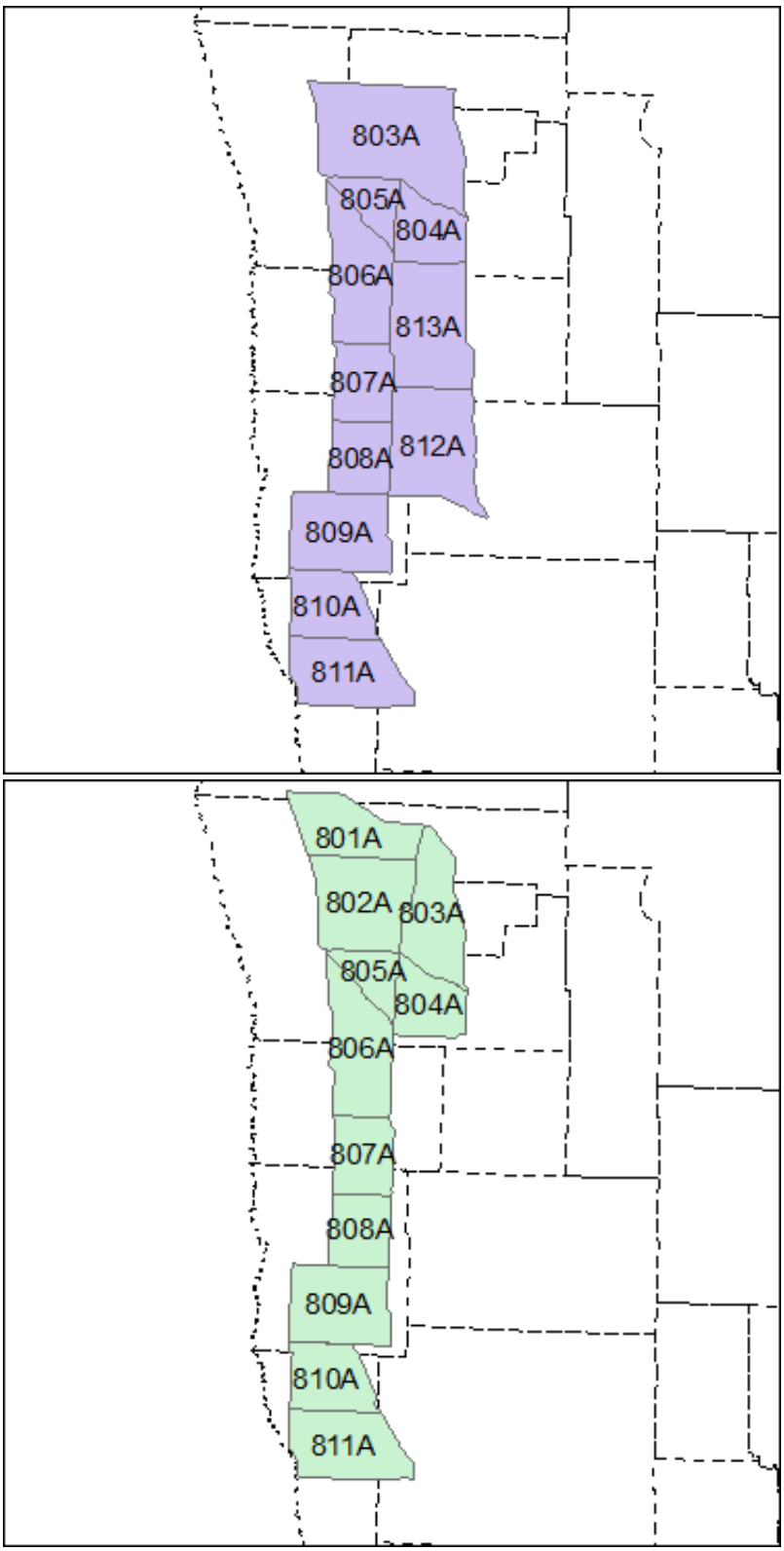

Figure 1. Prairie-chicken hunting permit area boundaries in northwestern Minnesota since 2013 (top) compared to during 2006–2012 (bottom). County boundaries are indicated by dashed lines. Permit areas 812A and 813A were added, 801A was eliminated, and 802A and portions of 803A were combined into a revised permit area 803A.

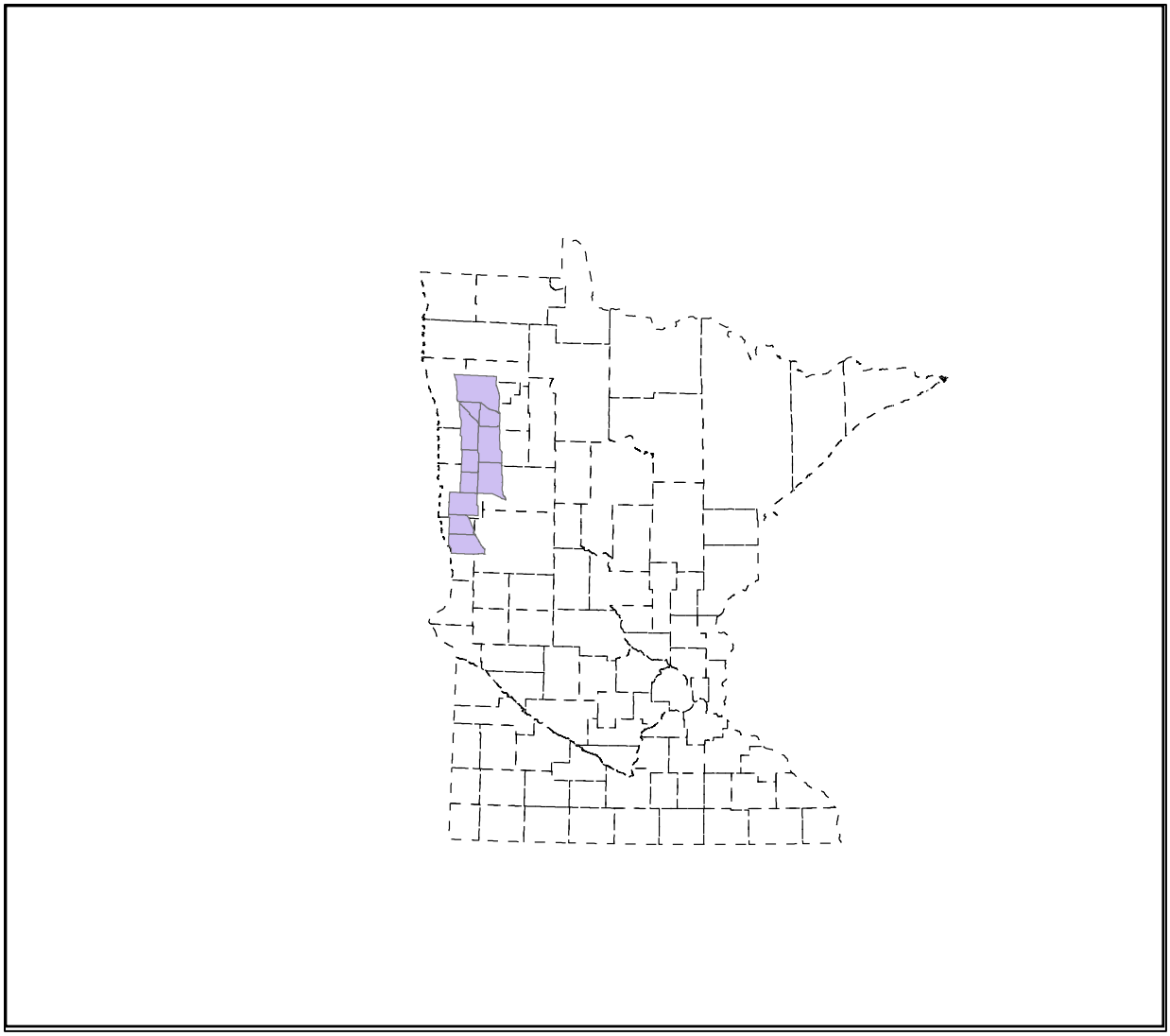

Figure 2. Northwestern location of prairie-chicken hunting permit areas within the state relative to county boundaries (dashed lines).

STATUS OF MINNESOTA BLACK BEARS, 2017

Dave Garshelis and Andy Tri, Forest Wildlife Research Group

INTRODUCTION

The Minnesota bear range has historically been divided into 11 bear management units (BMU). Each has a separate quota on hunting licenses, and hunters must enter hunters must enter a lottery (based on preference points) to obtain a license. Outside the primary bear range, where bear depredation to crops is a primary concern, license sales are unlimited (no-quota area), and hunters can purchase licenses right up to and through the season, over the counter. 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 bear hunting and harvests.

METHODS

Successful hunters must register their bears, in person at designated registration stations or electronically by internet or phone. Stations are not staffed by DNR personnel. Harvest data are a simple tally of these registrations. Hunters also are required to submit a tooth from harvested bears, which is used to estimate age, and thus harvest age structure. Tooth envelopes must be acquired at registration stations.

RESULTS

Permits, licenses, harvest, and success rates

Permit applications for bear licenses exceeded 20,000 for the first time since 2002 (Table 1). However, 2,800 applicants, a record high number, applied for area 99, meaning that they only sought to raise their preference level for the permit system. Permit availability was 13% lower than 2016. The low permit availability has driven up sales of no-quota licenses, which were the highest on record in 2016 and nearly the same in 2017. Harvest was reduced 23% from 2016 because of the reduction in quota zone hunters and a slightly lower success rate of quota zone hunters (yet still the second-highest all-time success rate in the quota zone). Hunting success is inversely related to the number of hunters (Figure 1).

Quota zone permits and licenses

In 2016, Bear Management Unit (BMU, see Figure 2) 26 was divided into 27 and 28, and BMU 44 was split into 46 and 47 (BMUs 28 and 47 comprise the Leech Lake Reservation). The number of quota zone permits available in 2017 was reduced by 10–30% for all BMUs, except 22 and 41 (which remained the same, see Table 2). This was the 7th year of a system whereby licenses for the quota zone that were not purchased by permittees selected in the lottery could be purchased later as surplus. All surplus licenses (~400) were purchased (Table 3).

Quota zone applicants

Statewide, quota zone applications increased by 21% over the past 10 years, but much of that increase was for area 99 (preference level application). Among applications for specific BMUs,

only BMU 45 showed a significant, steady increase, nearly tripling from 2008 to 2017. Applications for some BMUs showed a decline (Figure 3).

Quota zone lottery

The low quota zone permit availability over the past 5 years has made it more difficult to succeed in the lottery (Table 4). In 2012, before the large drop in permits (Table 2), all 3rd- year applicants (preference level 3) were drawn, and ~50% or more of 2nd-year applicants were drawn in all but two BMUs (44, 45). By 2017, with the exception of BMU 22 (wilderness area hunt), preference level 2 applicants were drawn only in two BMUs (13, 25; <20% drawn in both), and in four BMUs (28, 46, 47, 45), only some hunters with preference 4 were drawn (i.e., preference 5 was required to guarantee being drawn).

Harvest by BMU

In 2017, most BMUs had lower harvests than in 2016 (Table 5), although many were near the previous 5-year mean. The total quota zone harvest (1,547) and no-quota harvest (493) were both close to the respective 5-year means. The sex ratio of the harvest was more male-biased than normal (63%), although typical of the past 4 years (Table 1). Two BMUs had record-high percent males (69–70%). The highly skewed sex ratio may be indicative of increased hunter selection (with a lower hunter density due to reduced quotas) as well as sex-related differences in attraction to baits (given that the no-quota area had an even larger skew toward males: 68%). The only notable harvests were in BMU 10 (Figure 2) at the south-western fringe of the bear range (record high 18 bears), and the first-known bear legally harvested in southeastern Minnesota.

Harvest by quota vs no-quota zones

Permit availability continuously declined during the decade 2003–2013 (Table 1), and with that, total harvests declined and the percent of the harvest in the no-quota zone increased (Figure 4). The percent harvest in the no-quota zone has leveled off in recent years (~26%), with stabilization of the number of quota-zone permits available. However, the percent of bear hunters purchasing a no-quota license reached a new high of 50% in 2017.

Hunting success by BMU

Hunters in the quota zone had a record high (50%) success in 2016 (Table 6); this was true for most BMUs. Success rates were slightly lower, but still second-highest throughout the quota zone in 2017. BMU 45 had a record high success, and BMU 28 (split from BMU 26 in 2016) had the highest success of any BMU in any year (70%). Success rate was more normal in the no-quota zone — only one-third that of the quota zone in 2017. The distribution of hunters in the no-quota zone is gleaned from where they said they would hunt when they purchased their license: notably, a growing number (137 in 2017) indicated that they planned to hunt in the quota zone.

Harvest by date

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). The distribution of the harvest by date followed this normal pattern in both 2016 and 2017, which was very unlike the delayed harvest pattern in 2015.

Predictions of harvest

The 2017 statewide harvest was close to what was expected, based on regression of harvest as a function of hunter numbers and the fall food productivity index (Figure 5). This regression is particularly strong (and has accurately predicted previous harvests) when only the past 15 years

are considered. However, for the quota zone, the actual harvest in 2017 was higher than predicted by this regression.

Harvest sex ratios

Sex ratios of harvested bears 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 selectivity). In general, harvest sex ratios favoring males provide more resilience to the population. Harvest sex ratios within BMUs varied considerably year-to-year over the past 2 decades (Figure 6).

Only two BMUs have shown a generally increasing trend in percent males that has continued through 2017 (BMUs 25, 31; both record high in 2017); however, statewide there has been a clear shift toward more males in the harvest (the last 5 years all >60% males; see Figure 8).

Harvest ages

Statewide, the median age of harvested females increased for the third year in a row (exceeding 3 years old for the first time since 2011, see Figure 7). Accordingly, the proportion of the female harvest composed of 1–2 year-olds declined and 4–10 year-olds increased. The median age of harvested males (slightly over 2 years old) has been relatively stable, but creeping upward (Figure 8). On a BMU-basis, variability in median ages has been too extreme to discern a trend over the past 20 years (only BMU 11 shows a continuing declining trend, see Figure 9).

Submission of bear teeth for aging

Ages of harvested bears are used as the principal means of monitoring population trends. Although hunters are required to submit a tooth from their harvested bear, historically >25% did not comply. Reminder notices were sent to non-compliant hunters each year since 2014, which spurred a higher initial compliance the following years (>80%). However, ~90% compliance was achieved only through a reminder mailing (Figure 10). Since 2013, hunters could register by phone or internet, and pick up a tooth submission envelope later: tooth submission compliance by these hunters has been significantly less than for hunters who registered their bear in person and picked up a tooth envelope at that time. No-quota zone hunters have the poorest rate of tooth submission (Figure 11).

Trends in harvest rates

The sex ratio of harvested bears varies by age in accordance with the relative vulnerability of the sexes. Male bears are more vulnerable to harvest than females, so males always predominate among harvested 1-year-olds (67–75%). Males also predominate, but less strongly among 2 and 3-year-old harvested bears. However, older-aged harvested bears (≥7 years) are nearly always dominated by females, because, although old females continue to be less vulnerable, there are far more of them than old males in the living population. The age at which the line fitted to these proportions crosses the 50:50 sex ratio is approximately the inverse of the harvest rate. Segregating the data into time blocks showed harvest rates increasing from 1980–1999, then declining with reductions in hunter numbers (Figure 1). Harvest rates since 2014 have been significantly less than what they were in the early 1980s, when the bear population was increasing (Figure 12).

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less vulnerable, there are far more of them than old males in the living population. The age at which the line fitted to these proportions crosses the 50:50 sex ratio is approximately the inverse of the harvest rate. Segregating the data into time blocks showed harvest rates increasing from 1980–1999, then declining with reductions in hunter numbers (Figure 1). Harvest rates since 2014 have been significantly less than what they were in the early 1980s, when the bear population was increasing (Figure 12).

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

Table 1. Bear permits, licenses, hunters, harvests, and success rates, 1997–2017.

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Permit applications	30245	29384	29275	26824	21886	16431	16466	16153	15725	16345	17362[a]	17571[a]	18647[a]	19184[a]	18103[a]	18107[a]	18885[a]	18422[a]	19958[a]	21034[a]
Permits available	18210	20840	20710	20710	20610	20110	16450	15950	14850	13200	11850	10000	9500	7050[b]	6000	3750	3750	3700	3850	3350
Licenses purchased (total)	16737	18355	19304	16510	14639	14409	13669	13199	13164	11936	10404	9892	9689	9555	8986	6589	6620	6962	7177	6655
Quota zone [c]	14941	16563	17021	13632	12350	9833	10063	9340	9169	8905	7842	7342	7086	5684	4951	3188	3177	3257	3420	2954
Quota surplus/military [c]				235	209	2554	1356	1591	1561	526	233	77	83	1385	1070	578	583	446	441	401
No-quota zone [c]	1796	1792	2283	2643	2080	2022	2238	2268	2434	2505	2329	2473	2520	2486	2965	2823	2860	3259	3316 [h]	3300 [h]
% Licenses bought																				
Of permits available [d]	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	100	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	84.7	87.9	88.7	88.2
Estimated no. hunters [e]	14500	15900	16800	15500	13800	13600	12900	12500	12500	11300	9900	9400	9200	9200	8600	6300	6300	6700	6900	6400
Harvest	4110	3620	3898	4936	1915	3598	3391	3340	3290	3172	2135	2801	2699	2131	2604	1866	1627	1971	2641	2040
Harvest sex ratio (%M) [f]	55	53	58	56	61	58	57	59	58	57	62	59	59	61	59	62	62	66[i]	61	63
Success rate (%)																				
Total harvest/hunters [g]	28	23	23	29	14	26	26	26	26	28	21	30	29	23	30	30	26	30	39	32
Quota harvest/licenses	25	20	20	28	14	25	26	25	25	28	21	30	30	24	33	37	33	39 [j]	50 [j]	46 [j]

[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; 2014=2377; 2015=2455; 2016=2641; 2017=2803 (record high); additionally, in 2017, area 88 nuisance-only bear license applications counted in this total [n=3]).

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

[c] Quota zone established in 1982. No-quota zone 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 August 1. Free licenses for 10 and 11 year-olds were available beginning 2009.

[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 2011–17, all unpurchased licenses were put up for sale and 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%). Beginning in 2011 all unpurchased quota licenses were sold as "surplus" in August, and this process is quick and competitive; thus, for 2011–17 all Surplus and Military license-holders were considered to have hunted.

[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. After 2012, hunters could take 2 bears only if they bought 2 licenses (1 quota + 1 no-quota). In both 2016 and 2017, 5 hunters legally killed 2 bears.

[h] Record high number of no-quota zone licenses purchased in 2016; record high % of licenses in no-quota zone in 2017 (nearly 50%; see Fig. 4).

[i] Record high % males in statewide harvest.

[j] 2015: highest success rate in quota zone since very poor food year of 1995; 2016: record high success rate; 2017: second-highest success rate.

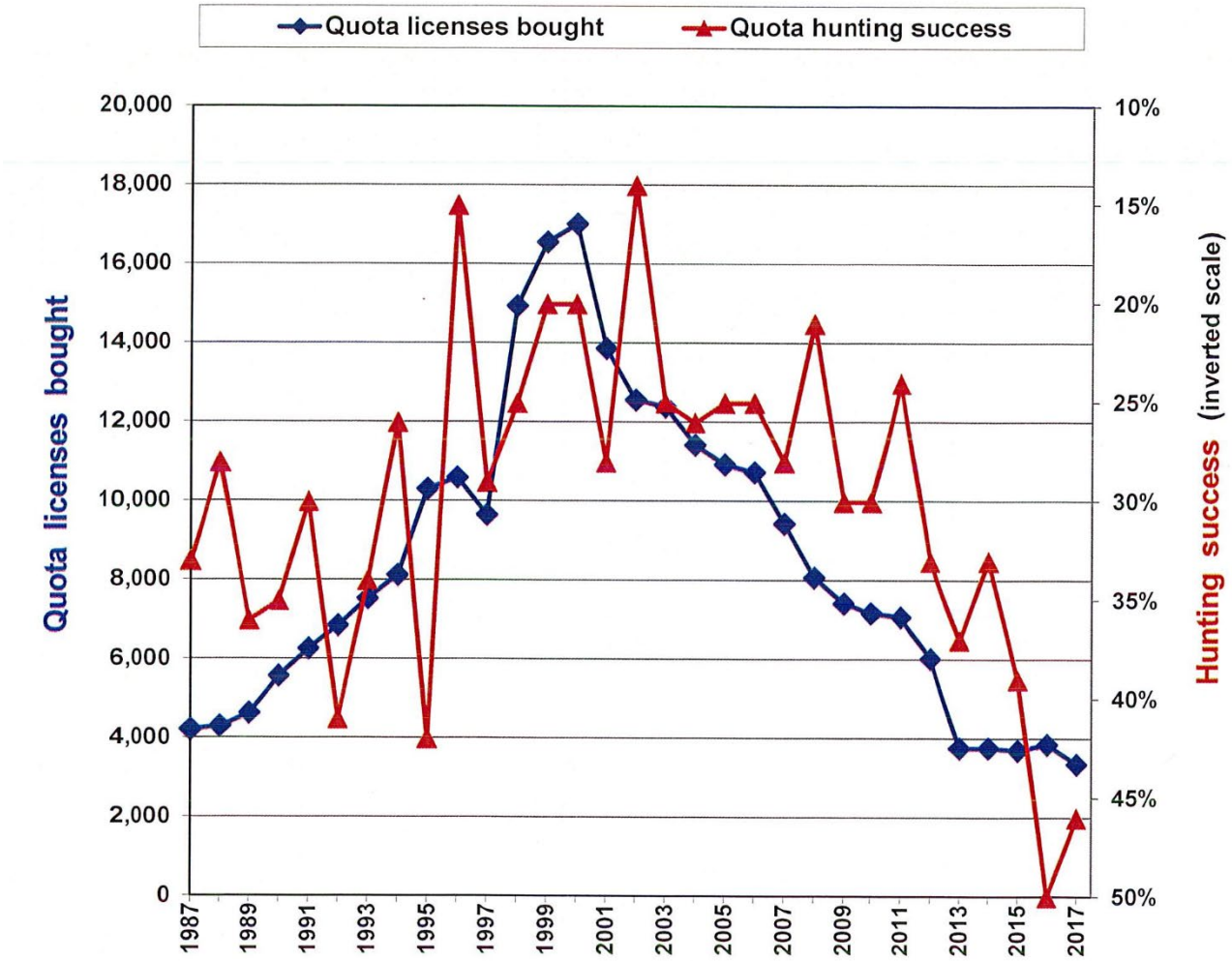


Figure 1. Relationship between licenses sold and hunting success (*note inverted scale*) in quota zone, 1987–2017 (no-quota zone first partitioned out in 1987). Number of licenses explains 48% of variation in hunting success during this period. Large variation in hunting success is also attributable to food conditions.

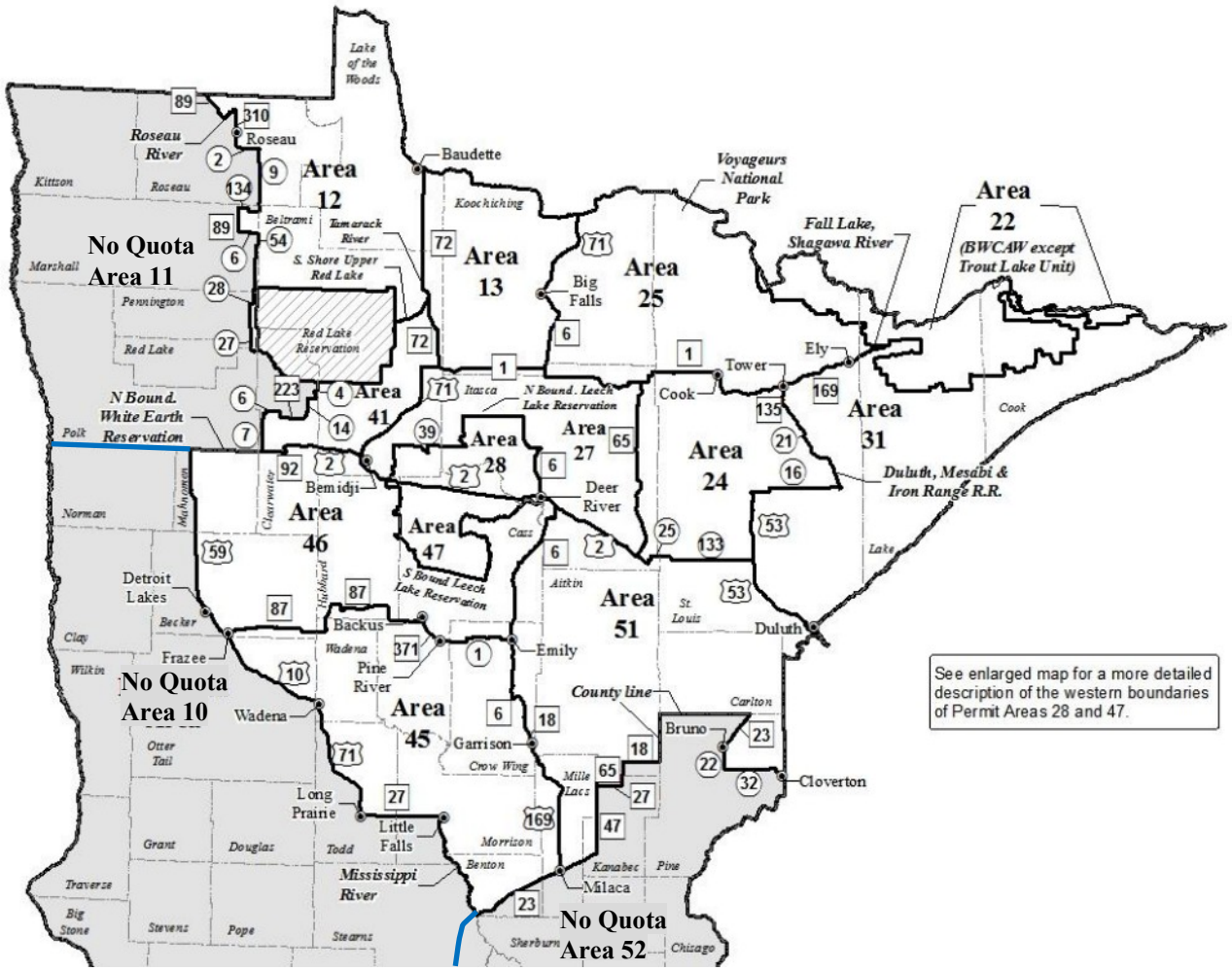


Figure 2. Bear management units (BMUs) within quota (white) and no-quota (gray) zones. Hunters in the quota zone are restricted to a single BMU. In 2016, BMU 26 was divided into 27 and 28, and BMU 44 was split into 46 and 47 (BMUs 28 and 47 comprise the Leech Lake Reservation). No-quota hunters can hunt anywhere within the gray-colored zone, including the southeast corner of Minnesota (not shown; designated area 60).

Table 2. Number of bear hunting quota area permits available, 2012–2017. Highlighted values show a change from the previous year. BMUs 26 and 44 were divided into 27/28 and 46/47, respectively, in 2016.

BMU	2012	2013	2014	2015	2016 Before BMU split [a]	2016 After BMU split	2017
12	300	200	200	150	150	150	125
13	400	250	250	250	250	250	225
22	100	50	50	50	50	50	50
24	300	200	200	200	200	200	175
25	850	500	500	500	500	500	400
26	550	350	350	350	325		
27						250	225
28						75	60
31	900	550	550	550	550	550	500
41	250	150	150	150	125	125	125
44	700	450	450	450	450		
46						400	350
47						50	40
45	200	150	150	150	250	250	175
51	1450	900	900	900	1000	1000	900
Total	**1650**	**3750**	**3750**	**3700**	3850	**3850**	**1465**

[a] In 2016, the Leech Lake Reservation was split from BMUs 26 and 44 to form BMUs 28 (north) and 47 (south), with the remaining area of BMU 26 renamed BMU 28 and remaining area of BMU 44 renamed BMU 46. The column shows permit allocation before the split in order to compare with previous years.

Table 3. Number of quota BMU permit applicants (Apps), licenses bought (after permits drawn) and surplus licenses bought, 2012–2017[a]. Shaded values indicate undersubscribed (applications less than permits available).

BMU	2012			2013			2014			2015			2016			2017		
	Apps	Bought license	Surplus bought	Apps	Bought license	Surplus bought	Apps	Bought license	Surplus bought	Apps	Bought license	Surplus bought	Apps	Bought license	Surplus bought	Apps	Bought license	Surplus bought
12	813	244	60	707	160	44	661	164	36	612	130	20	624	133	17	774	113	12
13	719	325	76	664	213	37	703	218	32	692	210	40	716	221	29	772	200	25
22	83	56	43	55	36	14	65	33	17	48	36	9[b]	52	37	13	47	34	16
24	888	253	47	763	170	30	875	174	26	771	171	29	884	173	27	945	158	17
25	1625	713	137	1575	432	69	1533	424	76	1396	433	67	1443	440	60	1651	354	46
26	1666	458	92	1695	303	47	1696	298	52	1650	309	42						
27													1224	219	31	1297	197	28
28													325	72	3	330	52	8
31	2406	758	146	2261	478	72	2257	468	82	2021	488	62	2180	489	62	2076	441	59
41	592	208	42	575	135	15	561	129	21	570	129	21	618	114	11	614	109	16
44	2619	612	88	2682	386	65	2751	393	57	2626	402	48						
46													2690	370	30	2774	319	31
47													194	45	5	214	33	7
45	1135	170	30	1205	141	9	1403	127	23	1703	139	11	2046	227	23	2323	161	14
51	3650	1154	296	3796	734	166	4003	748	152	3878	810	90	4321	880	121	4411	783	117
Total	4785	1324	326	15978	3188	568	5406	875	175	5581	949	101	17317	3420	432	9722	1296	169

[a] Beginning in 2011, all licenses not purchased by permittees were sold as "surplus". In all cases but one (see footnote b), all of the surplus licenses were purchased. Surplus = Permits available (Table 2) minus Bought license (±4 to account for groups applying together).

[b] Even after purchase of surplus licenses, this BMU remained undersubscribed.

[c] 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 the total number of applications (unlike Table 1, where they are included).

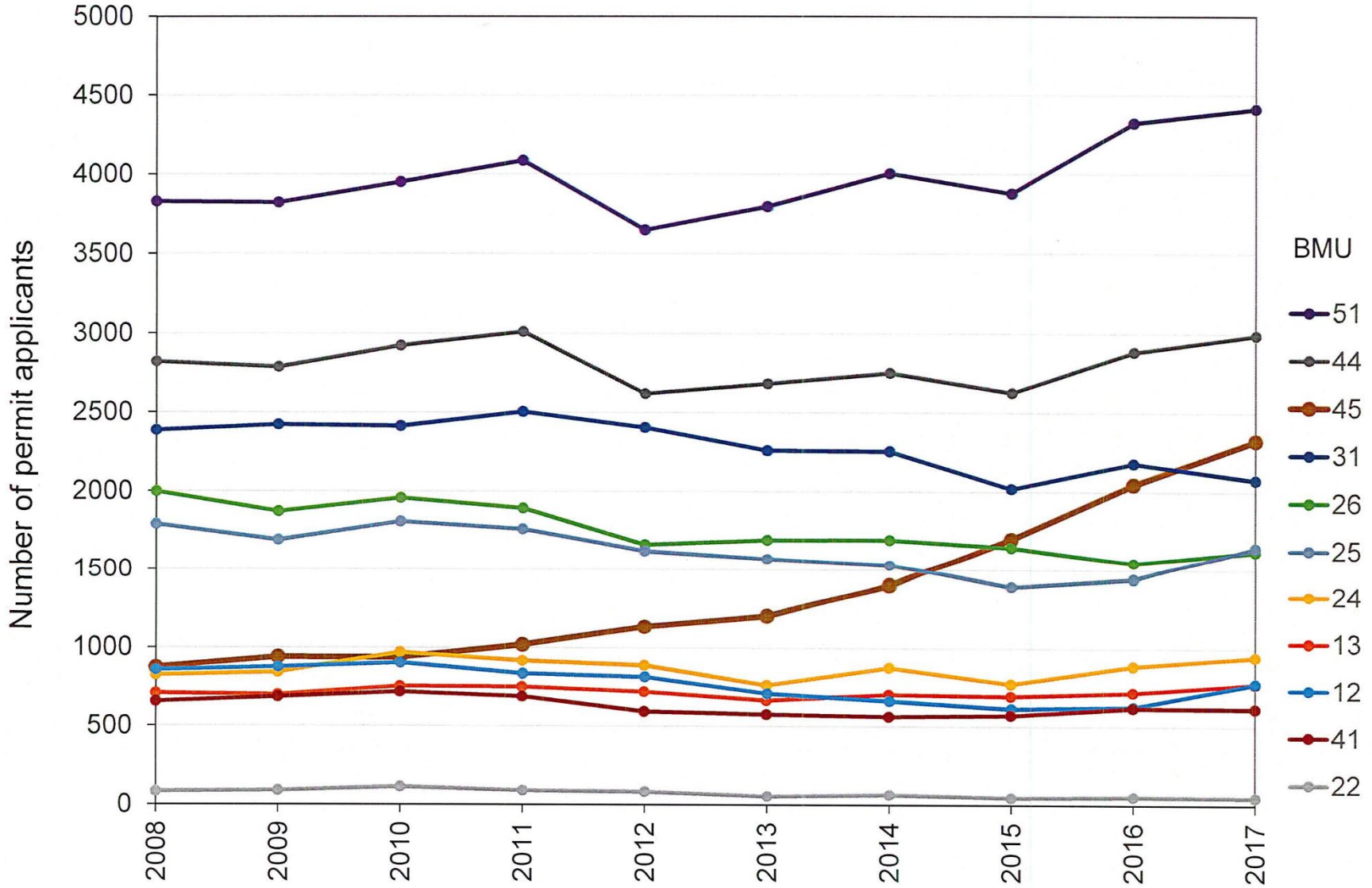


Figure 3. Trends in number of applicants for quota zone permits by BMU over past 10 years, 2008–2017. For 2016 and 2017, BMUs 27 and 28 were grouped into old BMU 26 and BMUs 46 and 47 were grouped into old BMU 44. BMU 45 is highlighted because applications there nearly tripled over this time period.

Table 4. Percent of quota BMU lottery applicants with preference levels 1 (1st-year applicants), 2, 3, and 4 who were drawn for a bear permit during 2012–2017. Blank spaces indicate 100% of applicants were drawn. All preference level 2 applicants were drawn, except where 0 preference level 1 applicants were drawn. Likewise, all preference level 3 applicants were drawn, except where 0 preference level 2 applicants were drawn[a].

	2012		2013			2014			2015				2016				2017			
BMU	Pref 1	Pref 2	Pref 1	Pref 2	Pref 3	Pref 1	Pref 2	Pref 3	Pref 1	Pref 2	Pref 3	Pref 4	Pref 1	Pref 2	Pref 3	Pref 4	Pref 1	Pref 2	Pref 3	Pref 4
12	0	80	0	46		0	40		0	17			0	0	98		0	0	57	
13	33		4			0	72		0	56			0	38			0	16		
22	100		89			72			100				98				100			
24	0	75	0	41		0	13		0	2			0	0	86		0	0	57	
25	28		0	81		0	57		0	44			0	42			0	6		
26[b]	0	49	0	7		0	0	80	0	0	51									
27													0	0	30		0	0	2	
28													0	0	0	99	0	0	0	76
31	0	84	0	45		0	15		0	0	87		0	0	75		0	0	67	
41	0	86	0	43		0	19		0	0	99		0	0	77		0	0	56	
44[b]	0	28	0	0	68	0	0	41	0	0	18									
46													0	0	0	85	0	0	0	51
47													0	0	10		0	0	0	49
45	0	29	0	0	75	0	0	30	0	0	0	81	0	0	0	63	0	0	0	16
51	1		0	53		0	22		0	0	89		0	0	72		0	0	54	

[a] As an example, in 2017: BMU 12: 0% of preference level 1 and 2 applicants were drawn, 57% of preference level 3, and 100% of preference level 4 and above were drawn for a permit; BMU 22: all preference level 1 applicants were selected; BMU 45: no preference level 1–3 applicants were drawn, 16% of hunters with preference 4 were drawn, and 100% of hunters with preference level 5 and above were drawn.

[b] BMU 26 was split into 27/28 and BMU 44 was split into 46/47 in 2016.

Table 5. Minnesota bear harvest tally for 2017 by Bear Management Unit (BMU)[a] and sex[b] compared to harvests during 2012–2016 and record high and low harvests (since establishment of each BMU).

BMU	2017 M	(%M)	F	Total	2016	2015	2014	2013	2012	5-year mean	Record low harvest (yr)	Record high harvest (yr)
Quota												
12	36	(67)	18	54	78	60	38[d]	62	82	64	38 (14)	263 (01)
13	67	(67)	33	100	147	72[e]	91	95	112	103	71 (88)	258 (95)
22	4	(50)	4	8	5	7	5	9	8	7	3 (03)	41 (89)
24	45	(56)	36	81	96	97	50[f]	76	108	85	50 (14)	288 (95)
25	146	(69)[p]	66	212	287[p]	227	168[g]	197	254	227	149 (96)	584 (01)
26	[96]	[59]	[66]	[162]	[171][p]	121	117[h]	121	238	154	117 (14)	513 (95)
27	72	(60)	48	120	131							
28	24	(57)	18	42	40							
31	183	(70)[p]	79	262	312	307	221	197	363	280	157 (88)	697 (01)
41	34	(56)	27	61	57	35[i]	36	40	70	48	35 (15)	201 (01)
44	[99]	[63]	[59]	[158]	[215]	158	170	181	188	182	130 (11)	643 (95)
46	91	(65)	50	141	190							
47	8	(47)	9	17	25							
45	47	(61)	30	77	102[m]	55	54	48	67	65	32 (11)	178 (01)
51	191	(51)	181	372	463	302	291	349	471	375	247 (91)	895 (01)
Total	948	(61)	599	607	1933	357	345[j]	397	1961	1590	1192 (88)	4288 (01)
No-Quota[b]												
11	127	(71)	52	179	291	195	77[k]	136	224	185	38 (87)	351 (05)
10	14	(78)	4	18[n]	15	11	8	9	14	11		15 (16)
52	195	(66)	100	295	402	324	301	346	405	356	105 (02)	405 (12)
60	1[c]		0	1	0	0	0	0	0			
Total	337	(68)	156	296	708[n]	530	386	491	643	552	198 (87)	708 (16)
State	1285	(63)	755	**2040**	**2641**	1971	1627[j]	1866	2604	2142		4956 (95)

[a] Some tooth envelopes were received from hunters who did not register their bear. These were added to the harvest tally:

2012:7; 2013:6; 2014:3; 2015:6; 2016:7; 2017:4.

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

2012:8; 2013:11; 2014:4; 2015:12; 2016:9; 2017:2

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 (presuming most were misreported kill locations).

[b] Sex recorded on tooth envelopes may differ from the registered sex. Sex shown on table is the registered sex.

[c] BMU 60 designates SE Minnesota, which is within No-quota zone. This is the first hunter-harvested bear in this area.

Notable harvests:

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

[e] Lowest harvest since 1988.

[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] Record low harvest since this area was established in 1990. [j] Lowest harvest since 1988 (quota—no-quota split in 1987). [k] Lowest harvest since 1999.

[m] Highest harvest since 2007.

[n] Record high harvest.

[p] Record high % males.

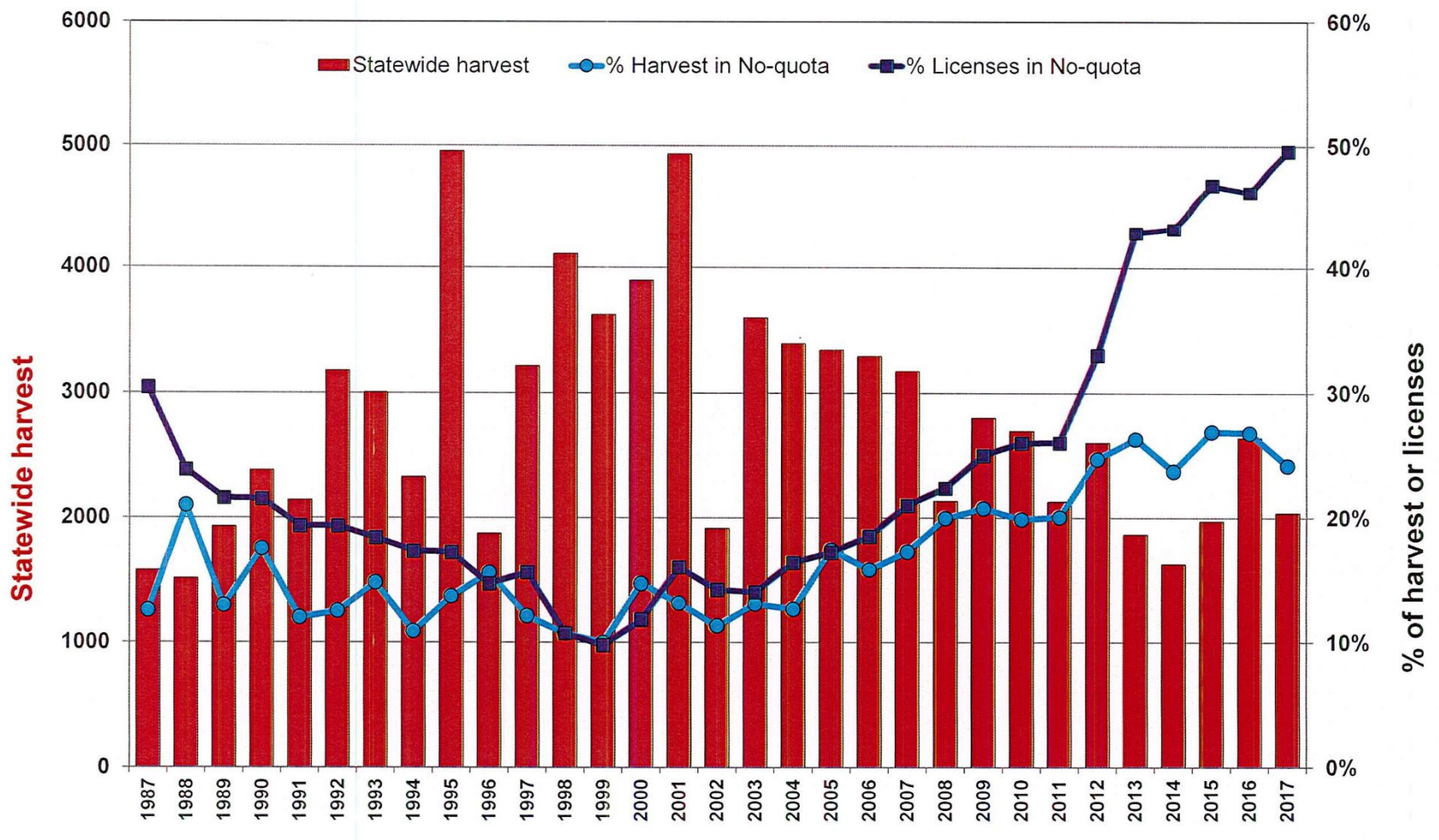


Figure 4. Trends in statewide bear harvest and proportions of harvest and licenses in the no-quota zones, 1987–2017.

Table 6. Bear hunting success (%) by BMU, measured as the registered harvest divided by the number of licenses sold[a], 2012–2017

BMU	Max success (yr) prior to 2016		Mean success 2012–2016	2017	2016	2015	2014	2013	2012
12	49	(95)	34	43	52[b]	40	19[e]	30	27
13	59	(95)	38	44[c]	59[b]	29	36	38	28
22	21	(92)	12	16	10	13	10	18[c]	8
24	45	(92)	39	46[c]	48[b]	48[b]	25	38	36
25	47	(92)	41	53[c]	57[b]	45	34	39	30
26	59	(95)	39	57[c]	52	34	33	34	43
27				53	52				
28				70[d]	53				
31	55	(92)	46	52	56[b]	56[b]	40	36	40
141	50	(95)	29	49[c]	46	23	24	26	28
44	43	(95)	37	41	48[b]	35	38	40	27
46				40	47				
47				43	50				
45	36	(14,15)	35	44[b]	40[c]	36	36	32	33
51	39	(13)	36	41[c]	46[b]	33	32	39	32
Quota	42	(95)	38	46[c]	50[b]	39	33	37	33
11[f]			18	17	28	20	9	15	
10[f]			9	8	9	7	7	12	
52[f]			17	14	19	15	16	19	
No Quota	32	(95)	18	15	21	16	13	17	20
Statewide	40	(95)	29	31	37[c]	28	25	28	28

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

b Record high (or tied record high) success.

c Second highest success.

d Highest success ever for any BMU.

e Tied record lowest success.

f Since 2013, an attempt was made to differentiate the number of no-quota (NQ) hunters by BMU in order to estimate success rates. When no-quota hunters bought licenses, they recorded the deer block where they anticipated hunting. A significant number chose blocks in the quota zone; those who did not harvest a bear in the quota zone were divided up into NQ-BMUs in proportion to those who chose blocks in or adjacent to NQ-BMUs. A few chose BMU 60 (SE Minnesota); the first bear was harvested there in 2017.

Table shows % indicating where they planned to hunt (number of hunters in parentheses for BMU 60 and Quota zone):

BMU	2017	2016	2015	2014	2013
11	29.8	30.3	29.3	28.5	30.0
10	6.6	4.9	4.4	4.1	2.6
52	59.2	61.2	63.9	64.7	62.6
60 (n)	0.1 (4)	0.4 (12)	0.2 (8)	0.6 (17)	0.4 (10)
Quota zone (n)	4.2 (137)	3.2 (105)	3.1 (101)	2.1 (60)	4.5 (127)

Table 7. Cumulative bear harvest (% of total harvest) by date, 1997–2017.

Year	Day of week for opener	Aug 22/23 – Aug 31	Sep 1 – Sep 7	Sep 1 – Sep 14	Sep 1 – Sep 30
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[a]	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[a]	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
2014	Mon		60	75	92
2015	Tue		58[b]	75	91
2016	Thu		68	83	95
2017	Fri		69	83	93

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

[b] The slow start the first week was likely due to especially warm weather.

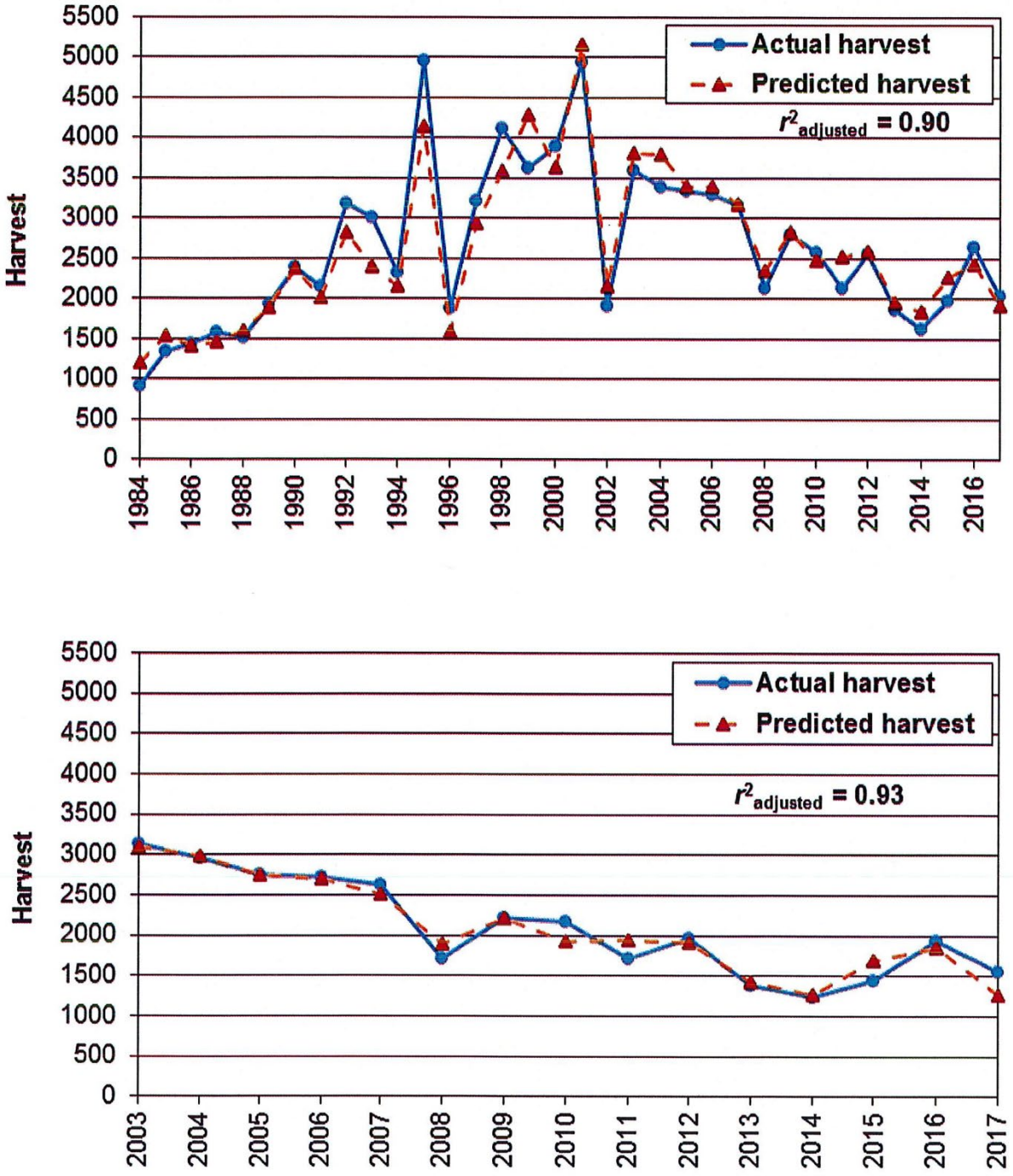


Figure 5. Number of bears harvested vs. number predicted to be harvested based on number of hunters and fall food production — top panel: statewide 1984–2017; bottom panel: quota zone only, most recent 15 years. Regression for the full dataset included an interaction term between food and hunters to better predict the drastic changes in harvest when fall foods were extremely high or low.

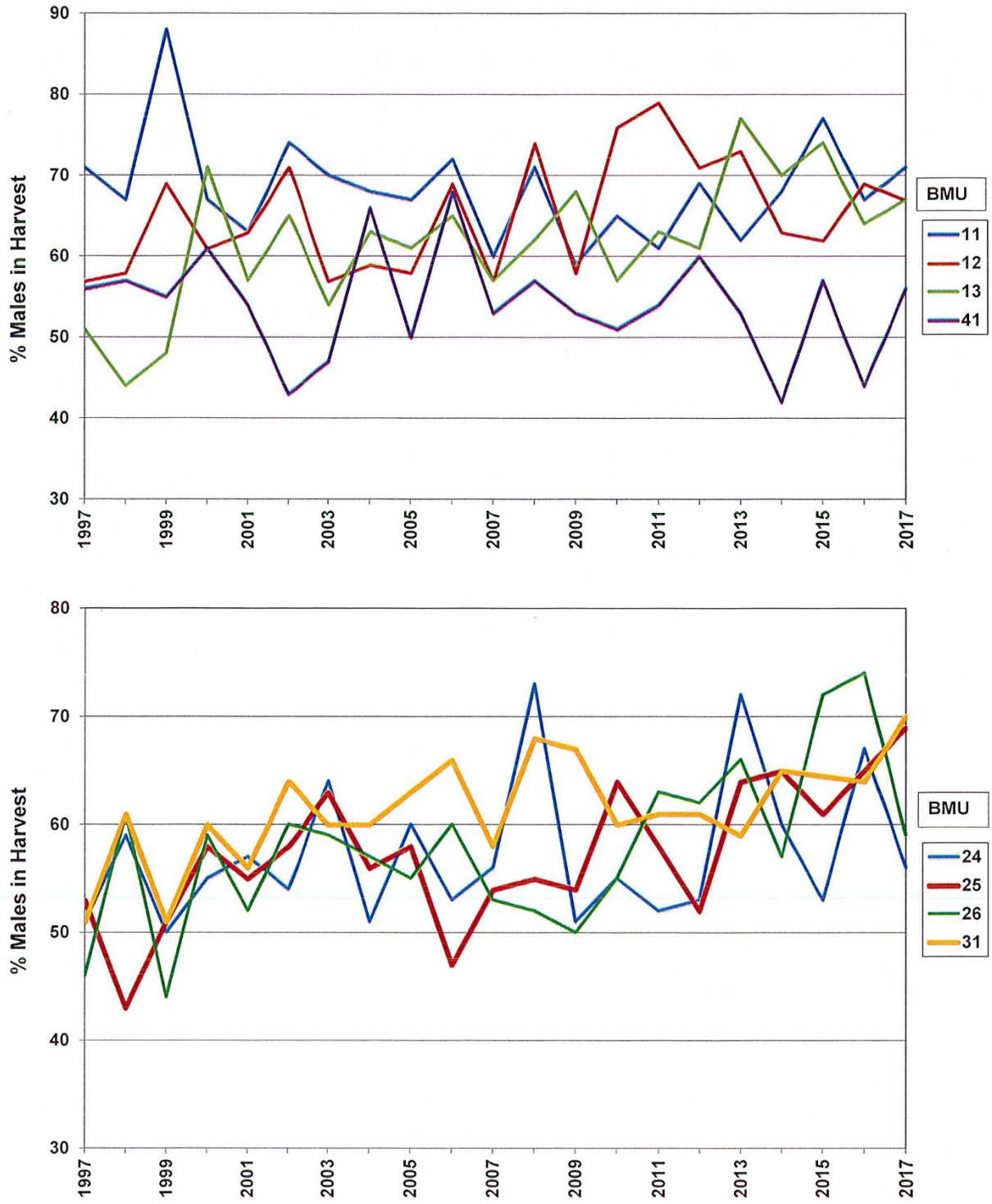


Figure 6. Sex ratios of harvested bears by bmu, 1997–2017. Thick lines show increasing trends continuing through 2017.

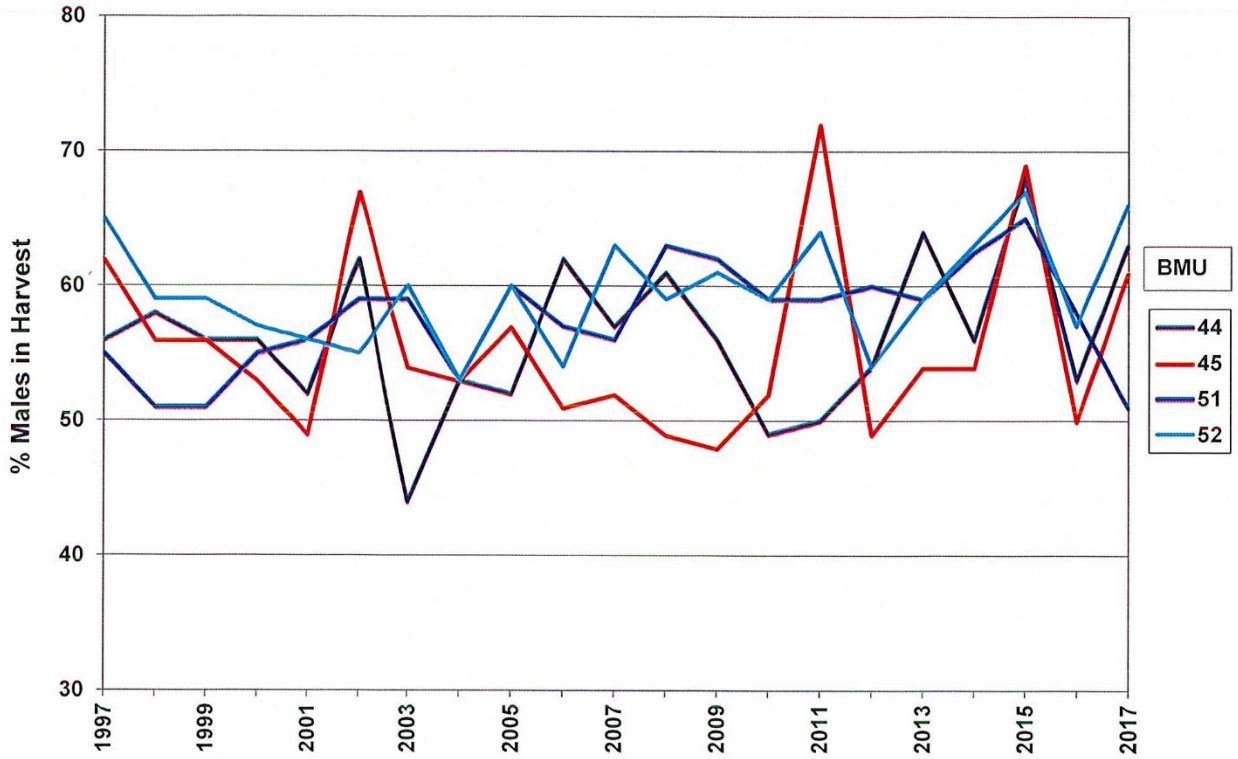


Figure 6 (continued)

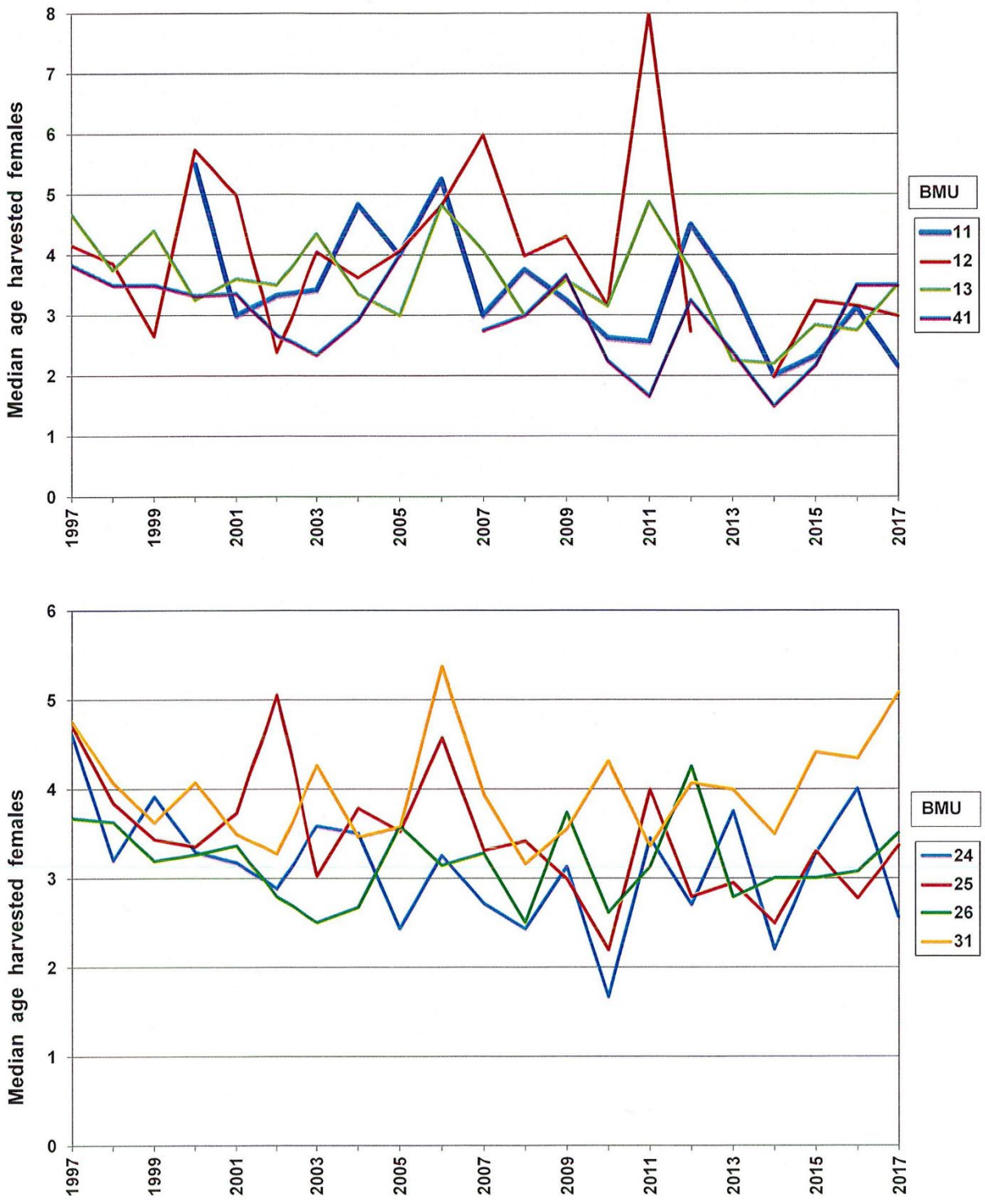


Figure 7. Median ages of harvested female bears by BMU, 1997–2017.

Thick lines show decreasing trends continuing through 2017. Breaks in line occur when sample sizes were too small to calculate a meaningful median.

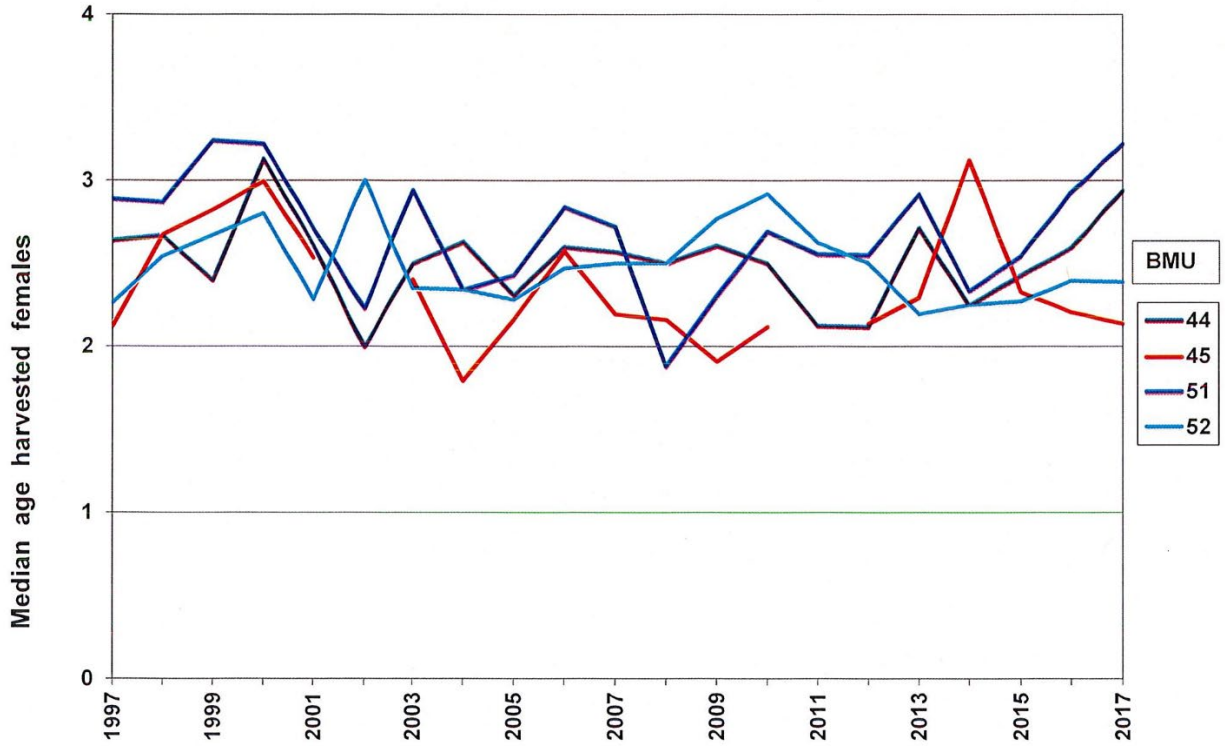


Figure 7. (continued)

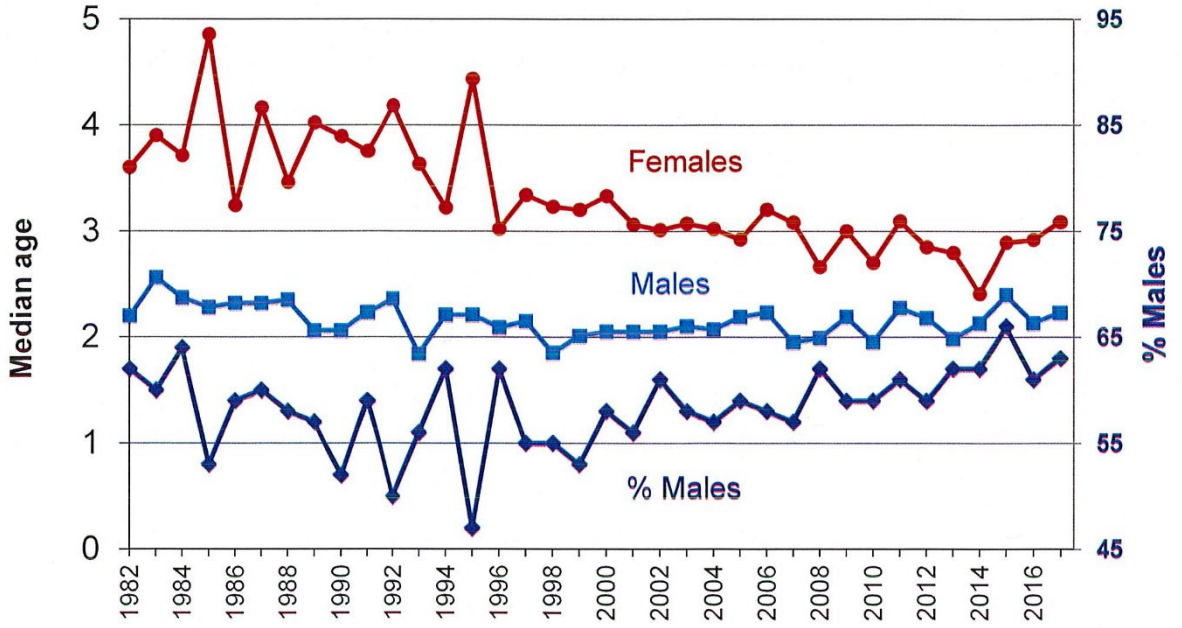


Figure 8. Statewide median ages (years) and sex ratio of harvested bears, 1982–2017.

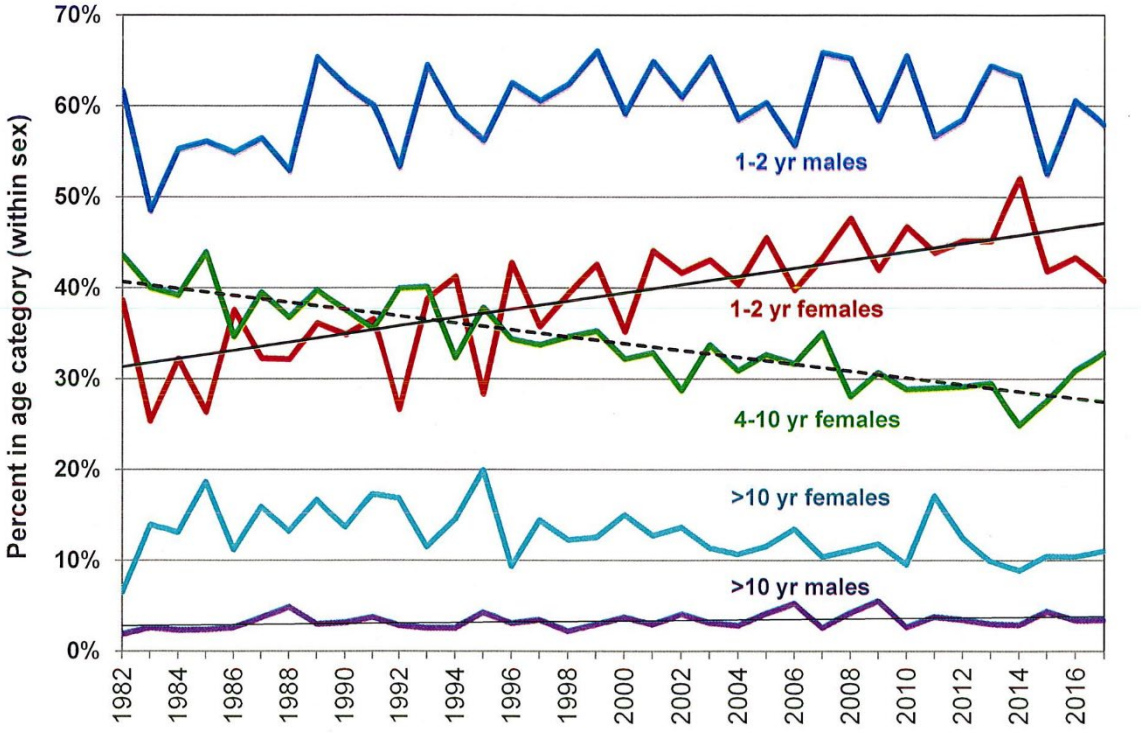


Figure 9. Statewide harvest structure: proportion of each sex in age category, 1982–2017. Trend lines are significant, but the last few years show a different trend.

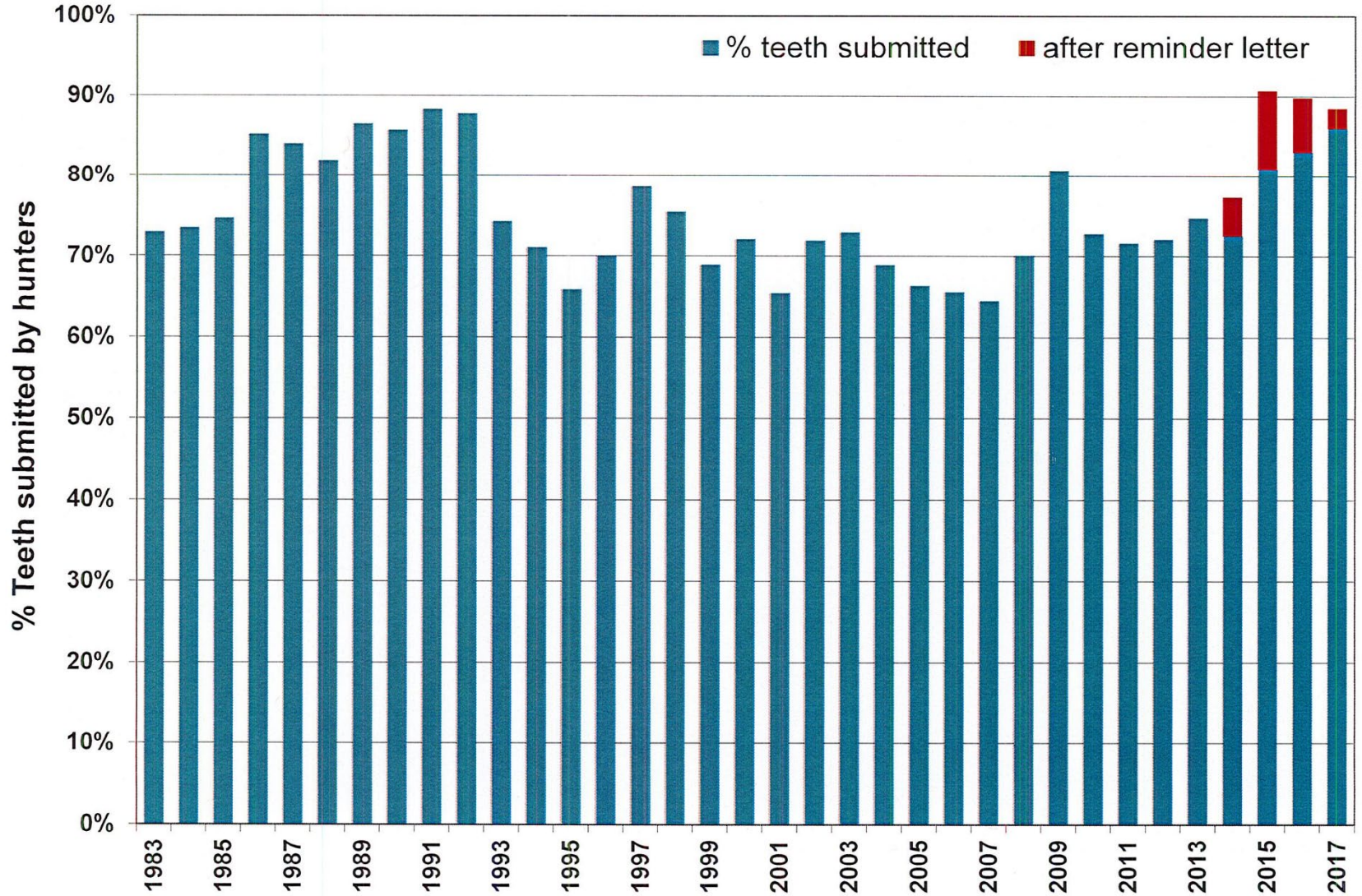


Figure 10. Percent of hunters submitting useable bear teeth for aging (vital for population monitoring, see Figs. 14–16). Cooperation levels exceeded 80% when registration stations were paid to extract teeth (this practice ended in 1993) and ~90% when non-compliant hunters were sent a reminder letter after the season.

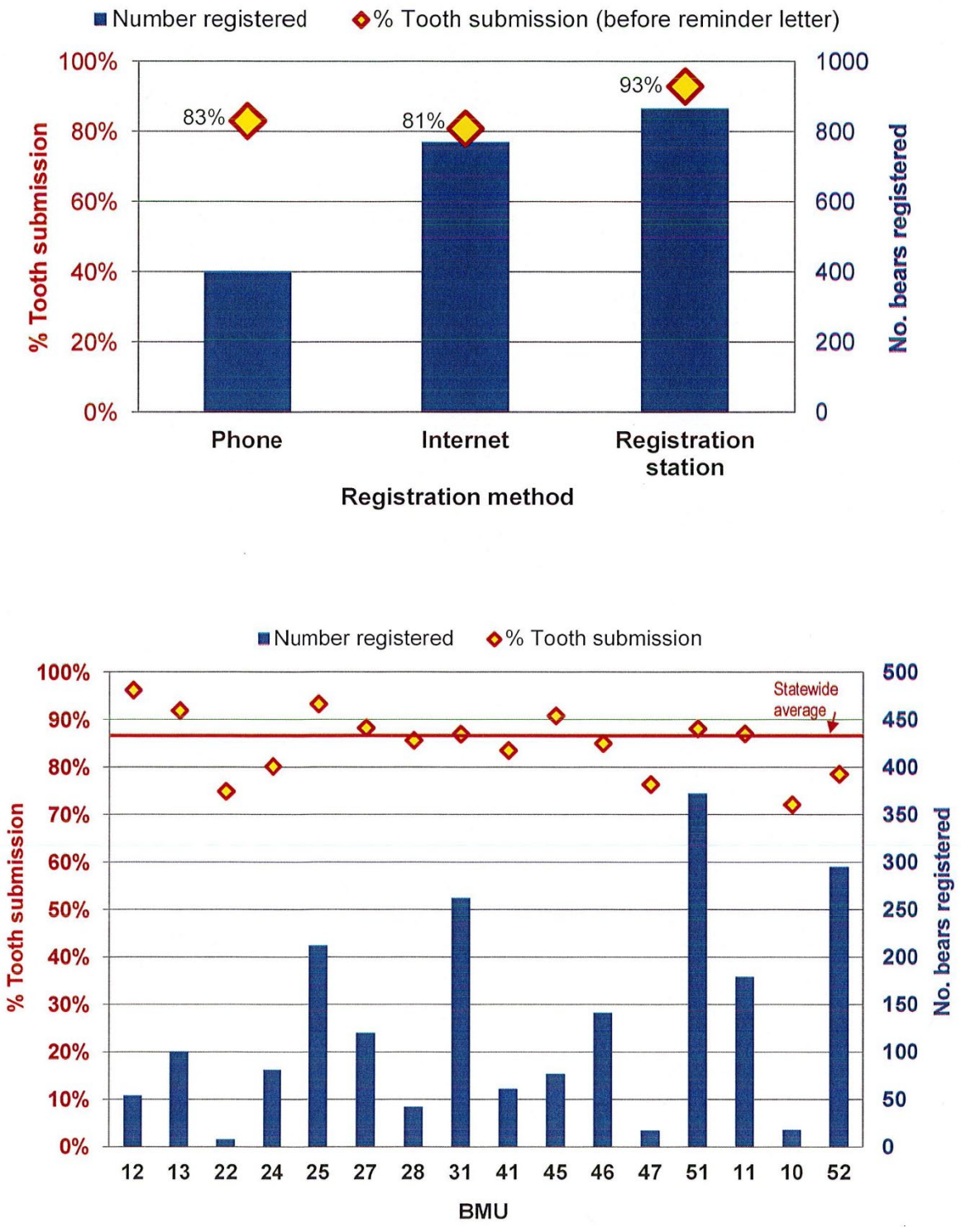


Figure 11. Percent of hunters who submitted a bear tooth in 2017 by method of registration (top panel) and by BMU (bottom panel). Beginning in 2013, hunters could register their bear by phone or internet, as well as in person at a station.

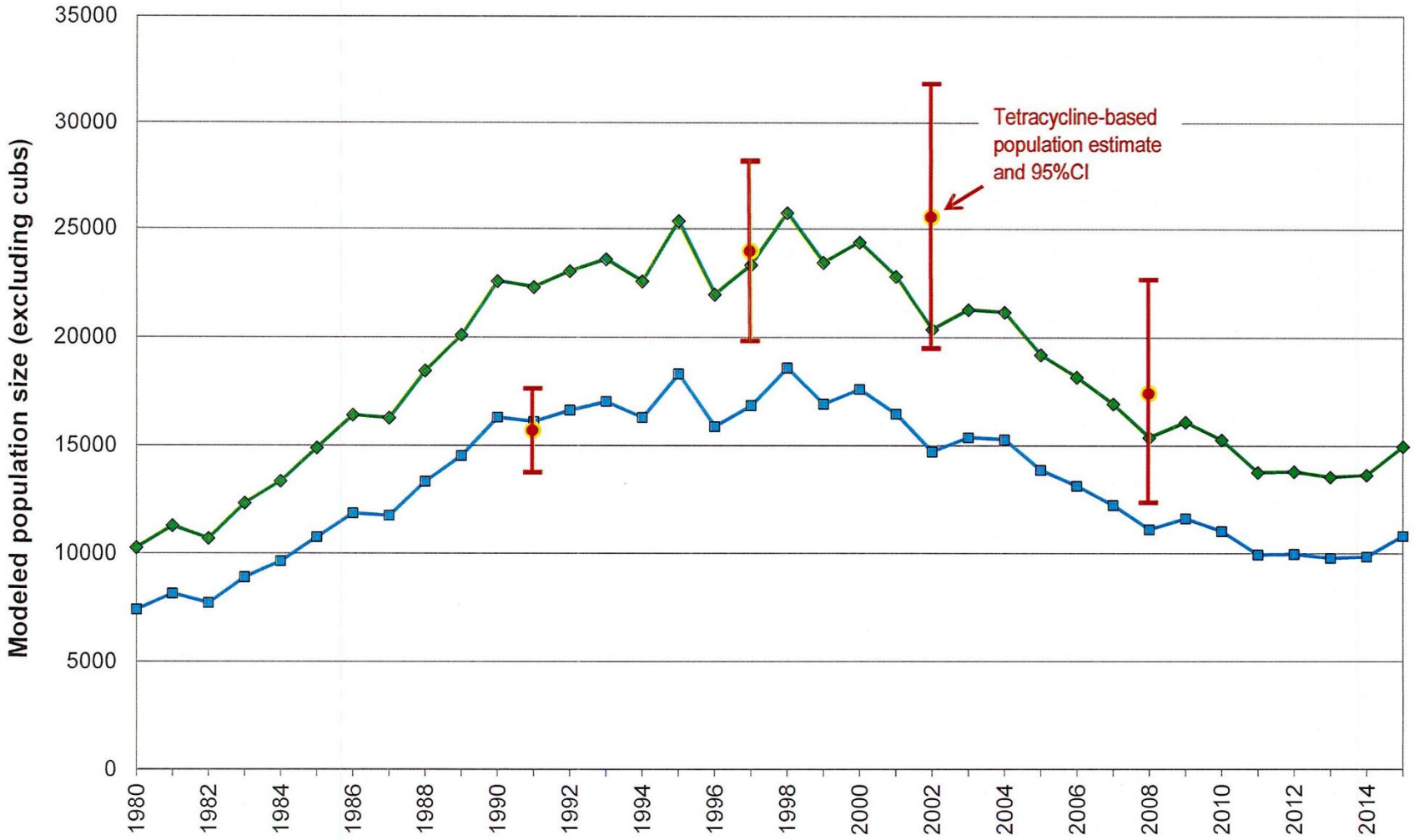


Figure 12. Statewide bear population trend (pre-hunt) derived from Downing reconstruction using harvest age structures, 1980–2017. Curves were scaled (elevated to account for non-harvest mortality) to various degrees to attempt to match the tetracycline-based mark–recapture estimates (2 such curves shown here). Estimates beyond 2015 are unreliable.

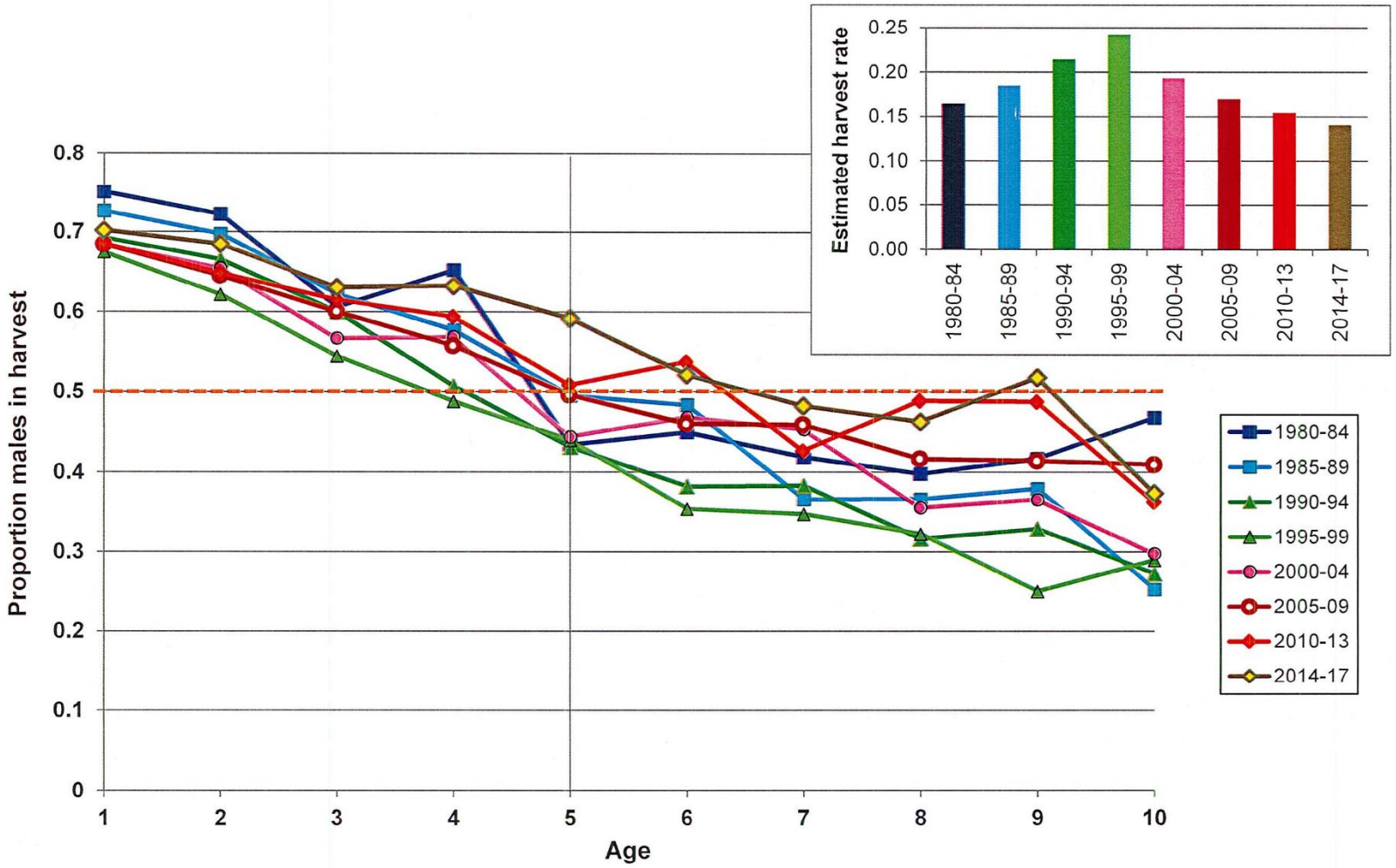


Figure 13. Trends in proportion of male bears in statewide harvest at each age, 1–10 years, grouped in 5-year time blocks, 1980–2017 (last 2 intervals are 4 years). Higher harvest rates result in steeper curves because males are reduced faster than females. Fitting a line to the data for each time block and predicting the age at which 50% of the harvest is male (dashed tan line) yields approximately the inverse of the harvest rate (derived rates are shown in inset).

2017 MINNESOTA DEER HARVEST REPORT

Erik Thorson, Big Game Program Leader, Division of Fish and Wildlife

INTRODUCTION

The white-tailed deer may be considered Minnesota's most popular wildlife species. In 2017, nearly 500,000 hunters participated in the season. 2017 was a generally liberal season designed to stabilize or reduce deer population growth across much of the state after they had mostly recovered from recent more severe winters. During the archery, firearms and muzzleloader seasons, hunters registered 197,768 deer.

METHODS

Every deer taken by hunting in Minnesota must be registered. 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. 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 the time of registration includes date of kill, deer permit area, and season. In 2016, carcass import restrictions were instituted to help prevent the spread of Chronic Wasting Disease (CWD). CWD was detected in three deer in Fillmore County during routine surveillance efforts. This prompted additional late season deer harvest for sample collection in southeast Minnesota around that area. Additionally, deer farms in Meeker and Crow Wing counties tested positive for CWD in the spring of 2017. For 2017 mandatory testing of all deer > 1 year old was instituted for the opening weekend of firearms season in three areas of the state and for the entire hunting season in the newly created CWD disease management zone 603.

RESULTS

Outcomes of the 2017 deer harvest are presented in the following tables.

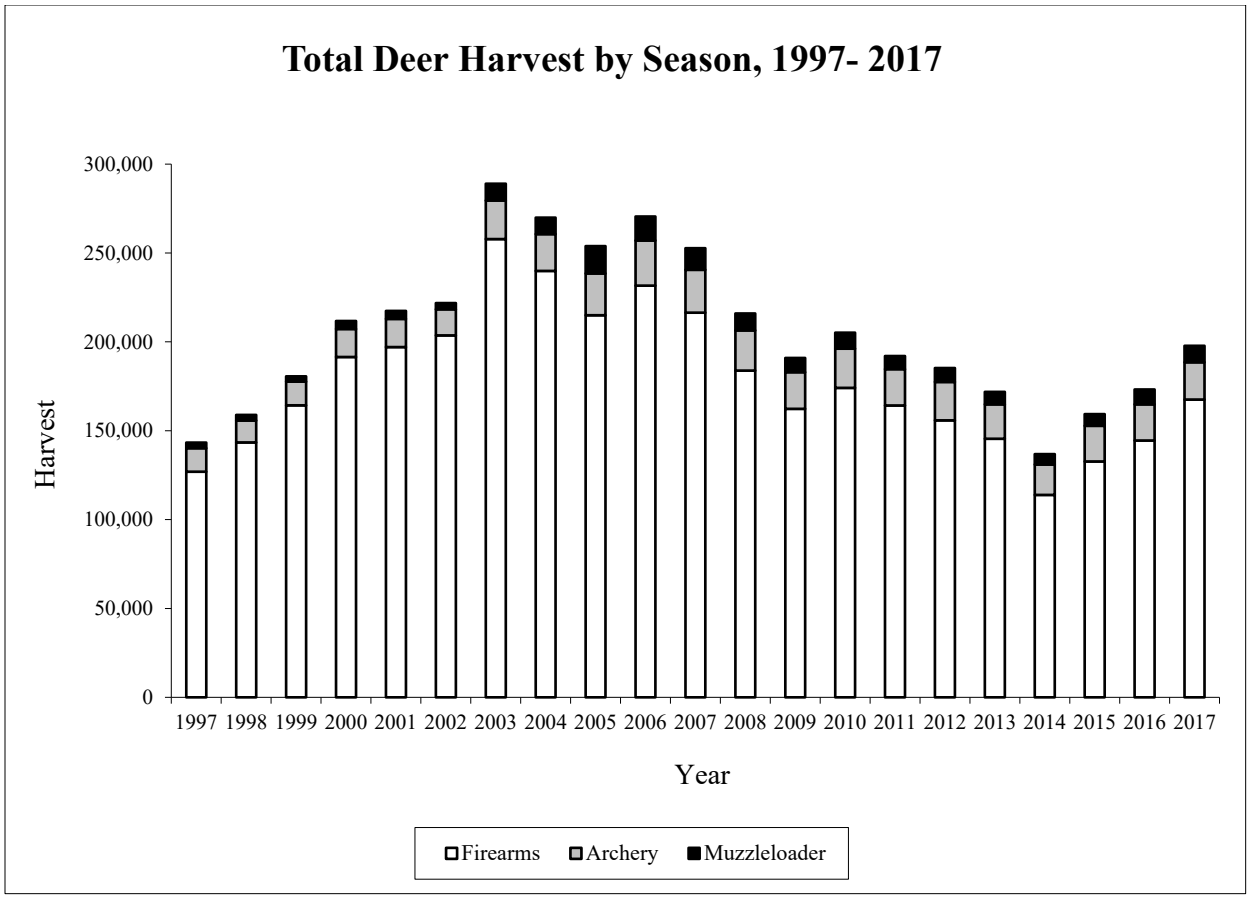


Figure 1. Total deer harvest by season, 1997-2017.

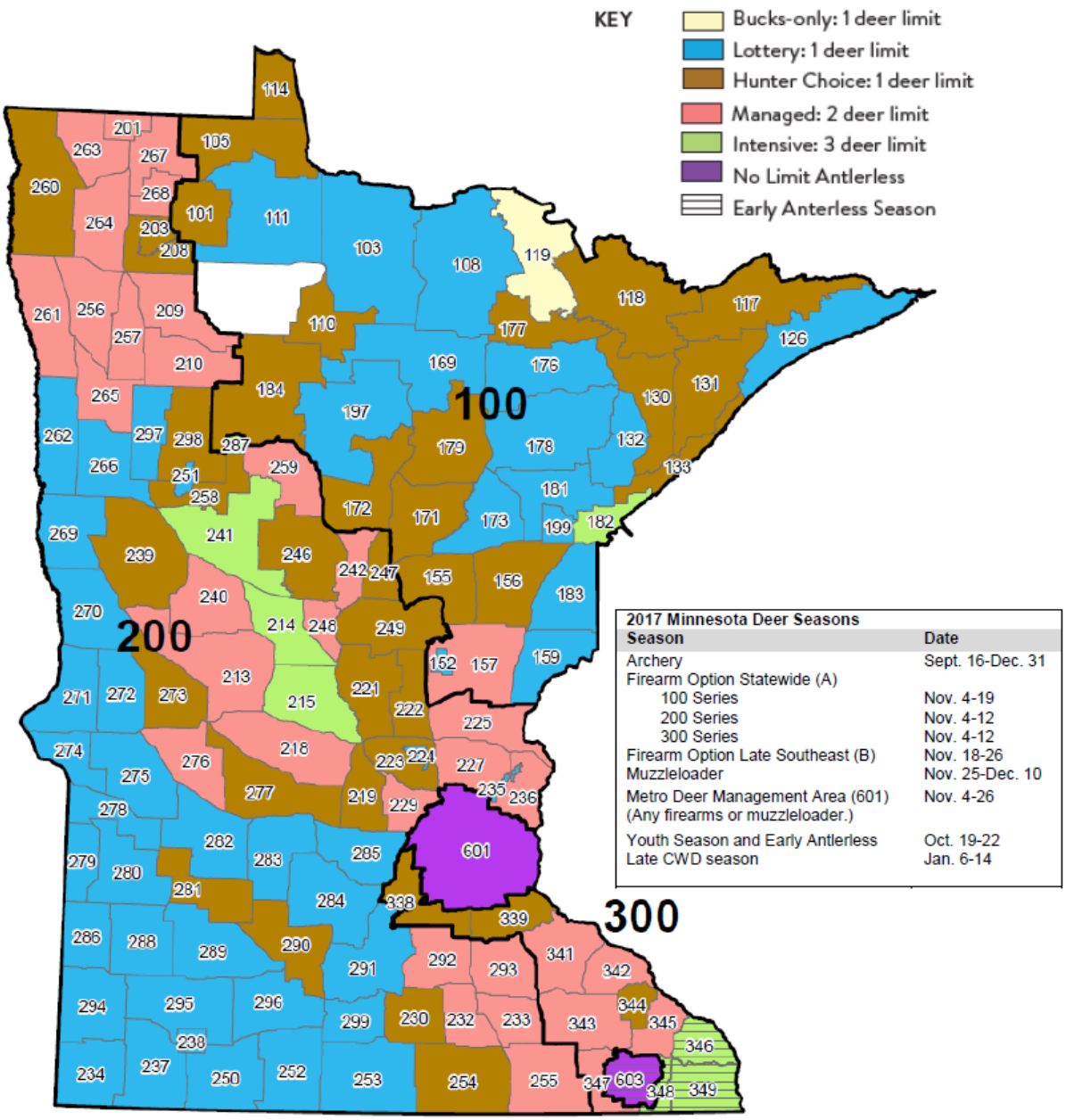


Figure 2. 2017 Deer Permit Areas, Seasons and Deer Management Designations.

Table 1. Statewide Firearms, Archery, and Muzzleloader Harvest, License Sales, and Success Rates, 2000-2017.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
REGULAR FIREARMS																		
Resident License Sales	400,814	401,005	367,964	344,875	309,698	291,298	299,774	285,286	376,006	377,077	379,866	382,668	391,822	391,967	374,314	371,612	372,645	368,407
Non-Resident License Sales	10,595	10,972	10,835	11,334	12,036	12,523	12,520	12,520	11,883	11,759	11,908	11,955	12,483	12,496	11,674	13,501	12,540	12,923
Bonus Permit Sales	34,802	59,013	105,699	194,201	183,186	184,566	167,343	145,522	190,156	140,920	143,763	142,049	89,750	97,402	29,642	31,065	44,365	93,309
Multi-Zone Buck License Sales	42,669	41,921	35,658	32,929	32,359	28,233	15,984	15,051	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Youth License Sales	3,215	4,011	2,884	34,463	51,347	50,501	49,599	49,242	50,397	56,678	59,726	60,943	62,949	64,748	62,488	62,333	61,138	58,779
All Season Deer License Sales	2,384	3,986	22,125	30,998	46,008	59,090	75,511	76,385	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total License Sales	495,289	519,601	545,165	648,800	634,634	626,211	620,731	584,006	628,442	586,434	595,263	597,615	557,004	566,613	478,118	478,511	490,688	533,418
Registered Buck Harvest[1]	102,961	98,894	101,333	110,440	116,612	95,594	95,695	97,528	85,646	83,820	88,027	76,003	84,729	70,627	69,851	83,939	87,855	88,467
Antlerless Permits Offered	232,595	286,540	365,667	31,625	30,760	28,830	18,925	18,830	32,325	60,100	60,083	15,525	32,854	36,816	26,332	31,065	39,646	20,540
Antlerless Permits Issued	180,490	196,603	192,907	25,386	24,111	25,656	18,925	18,830	32,325	60,100	60,083	15,525	32,854	36,816	26,332	31,065	39,646	20,385
Antlerless Permits App.	237,571	225,341	202,086	30,253	28,454	31,403	31,403	31,403	31,403	90,882	86,783	21,071	67,308	68,811	96,580	95,656	97,056	45,001
Registered AL Harvest[1]	88,492	98,169	102,280	147,420	123,278	119,363	135,981	118,860	98,147	78,525	86,077	88,197	71,140	67,885	44,038	48,758	52,338	79,033
Registered Total Harvest[1]	191,453	197,063	203,613	257,860	239,890	214,957	231,676	216,388	183,793	162,345	174,104	164,200	155,869	145,449	113,889	132,697	144,470	167,500
Registered % Successful[2]	38.6	37.9	37.3	39.7	37.8	34.3	37.3	41.7	34.8	33.8	35.9	32.9	32.0	29.7	25.3	28.9	31.2	33.7
ARCHERY																		
Resident License Sales	68,947	69,608	57,532	59,339	50,601	50,293	49,595	52,780	87,872	88,707	91,156	90,252	95,259	92,717	92,301	93,462	92,076	91,875
Non-Resident License Sales	1,271	1,288	1,275	1,428	1,144	1,207	1,286	1,509	1,509	1,610	1,638	1,718	1,814	1,952	1,946	2,032	2,062	2,016
Youth Archery Sales	N/A	N/A	N/A	3,748	7,261	7,489	7,688	7,663	9,005	9,157	9,577	10,306	11,276	12,212	11,965	11,905	10,846	9,961
Mgmt Permit License Sales	20,393	22,141	18,126	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total License Sales	90,611	93,037	76,933	60,767	59,006	58,989	58,569	61,952	99,033	99,474	102,371	102,276	108,349	106,881	106,212	107,399	104,984	103,852
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	N/A	N/A	N/A	N/A
Total Archery Harvest	15,776	15,884	14,744	21,691	20,726	23,538	25,360	24,161	22,632	20,629	22,057	20,444	21,605	19,388	17,119	20,074	20,360	21,058
Registered % Successful[2]	17.4	17.1	19.2	22.3	29.2	24.6	24.8	24.3	18.5	17.5	17.8	17.0	18.8	14.5	15.3	16.5	18.5	18.7
MUZZLELOADER																		
Total Muzzleloader License Sales	11,972	13,043	11,764	9,142	10,512	9,226	10,781	9,867	64,673	63,282	55,640	59,384	58,363	51,092	43,946	50,176	53,097	51,961
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	N/A	N/A	N/A	N/A
Total Muzzleloader Harvest	4,548	4,494	3,505	9,466	9,289	15,421	13,507	12,138	9,572	7,929	9,023	7,416	7,779	7,045	5,847	6,572	8,383	9,210
Registered % Successful[2]	38.0	34.5	29.8	44.7	37.6	47.4	39.6	28.2	13.4	11.3	14.4	11.6	12.4	12.7	12.7	12.0	15.2	16.6
Antlerless Permits Offered											5,792	1,997	1,626	2,144	1,593	1,434	1,352	935
Antlerless Permits App.											7,260	2,615	3,743	3,544	4,588	3,393	2,930	1,902
TOTAL Registered Harvest	**211,777**	**217,452**	**222,050**	**290,525**	**260,604**	**255,736**	**270,778**	**260,434**	**221,837**	**194,186**	**207,313**	**192,331**	**186,634**	**172,781**	**139,442**	**159,343**	**173,213**	**197,768**

[1]Does not include free landowner licenses

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

Table 2. Deer Harvest by Season, 2017.

Season	Total Hunters	Buck Harvest	Antlerless Harvest	Total Harvest	Successful Hunters[2]	Overall Success
Archery	100,800	9,180	11,878	21,058	18,815	18.7%
100 Series A	161,512	32,130	25,779	57,909	57,027	35.3%
200 Series A	235,695	48,768	43,947	92,715	85,669	36.3%
300 Series A[1]	25,872	4,860	4,034	8,894	7,941	30.7%
300 Series B[1]	11,334	1,136	3,074	4,210	3,629	32.0%
Metro Firearms (601)	2,750	584	471	1,055	956	34.8%
Muzzleloader	50,993	3,557	5,428	8,985	8,429	16.5%
Youth	N/A	629	568	1,197	1,190	N/A
Early Antlerless	2,563	0	321	321	286	11.2%
Special Firearms Hunts[3]	3,868	317	733	1,050	894	23.1%
Late CWD	N/A	81	293	374	290	N/A
Total	**487,799**	**101,242**	**96,526**	**197,768**	**180,844**	**37.1%**

[1]Includes deer harvested in area 603
[2]Number of individuals who harvested at least one deer
[3]Includes deer harvested from both special firearm (825) and special muzzleloader (225) hunts

Table 3. Firearms Hunters, Harvest, and Harvest per Square Mile by Permit Area, 2017.
Includes regular, youth, and antlerless permits but no special hunts.

Permit Area	Land Area (Sq. Mile)	Firearms Hunters	Hunters/ Sq. Mile	Adult Male Harvest	Fawn Male Harvest	Adult Female Harvest	Fawn Female Harvest	Total Harvest	Bucks/ Sq. Mile	Antlerless/ Sq. Mile	Total/ Sq. Mile
101	496	1,867	3.8	418	31	186	30	665	0.84	0.50	1.34
103	1,820	2,990	1.6	798	26	223	17	1,064	0.44	0.15	0.58
105	740	4,133	5.6	1,004	85	688	77	1,854	1.36	1.15	2.51
108	1,651	4,414	2.7	968	34	166	18	1,186	0.59	0.13	0.72
110	529	4,029	7.6	978	112	628	112	1,830	1.85	1.61	3.46
111	1,438	2,260	1.6	443	23	122	21	609	0.31	0.12	0.42
114	116	153	1.3	24	1	7	1	33	0.21	0.08	0.28
117	927	145	0.2	23	5	17	7	52	0.02	0.03	0.06
118	1,220	3,281	2.7	565	63	431	47	1,106	0.46	0.44	0.91
119	770	2,237	2.9	333	2	12	1	348	0.43	0.02	0.45
126	942	1,626	1.7	290	13	81	7	391	0.31	0.11	0.42
130	746	2,135	2.9	310	35	220	21	586	0.42	0.37	0.79
131	899	1,029	1.1	93	11	64	12	180	0.10	0.10	0.20
132	482	1,885	3.9	277	13	77	16	383	0.57	0.22	0.79
133	352	2,305	6.5	432	40	253	30	755	1.23	0.92	2.14
152	61	627	10.3	77	13	30	9	129	1.26	0.85	2.11
155	593	7,139	12.0	1,423	283	1,128	213	3,047	2.40	2.74	5.14
156	825	8,760	10.6	1,733	252	1,310	213	3,508	2.10	2.15	4.25
157	888	13,072	14.7	2,706	577	2,015	449	5,747	3.05	3.43	6.48
159	571	6,518	11.4	1,411	103	515	49	2,078	2.47	1.17	3.64
169	1,124	8,359	7.4	1,526	136	682	91	2,435	1.36	0.81	2.17
171	701	6,442	9.2	1,116	227	1,044	197	2,584	1.59	2.09	3.69
172	687	10,125	14.7	1,836	411	1,646	357	4,250	2.67	3.52	6.19
173	584	4,534	7.8	817	59	415	63	1,354	1.40	0.92	2.32
176	921	5,753	6.2	1,144	89	527	65	1,825	1.24	0.74	1.98
177	480	3,922	8.2	699	100	601	71	1,471	1.46	1.61	3.07
178	1,195	8,684	7.3	1,681	92	593	73	2,439	1.41	0.63	2.04

Permit Area	Land Area (Sq. Mile)	Firearms Hunters	Hunters/ Sq. Mile	Adult Male Harvest	Fawn Male Harvest	Adult Female Harvest	Fawn Female Harvest	Total Harvest	Bucks/ Sq. Mile	Antlerless/ Sq. Mile	Total/ Sq. Mile
179	862	9,026	10.5	1,906	302	1,534	248	3,990	2.21	2.42	4.63
181	629	5,301	8.4	1,066	97	561	85	1,809	1.69	1.18	2.88
182	278	2,393	8.6	446	75	360	74	955	1.60	1.83	3.44
183	663	6,867	10.4	1,514	89	478	73	2,154	2.28	0.97	3.25
184	1,229	13,864	11.3	2,945	476	1,943	356	5,720	2.40	2.26	4.65
197	955	5,152	5.4	1,101	62	228	31	1,422	1.15	0.34	1.49
199	153	485	3.2	124	9	20	3	156	0.81	0.21	1.02
201	161	506	3.1	122	15	95	17	249	0.76	0.79	1.55
203	118	237	2.0	54	2	24	5	85	0.46	0.26	0.72
208	379	1,030	2.7	233	16	121	17	387	0.62	0.41	1.02
209	640	2,568	4.0	599	106	425	74	1,204	0.94	0.95	1.88
210	615	4,164	6.8	913	161	605	128	1,807	1.48	1.45	2.94
213	1,057	10,129	9.6	2,312	519	1,392	327	4,550	2.19	2.12	4.31
214	554	7,223	13.0	1,727	475	1,414	432	4,048	3.12	4.19	7.31
215	701	7,032	10.0	1,500	376	987	275	3,138	2.14	2.34	4.48
218	884	5,795	6.6	1,084	213	709	172	2,178	1.23	1.24	2.46
219	391	3,401	8.7	620	86	275	56	1,037	1.58	1.07	2.65
221	642	5,688	8.9	1,370	266	731	177	2,544	2.13	1.83	3.96
222	413	4,866	11.8	1,013	202	551	136	1,902	2.45	2.15	4.60
223	376	3,283	8.7	670	80	308	70	1,128	1.78	1.22	3.00
224	47	682	14.4	91	12	52	14	169	1.92	1.65	3.57
225	618	7,332	11.9	1,614	311	997	230	3,152	2.61	2.49	5.10
227	472	4,829	10.2	1,007	189	592	118	1,906	2.14	1.91	4.04
229	284	1,612	5.7	281	56	161	28	526	0.99	0.86	1.85
230	452	1,402	3.1	223	33	120	20	396	0.49	0.38	0.88
232	377	1,305	3.5	238	43	127	25	433	0.63	0.52	1.15
233	385	979	2.5	192	29	81	18	320	0.50	0.33	0.83
234	636	703	1.1	154	9	44	4	211	0.24	0.09	0.33
235	34	389	11.5	48	3	12	3	66	1.42	0.53	1.96
236	370	3,112	8.4	618	106	344	76	1,144	1.67	1.42	3.09

Permit Area	Land Area (Sq. Mile)	Firearms Hunters	Hunters/ Sq. Mile	Adult Male Harvest	Fawn Male Harvest	Adult Female Harvest	Fawn Female Harvest	Total Harvest	Bucks/ Sq. Mile	Antlerless/ Sq. Mile	Total/ Sq. Mile
237	728	1,087	1.5	215	12	50	4	281	0.30	0.09	0.39
238	95	308	3.2	75	2	20	3	100	0.79	0.26	1.05
239	919	7,758	8.4	1,636	263	833	184	2,916	1.78	1.39	3.17
240	643	7,571	11.8	1,810	394	1,222	314	3,740	2.82	3.00	5.82
241	996	14,277	14.3	3,149	860	2,781	734	7,524	3.16	4.39	7.56
242	214	2,951	13.8	728	141	569	149	1,587	3.40	4.02	7.42
246	840	10,719	12.8	2,143	478	1,593	364	4,578	2.55	2.90	5.45
247	228	3,492	15.3	742	143	530	98	1,513	3.25	3.38	6.63
248	214	1,982	9.2	418	89	285	65	857	1.95	2.05	4.00
249	502	6,004	12.0	1,300	278	907	208	2,693	2.59	2.78	5.37
250	713	1,455	2.0	284	12	97	10	403	0.40	0.17	0.57
251	55	484	8.8	69	7	38	8	122	1.25	0.96	2.22
252	715	1,267	1.8	258	15	90	10	373	0.36	0.16	0.52
253	974	1,987	2.0	404	20	87	14	525	0.41	0.12	0.54
254	929	2,440	2.6	440	53	156	31	680	0.47	0.26	0.73
255	774	1,908	2.5	440	76	201	42	759	0.57	0.41	0.98
256	654	2,242	3.4	536	64	404	64	1,068	0.82	0.81	1.63
257	412	1,882	4.6	430	64	323	56	873	1.04	1.07	2.12
258	343	4,122	12.0	882	185	527	135	1,729	2.57	2.47	5.05
259	490	7,272	14.9	1,542	378	1,513	330	3,763	3.15	4.54	7.69
260	1,249	1,712	1.4	392	27	193	27	639	0.31	0.20	0.51
261	795	845	1.1	221	23	148	15	407	0.28	0.23	0.51
262	677	956	1.4	236	20	64	14	334	0.35	0.14	0.49
263	512	1,972	3.9	422	57	295	40	814	0.82	0.77	1.59
264	669	3,639	5.4	798	126	605	121	1,650	1.19	1.27	2.47
265	494	2,137	4.3	499	93	387	88	1,067	1.01	1.15	2.16
266	617	1,939	3.1	367	31	102	23	523	0.60	0.25	0.85
267	472	1,283	2.7	313	47	265	32	657	0.66	0.73	1.39
268	228	1,375	6.0	351	51	278	53	733	1.54	1.67	3.21
269	650	1,274	2.0	241	9	51	5	306	0.37	0.10	0.47

Permit Area	Land Area (Sq. Mile)	Firearms Hunters	Hunters/ Sq. Mile	Adult Male Harvest	Fawn Male Harvest	Adult Female Harvest	Fawn Female Harvest	Total Harvest	Bucks/ Sq. Mile	Antlerless/ Sq. Mile	Total/ Sq. Mile
270	748	1,016	1.4	180	8	34	1	223	0.24	0.06	0.30
271	632	1,082	1.7	248	11	85	10	354	0.39	0.17	0.56
272	531	1,092	2.1	181	9	40	5	235	0.34	0.10	0.44
273	571	2,602	4.6	483	42	219	46	790	0.85	0.54	1.38
274	354	1,190	3.4	238	13	73	11	335	0.67	0.27	0.95
275	764	1,815	2.4	359	9	83	9	460	0.47	0.13	0.60
276	542	3,118	5.8	597	84	339	58	1,078	1.10	0.89	1.99
277	812	6,623	8.2	1,341	190	727	127	2,385	1.65	1.29	2.94
278	402	1,753	4.4	371	16	87	13	487	0.92	0.29	1.21
279	344	1,184	3.4	165	23	102	18	308	0.48	0.42	0.90
280	675	1,279	1.9	175	6	44	12	237	0.26	0.09	0.35
281	575	2,467	4.3	476	52	210	36	774	0.83	0.52	1.35
282	778	684	0.9	101	3	20	6	130	0.13	0.04	0.17
283	613	1,421	2.3	233	19	64	7	323	0.38	0.15	0.53
284	838	1,781	2.1	300	23	83	13	419	0.36	0.14	0.50
285	549	2,249	4.1	365	18	100	19	502	0.67	0.25	0.91
286	446	1,322	3.0	237	15	76	6	334	0.53	0.22	0.75
287	46	457	10.0	78	28	102	25	233	1.71	3.39	5.10
288	625	1,954	3.1	348	25	134	16	523	0.56	0.28	0.84
289	815	1,048	1.3	203	20	92	17	332	0.25	0.16	0.41
290	662	2,534	3.8	450	62	244	37	793	0.68	0.52	1.20
291	800	3,662	4.6	658	49	195	22	924	0.82	0.33	1.15
292	479	2,946	6.2	538	93	308	75	1,014	1.12	0.99	2.12
293	511	2,594	5.1	549	99	281	50	979	1.07	0.84	1.91
294	686	1,356	2.0	263	38	148	13	462	0.38	0.29	0.67
295	839	2,137	2.5	391	25	103	15	534	0.47	0.17	0.64
296	667	1,676	2.5	289	14	96	13	412	0.43	0.18	0.62
297	438	960	2.2	186	14	33	9	242	0.42	0.13	0.55
298	618	3,611	5.8	720	99	324	80	1,223	1.17	0.81	1.98
299	386	1,475	3.8	264	22	89	13	388	0.68	0.32	1.01

Permit Area	Land Area (Sq. Mile)	Firearms Hunters	Hunters/ Sq. Mile	Adult Male Harvest	Fawn Male Harvest	Adult Female Harvest	Fawn Female Harvest	Total Harvest	Bucks/ Sq. Mile	Antlerless/ Sq. Mile	Total/ Sq. Mile
338	454	1,933	4.3	230	44	171	30	475	0.51	0.54	1.05
339	394	1,729	4.4	263	44	146	33	486	0.67	0.57	1.24
341	612	5,031	8.2	810	201	685	130	1,826	1.32	1.66	2.98
342	349	3,672	10.5	607	127	487	108	1,329	1.74	2.07	3.81
343	663	3,975	6.0	603	157	455	96	1,311	0.91	1.07	1.98
344	190	2,558	13.5	273	47	211	59	590	1.44	1.67	3.11
345	323	2,643	8.2	445	127	352	69	993	1.38	1.70	3.08
346	318	4,276	13.5	801	246	772	221	2,040	2.52	3.90	6.42
347	272	1,616	5.9	291	68	166	50	575	1.07	1.04	2.11
348	123	1,440	11.7	236	54	182	38	510	1.92	2.23	4.15
349	490	5,675	11.6	1,102	300	928	276	2,606	2.25	3.07	5.31
601	1,625	2,750	1.7	602	94	330	53	1,079	0.37	0.29	0.66
603	372	2,658	7.1	606	115	321	97	1,139	1.63	1.43	3.06
TOTAL[1]	**78,854**	**437,163**	**5.5**	**88,107**	**14,025**	**53,327**	**10,842**	**166,301**	**1.12**	**0.99**	**2.11**

[1]Does not include figures from special firearm hunts (see Table 6)

Table 4. Archery Harvest by Permit Area, 2017.

Includes regular, youth, and antlerless permits but no special hunts.

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
101	11	0	5	0	16
103	13	0	13	1	27
105	26	1	29	2	58
108	39	4	33	5	81
110	32	5	25	2	64
111	8	0	9	1	18
114	2	1	0	0	3
117	0	0	2	0	2
118	20	1	26	2	49
119	4	0	0	0	4
126	11	1	12	0	24
130	10	1	14	0	25
131	4	0	3	0	7
132	3	1	3	0	7
133	29	1	23	3	56
152	2	0	2	0	4
155	62	8	57	8	135
156	83	8	77	5	173
157	162	31	211	19	423
159	86	5	58	4	153
169	40	6	50	0	96
171	31	3	38	3	75
172	73	10	93	15	191
173	33	5	30	3	71
176	42	5	36	2	85
177	20	0	18	0	38
178	72	10	66	5	153
179	112	11	90	16	229
181	44	7	37	5	93
182	102	31	187	35	355
183	67	9	63	7	146
184	169	23	108	10	310
197	46	3	31	1	81
199	5	1	6	0	12
201	3	1	6	0	10
203	1	0	1	0	2
208	4	3	3	1	11
209	39	7	34	1	81
210	32	5	51	7	95
213	152	45	253	25	475
214	128	36	270	29	463

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
249	90	9	58	8	165
250	38	5	18	4	65
251	2	0	2	0	4
252	46	4	14	3	67
253	89	8	40	1	138
254	87	5	41	2	135
255	98	19	97	15	229
256	35	5	24	2	66
257	27	6	28	2	63
258	44	2	29	7	82
259	62	9	94	11	176
260	20	1	10	0	31
261	26	1	19	1	47
262	24	5	19	4	52
263	19	1	12	3	35
264	37	1	40	2	80
265	37	3	40	6	86
266	20	2	18	0	40
267	16	2	19	1	38
268	18	2	27	3	50
269	33	2	17	4	56
270	25	2	11	0	38
271	25	1	11	1	38
272	15	1	3	1	20
273	45	4	19	1	69
274	33	1	16	4	54
275	30	3	25	3	61
276	57	4	70	10	141
277	190	17	119	15	341
278	43	2	19	0	64
279	12	0	1	0	13
280	22	2	14	1	39
281	55	5	37	2	99
282	23	2	5	1	31
283	51	2	26	1	80
284	39	1	19	3	62
285	81	3	36	2	122
286	23	2	17	1	43
287	3	1	3	1	8
288	37	5	32	1	75
289	24	2	16	2	44

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
215	205	57	331	47	640
218	155	33	237	36	461
219	117	8	55	10	190
221	114	12	73	12	211
222	79	7	36	3	125
223	182	17	89	9	297
224	24	1	16	3	44
225	182	50	189	27	448
227	259	65	275	47	646
229	85	15	78	11	189
230	39	3	18	1	61
232	38	4	39	3	84
233	56	8	54	7	125
234	28	1	12	0	41
235	13	2	11	1	27
236	225	41	200	16	482
237	35	1	18	2	56
238	9	0	7	1	17
239	112	6	64	5	187
240	140	25	185	16	366
241	242	69	555	69	935
242	126	32	177	18	353
246	105	14	70	8	197
247	69	9	60	7	145
248	56	6	50	6	118

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
290	54	5	33	3	95
291	146	14	83	4	247
292	103	12	110	10	235
293	113	17	94	12	236
294	22	4	18	2	46
295	49	5	45	1	100
296	26	2	15	2	45
297	12	0	3	0	15
298	15	3	13	3	34
299	56	2	37	2	97
338	65	6	36	0	107
339	63	4	31	3	101
341	193	34	198	23	448
342	111	23	116	20	270
343	240	34	256	35	565
344	51	8	13	7	79
345	82	10	50	7	149
346	176	30	192	19	417
347	57	7	41	2	107
348	42	7	39	6	94
349	222	29	201	21	473
601	757	186	905	113	1,961
603	81	19	83	18	201
Total[1]	**8,954**	**1,388**	**8,749**	**1,024**	**20,115**

[1]Does not include 943 deer from 900-series Archery Hunts, including Camp Ripley hunts (see Table 8)

Table 5. Muzzleloader Harvest by Permit Area, 2017.

Includes regular, youth, and antlerless permits but no special hunts.

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
101	21	0	14	0	35
103	22	1	4	1	28
105	25	1	25	4	55
108	37	0	6	0	43
110	13	6	11	2	32
111	11	0	1	1	13
114	1	0	0	0	1
117	1	1	1	1	4
118	20	2	19	0	41
119	7	0	0	0	7
126	12	0	3	0	15
130	5	2	5	1	13
131	2	0	0	0	2
132	2	0	3	0	5
133	8	1	9	0	18
152	1	0	0	0	1
155	13	2	23	1	39
156	10	5	18	1	34
157	28	6	50	7	91
159	14	2	8	0	24
169	20	1	14	1	36
171	14	5	23	4	46
172	26	10	41	4	81
173	11	0	4	1	16
176	14	1	15	1	31
177	14	3	22	3	42
178	18	0	5	0	23
179	35	4	39	7	85
181	14	1	11	0	26
182	5	1	20	1	27
183	16	1	6	1	24
184	46	5	60	8	119
197	10	0	3	0	13
199	3	1	2	0	6
201	8	1	20	0	29
208	13	3	4	0	20
209	34	5	17	5	61
210	28	8	35	9	80
213	106	38	165	29	338
214	38	31	93	14	176

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
249	24	10	33	3	70
250	39	2	13	0	54
251	5	0	1	1	7
252	23	1	9	0	33
253	56	6	23	2	87
254	57	11	44	8	120
255	34	8	58	7	107
256	34	6	32	4	76
257	14	9	26	3	52
258	12	2	19	0	33
259	34	14	70	11	129
260	41	1	14	0	56
261	28	0	24	0	52
262	14	1	6	1	22
263	25	2	39	2	68
264	48	10	68	12	138
265	39	8	43	6	96
266	29	3	12	1	45
267	30	4	18	4	56
268	33	4	29	3	69
269	47	0	5	1	53
270	25	0	1	0	26
271	28	1	17	1	47
272	20	0	3	0	23
273	28	3	20	3	54
274	21	4	12	1	38
275	28	3	5	0	36
276	59	10	73	13	155
277	95	23	111	11	240
278	48	2	13	1	64
279	19	3	16	4	42
280	23	0	8	0	31
281	42	6	64	6	118
282	20	0	1	0	21
283	31	0	5	0	36
284	34	0	11	1	46
285	18	4	9	1	32
286	39	3	13	0	55
287	3	0	5	0	8
288	34	4	27	4	69

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
215	73	39	148	32	292
218	64	16	146	17	243
219	47	9	65	12	133
221	40	12	58	9	119
222	30	5	38	2	75
223	32	6	31	7	76
224	0	0	1	0	1
225	46	13	76	5	140
227	61	18	84	11	174
229	12	6	26	4	48
230	16	0	18	1	35
232	35	8	35	6	84
233	26	4	55	2	87
234	22	1	5	0	28
235	0	0	1	0	1
236	21	5	47	4	77
237	31	1	5	1	38
238	11	1	3	1	16
239	48	4	41	6	99
240	49	17	89	10	165
241	61	44	186	34	325
242	23	11	32	4	70
246	45	6	49	11	111
247	13	5	22	7	47
248	15	4	24	2	45
289	28	0	11	0	39
290	45	6	54	5	110
291	54	8	33	5	100
292	38	13	59	10	120
293	36	13	64	8	121
294	58	1	15	3	77
295	75	4	25	2	106
296	31	4	17	3	55
297	4	0	1	0	5
298	15	4	11	0	30
299	33	2	15	2	52
338	16	5	25	2	48
339	12	5	19	6	42
341	40	26	81	13	160
342	30	15	75	11	131
343	41	15	68	8	132
344	10	5	22	0	37
345	18	8	34	8	68
346	45	24	130	9	208
347	15	8	29	3	55
348	6	3	11	1	21
349	47	27	185	23	282
601	21	8	35	2	66
603	11	8	22	6	47
TOTAL[1]	**3,557**	**763**	**4,125**	**540**	**8,985**

[1]Does not include special hunts (see Table 7)

Table 6. Summary of Special Firearm Hunts, 2017.

Includes regular, youth, and bonus permits.

Hunt Area	Dates	Permits Available	Adult Male Harvest	Fawn Male Harvest	Adult Female Harvest	Fawn Female Harvest	Total Harvest
900 - Cascade River State Park	11/4-11/19	100*	5	0	13	0	18
901 - Rice Lake NWR	11/11-11/19	40*	6	2	4	0	12
902 - St. Croix State Park	11/16-11/19	350*	64	17	54	10	145
904 - Gooseberry Falls State Park	11/4-11/19	30*	6	2	9	3	20
905 - Split Rock Lighthouse State Park	11/4-11/19	30*	4	3	5	0	12
906 - Tettegouche State Park	11/4-11/19	125*	9	4	18	2	33
907 - Scenic State Park	11/4-11/19	30*	3	1	2	0	6
908 - Hayes Lake State Park	11/4-11/19	75***	0	0	4	5	9
909 - Lake Bemidji State Park	11/4-11/7	30***	4	6	4	1	15
910 - Zippel Bay State Park	11/4-11/19	75***	10	7	31	9	57
911 - Judge CR Magney State Park	11/4-11/19	75*	5	1	7	0	13
912 - Schoolcraft State Park	11/4-11/19	NA†	1	2	1	0	4
913 - Lake Carlos State Park	11/4-11/7	20**	2	2	6	0	10
914 - William O'Brien State Park	11/11-11/12	50*	10	3	13	4	30
915 - Lake Bronson State Park	11/4-11/12	30***	10	2	12	3	27
916 - Maplewood State Park	11/4-11/7	100*	33	4	15	6	58
919 - Glacial Lakes State Park	11/9-11/12	30**	0	3	7	1	11
920 - Zumbro Falls Woods SNA	11/4-11/12	12**	0	4	4	0	8
922 - Old Mill State Park	11/4-11/7	10*	3	1	1	3	8
923 - Zumbro Falls Woods SNA	11/18-11/26	12**	0	5	3	1	9
924 - Franz Jevne State Park	11/4-11/19	NA†	0	0	0	0	0
925 - Vermillion Highlands WMA (A and B)	11/4-11/17	20*	7	1	0	2	10
927 - Whitewater State Park	11/18-11/19	50*	3	4	13	3	23
930 - Carver Park Reserve (A and B)	11/11-11/12	110*	17	4	24	7	52
931 - City of Grand Rapids	11/4-11/19	NA†*	9	9	20	7	45
933 - Forestville - Mystery Cave State Park	11/4-11/5	130*	22	6	10	6	44
934 - Whitewater State Game Refuge	11/18-11/26	75**	0	2	16	4	22
962 - Great Rivers Bluff State Park	11/18-11/19	50*	3	3	9	1	16
Firearms Special Hunt Totals			**236**	**98**	**305**	**78**	**717**

* Either Sex

** Antlerless Only

*** Earn-A-Buck

NA† Unlimited Permits

Table 7. Summary of Special Muzzleloader Hunts, 2017.

Includes regular, youth, and bonus permits.

Hunt Area	Dates	Permits Available	Adult Male Harvest	Fawn Male Harvest	Adult Female Harvest	Fawn Female Harvest	Total Harvest
921 - Minneopa State Park	12/1-12/3	12***	1	2	7	2	12
935 - Jay Cooke State Park	12/2-12/6	75*	3	4	15	2	24
936 - Crow Wing State Park	12/2-12/3	25*	0	0	5	2	7
937 - Soudan Underground Mine and Lake Vermilion State Park	11/25-12/10	25*	3	2	6	3	14
938 - City of Tower	11/25-12/10	20*	2	0	5	0	7
939 - Myre-Big Island State Park	12/1-12/3	50**	0	10	45	5	60
940 - Frontenac State Park	12/2-12/3	50*	6	3	8	3	20
942 - Sibley State Park	11/25-11/26	60**	1	0	14	0	15
944 - Vermillion Highlands WMA	11/25-12/10	20*	3	1	2	1	7
946 - City of Grand Rapids	11/25-12/10	NA†*	0	0	0	1	1
947 - Lake Bemidji State Park	12/1-12/3	30*	2	0	5	0	7
948 - Savanna Portage State Park	11/25-11/28	30*	0	0	0	0	0
949 - St. Croix State Park	11/30-12/3	100*	3	2	11	2	18
992 - Sakatah Lake State Park	12/1-12/3	15**	0	1	3	1	5
Muzzleloader Special Hunt Totals			**24**	**25**	**126**	**22**	**197**

* Either Sex
** Antlerless Only
*** Earn-A-Buck
NA† Unlimited Permits

Table 8. Summary of Special Youth and Camp Ripley Archery Hunts, 2017.

Includes regular, youth, and bonus permits.

Hunt Area	Dates	Permits Available	Adult Male Harvest	Fawn Male Harvest	Adult Female Harvest	Fawn Female Harvest	Total Harvest
950 - Camp Ripley Youth Archery	10/7-10/8	175*	1	0	1	0	2
951 - Afton State Park	11/4-11/5	25*	8	0	6	1	15
952 - Sibley State Park	10/28-10/29	10*	3	0	2	0	5
953 - Zippel Bay State Park	10/21-10/22	20*	1	0	1	1	3
954 - Lake Bemidji State Park	10/20-10/22	20*	1	0	2	0	3
955 - Lake Alexander PreserveArchery	10/7-10/8	20*	0	0	0	1	1
956 - St. Croix State Park	10/28-10/29	90*	7	4	9	3	23
957 - Rydell National Wildlife Refuge	10/28-10/29	15*	3	1	1	0	5
958 - Savanna Portage State Park	10/28-10/29	25*	4	0	5	1	10
959 - Buffalo River State Park	11/4-11/5	14***	0	1	2	2	5
960 - Tettegouche State Park	10/28-10/29	10*	0	0	1	0	1
961 - Itasca State Park	10/14-10/15	75*	1	0	1	0	2
963 - Kilen Woods State Park	10/28-10/29	6*	1	0	1	0	2
965 - Banning State Park	10/28-10/29	6*	1	0	1	0	2
966 - Blue Mounds State Park	11/18-11/19	10*	2	0	2	0	4
967 - Camden State Park	10/28-10/29	12***	2	1	3	1	7
968 - Lake Shetek State Park	11/18-11/19	12***	3	1	6	1	11
Youth Special Hunt Totals			**38**	**8**	**44**	**11**	**101**
970 – Camp Ripley First Hunt	10/19-10/20	2,000*	25	4	26	3	58
971 - Camp Ripley First Hunt	11/28-10/29	2,000*	111	16	67	10	204
Camp Ripley Archery Hunt Totals			**136**	**20**	**93**	**13**	**262**

* Either Sex

** Antlerless Only

*** Earn-A-Buck

NA† Unlimited Permits

Table 9. Total Deer Harvest by Permit Area, 2017. Includes all seasons, license types, and permits with special hunts harvest reallocated to original permit area.

Permit Area	Adult Male Harvest	Fawn Male Harvest	Adult Female Harvest	Fawn Female Harvest	Total Harvest	Land Area (Sq. Mile)	Bucks/ Sq. Mile	Antlerless/ Sq. Mile	Total/ Sq. Mile	Rank
101	450	31	209	35	725	496	0.91	0.55	1.46	82
103	833	27	240	19	1,119	1,820	0.46	0.16	0.62	114
105	1,066	95	778	94	2,033	740	1.44	1.31	2.75	52
108	1,044	38	205	23	1,310	1,651	0.63	0.16	0.79	102
110	1,023	123	664	116	1,926	529	1.94	1.71	3.64	40
111	462	23	132	23	640	1,438	0.32	0.12	0.45	125
114	27	2	7	1	37	116	0.23	0.09	0.32	127
117	24	6	20	8	58	927	0.03	0.04	0.06	130
118	605	66	476	49	1,196	1,220	0.50	0.48	0.98	96
119	344	2	12	1	359	770	0.45	0.02	0.47	122
126	323	15	116	7	461	942	0.34	0.15	0.49	121
130	327	39	248	24	638	746	0.44	0.42	0.86	99
131	99	11	67	12	189	899	0.11	0.10	0.21	129
132	282	14	83	16	395	482	0.59	0.23	0.82	101
133	488	51	318	38	895	352	1.39	1.16	2.54	57
152	80	13	32	9	134	61	1.31	0.88	2.19	64
155	1,504	295	1,212	222	3,233	593	2.54	2.92	5.45	19
156	1,826	265	1,405	219	3,715	825	2.21	2.29	4.50	30
157	2,896	614	2,276	475	6,261	888	3.26	3.79	7.05	7
159	1,586	133	655	68	2,442	571	2.78	1.50	4.28	32
169	1,589	144	748	92	2,573	1,124	1.41	0.88	2.29	62
171	1,161	235	1,105	204	2,705	701	1.66	2.20	3.86	36
172	1,935	431	1,780	376	4,522	687	2.82	3.77	6.59	10
173	865	64	454	68	1,451	584	1.48	1.00	2.48	59
176	1,200	95	578	68	1,941	921	1.30	0.80	2.11	65
177	736	104	658	78	1,576	480	1.53	1.75	3.29	44
178	1,772	103	693	82	2,650	1,195	1.48	0.73	2.22	63
179	2,067	336	1,717	287	4,407	862	2.40	2.71	5.11	21
181	1,124	105	609	90	1,928	629	1.79	1.28	3.07	47
182	606	144	736	143	1,629	278	2.18	3.68	5.86	13
183	1,600	101	556	82	2,339	663	2.41	1.11	3.53	42
184	3,174	512	2,147	376	6,209	1,229	2.58	2.47	5.05	25
197	1,157	65	262	32	1,516	955	1.21	0.38	1.59	78
199	132	11	28	3	174	153	0.86	0.28	1.14	89
201	133	17	121	17	288	161	0.83	0.96	1.79	71
203	55	2	25	5	87	118	0.47	0.27	0.74	105
208	250	22	128	18	418	379	0.66	0.44	1.10	90
209	672	118	476	80	1,346	640	1.05	1.05	2.10	66

Permit Area	Adult Male Harvest	Fawn Male Harvest	Adult Female Harvest	Fawn Female Harvest	Total Harvest	Land Area (Sq. Mile)	Bucks/ Sq. Mile	Antlerless/ Sq. Mile	Total/ Sq. Mile	Rank
210	973	174	691	144	1,982	615	1.58	1.64	3.22	46
213	2,572	604	1,816	381	5,373	1,057	2.43	2.65	5.08	23
214	1,893	542	1,777	475	4,687	554	3.42	5.04	8.46	3
215	1,778	472	1,466	354	4,070	701	2.54	3.27	5.80	16
218	1,303	262	1,092	225	2,882	884	1.47	1.79	3.26	45
219	784	103	395	78	1,360	391	2.00	1.47	3.47	43
221	1,524	290	862	198	2,874	642	2.37	2.10	4.48	31
222	1,122	214	625	141	2,102	413	2.71	2.37	5.08	22
223	884	103	428	86	1,501	376	2.35	1.64	4.00	34
224	115	13	69	17	214	47	2.43	2.09	4.52	29
225	1,842	374	1,262	262	3,740	618	2.98	3.07	6.05	12
227	1,327	272	951	176	2,726	472	2.81	2.97	5.78	17
229	378	77	265	43	763	284	1.33	1.35	2.68	54
230	278	36	156	22	492	452	0.62	0.47	1.09	91
232	311	55	201	34	601	377	0.83	0.77	1.60	76
233	274	41	190	27	532	385	0.71	0.67	1.38	86
234	206	11	63	4	284	636	0.32	0.12	0.45	124
235	61	5	24	4	94	34	1.81	0.98	2.79	51
236	874	155	604	100	1,733	370	2.36	2.32	4.69	28
237	281	14	73	7	375	728	0.39	0.13	0.51	119
238	95	3	30	5	133	95	1.00	0.40	1.40	84
239	1,831	278	956	203	3,268	919	1.99	1.56	3.56	41
240	1,999	436	1,496	340	4,271	643	3.11	3.54	6.65	9
241	3,452	973	3,522	837	8,784	996	3.47	5.35	8.82	2
242	877	184	781	172	2,014	214	4.10	5.32	9.42	1
246	2,293	498	1,712	383	4,886	840	2.73	3.09	5.82	15
247	824	157	612	112	1,705	228	3.61	3.86	7.47	6
248	639	119	462	89	1,309	214	2.98	3.13	6.11	11
249	1,414	297	1,000	220	2,931	502	2.82	3.02	5.84	14
250	363	19	129	14	525	713	0.51	0.23	0.74	106
251	76	7	41	9	133	55	1.38	1.04	2.42	60
252	327	20	113	13	473	715	0.46	0.20	0.66	110
253	549	34	150	17	750	974	0.56	0.21	0.77	103
254	584	79	286	46	995	929	0.63	0.44	1.07	93
255	573	106	387	70	1,136	774	0.74	0.73	1.47	81
256	605	75	461	70	1,211	654	0.93	0.93	1.85	69
257	474	80	379	61	994	412	1.15	1.26	2.41	61
258	938	189	575	142	1,844	343	2.74	2.64	5.38	20
259	1,638	401	1,677	352	4,068	490	3.35	4.96	8.31	5
260	453	29	217	27	726	1,249	0.36	0.22	0.58	117

Permit Area	Adult Male Harvest	Fawn Male Harvest	Adult Female Harvest	Fawn Female Harvest	Total Harvest	Land Area (Sq. Mile)	Bucks/ Sq. Mile	Antlerless/ Sq. Mile	Total/ Sq. Mile	Rank
261	275	24	191	16	506	795	0.35	0.29	0.64	112
262	274	26	89	19	408	677	0.40	0.20	0.60	115
263	476	62	358	48	944	512	0.93	0.91	1.84	70
264	886	138	714	138	1,876	669	1.32	1.48	2.80	50
265	575	104	470	100	1,249	494	1.16	1.36	2.53	58
266	416	36	132	24	608	617	0.67	0.31	0.99	95
267	359	53	302	37	751	472	0.76	0.83	1.59	77
268	402	57	334	59	852	228	1.76	1.97	3.73	38
269	321	12	75	12	420	650	0.49	0.15	0.65	111
270	230	10	46	1	287	748	0.31	0.08	0.38	126
271	301	13	113	12	439	632	0.48	0.22	0.69	109
272	216	10	46	6	278	531	0.41	0.12	0.52	118
273	556	49	258	50	913	571	0.97	0.62	1.60	75
274	293	18	114	16	441	354	0.83	0.42	1.24	87
275	417	15	113	12	557	764	0.55	0.18	0.73	107
276	713	101	489	82	1,385	542	1.32	1.24	2.56	56
277	1,630	230	973	153	2,986	812	2.01	1.67	3.68	39
278	464	20	122	15	621	402	1.15	0.39	1.55	80
279	196	26	120	22	364	344	0.57	0.49	1.06	94
280	220	8	67	13	308	675	0.33	0.13	0.46	123
281	573	63	320	47	1,003	575	1.00	0.75	1.75	72
282	144	5	26	7	182	778	0.19	0.05	0.23	128
283	315	21	95	8	439	613	0.51	0.20	0.72	108
284	373	24	113	17	527	838	0.45	0.18	0.63	113
285	464	25	145	22	656	549	0.85	0.35	1.20	88
286	299	20	106	7	432	446	0.67	0.30	0.97	97
287	85	29	111	26	251	46	1.86	3.63	5.49	18
288	421	35	196	22	674	625	0.67	0.41	1.08	92
289	255	22	119	19	415	815	0.31	0.20	0.51	120
290	551	77	355	52	1,035	662	0.83	0.73	1.56	79
291	868	79	369	41	1,357	800	1.08	0.61	1.70	73
292	679	119	480	96	1,374	479	1.42	1.45	2.87	49
293	701	130	443	71	1,345	511	1.37	1.26	2.63	55
294	343	43	181	18	585	686	0.50	0.35	0.85	100
295	518	35	179	19	751	839	0.62	0.28	0.90	98
296	346	20	128	18	512	667	0.52	0.25	0.77	104
297	202	14	37	9	262	438	0.46	0.14	0.60	116
298	750	106	348	83	1,287	618	1.21	0.87	2.08	67
299	354	28	152	18	552	386	0.92	0.51	1.43	83
338	311	55	232	32	630	454	0.69	0.70	1.39	85

Permit Area	Adult Male Harvest	Fawn Male Harvest	Adult Female Harvest	Fawn Female Harvest	Total Harvest	Land Area (Sq. Mile)	Bucks/ Sq. Mile	Antlerless/ Sq. Mile	Total/ Sq. Mile	Rank
339	340	53	199	43	635	394	0.86	0.75	1.61	74
341	1,054	267	991	173	2,485	612	1.72	2.34	4.06	33
342	748	174	685	140	1,747	349	2.14	2.86	5.01	26
343	884	206	779	139	2,008	663	1.33	1.70	3.03	48
344	337	66	275	73	751	190	1.78	2.18	3.96	35
345	545	145	436	84	1,210	323	1.69	2.06	3.75	37
346	1,025	303	1,103	250	2,681	318	3.23	5.21	8.44	4
347	363	83	236	55	737	272	1.33	1.37	2.71	53
348	284	64	232	45	625	123	2.31	2.77	5.08	24
349	1,371	356	1,314	320	3,361	490	2.80	4.06	6.85	8
601	1,417	294	1,305	179	3,195	1,625	0.87	1.09	1.97	68
603	801	205	602	197	1,805	372	2.15	2.70	4.85	27
TOTAL	**101,242**	**16,451**	**67,390**	**12,685**	**197,768**	**78,854**	**1.28**	**1.22**	**2.51**	

Table 10. Youth Deer Season Harvest (Oct. 19-22) by Permit Area, 2017.

Permit Area	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
101	22	1	10	0	33
105	60	6	51	11	128
111	13	5	14	2	34
114	1	0	1	0	2
201	9	1	8	0	18
203	0	0	2	0	2
208	19	2	8	1	30
209	29	5	15	3	52
256	33	2	24	0	59
257	21	4	11	6	42
260	23	1	24	5	53
263	19	3	24	2	48
264	39	3	38	6	86
267	28	2	24	5	59
268	17	3	13	4	37
338	11	2	6	0	19
339	10	1	2	0	13
341	28	6	24	6	64
342	26	7	15	2	50
343	27	8	16	2	53
344	16	6	11	1	34
345	28	6	12	2	48
346	39	6	11	4	60
347	15	6	5	1	27
348	12	1	6	0	19
349	43	9	9	2	63
601	18	2	3	1	24
603	16	1	4	1	22
Total	**622**	**99**	**391**	**67**	**1,179**

Table 11. Early Antlerless Deer Season Harvest (Oct. 19-22) by Permit Area, 2017.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
346	24	78	25	127
348	3	13	4	20
349	28	66	27	121
603	11	15	5	31
Total	**66**	**172**	**61**	**299**

Table 12. 300 Series A and B Seasons Firearms Harvest by Permit Area, 2017.

Permit Area	Zone	Adult Male	Fawn Male	Adult Female	Fawn Female	Total
338	3A	193	34	122	20	369
	3B	26	8	43	10	87
339	3A	210	28	101	22	361
	3B	43	14	43	11	111
341	3A	635	127	382	72	1,216
	3B	147	68	277	52	544
342	3A	452	60	288	58	858
	3B	129	60	183	48	420
343	3A	491	95	279	59	924
	3B	85	54	160	35	334
344	3A	212	24	125	38	399
	3B	45	17	75	20	157
345	3A	326	59	169	37	591
	3B	91	62	171	29	353
346	3A	633	126	360	109	1,228
	3B	129	90	323	83	625
347	3A	227	33	103	24	387
	3B	49	29	58	25	161
348	3A	195	33	111	27	366
	3B	29	17	52	7	105
349	3A	832	125	391	117	1,465
	3B	227	138	462	130	957
603	3A	454	49	174	53	730
	3B	136	54	128	38	356
Total		**5,996**	**1,404**	**4,580**	**1,124**	**13,104**

Table 13. Free Landowner License Harvest by Permit Area, 2017.

Permit Area	Fawn Male	Adult Female	Fawn Female	Total
101	0	3	1	4
105	0	15	0	15
110	2	13	3	18
133	0	0	1	1
155	1	8	3	12
156	1	10	2	13
157	9	35	5	49
171	1	1	0	2
172	0	6	0	6
177	0	8	1	9
179	5	9	1	15
182	0	1	0	1
184	6	37	4	47
201	0	1	1	2
208	0	6	1	7
209	4	18	0	22
210	6	18	4	28
213	35	77	16	128
214	22	94	20	136
215	11	46	7	64
218	1	10	3	14
219	1	2	2	5
221	18	48	4	70
222	3	15	1	19
223	0	5	3	8
225	10	16	5	31
227	4	7	1	12
229	1	4	1	6
230	1	1	0	2
232	1	0	0	1
233	1	1	0	2
236	1	4	0	5
239	12	36	6	54
240	19	60	18	97
241	26	112	24	162
242	0	1	0	1
246	6	39	6	51
247	1	3	1	5
248	3	3	1	7
249	8	52	11	71
254	1	9	0	10
255	1	8	2	11
256	2	21	1	24
257	5	19	2	26
258	6	5	1	12
259	1	11	1	13
260	1	3	0	4
261	0	1	0	1
263	0	3	0	3
264	6	22	6	34
265	2	14	4	20
267	2	5	1	8
268	0	6	1	7
273	0	1	0	1
276	0	1	0	1
277	0	16	0	16
281	0	1	0	1
290	0	3	0	3
292	1	12	1	14
293	2	1	2	5
298	2	4	1	7
338	0	9	1	10
339	0	6	1	7
341	13	24	6	43
342	5	21	8	34
343	5	14	6	25
344	3	15	4	22
345	4	20	2	26
346	4	28	9	41
347	0	9	1	10
348	1	2	0	3
349	7	47	13	67
601	0	1	0	1
603	1	10	2	13
Total	**295**	**1,197**	**233**	**1,725**

Table 14. 2017 Firearm Lottery Distribution Report.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
103	1	365	1	365	0	**496**
	2	300	0	300	0	
	3	289	3	70	219	
	4	272	1	0	272	
	5	5	0	0	5	
		1,231	**5**	**735**	**496**	
108	1	334	2	334	0	**98**
	2	330	2	330	0	
	3	228	1	228	0	
	4	197	1	197	0	
	5	178	0	177	1	
	6	97	0	0	97	
	7	0	1	0	0	
		1,364	**7**	**1,266**	**98**	
111	1	215	1	215	0	**348**
	2	202	3	161	41	
	3	186	4	0	186	
	4	121	0	0	121	
		724	**8**	**376**	**348**	
126	1	415	2	104	311	**394**
	2	76	0	0	76	
	3	5	0	0	5	
	4	2	0	0	2	
		498	**2**	**104**	**394**	
132	1	591	0	546	45	**249**
	2	192	0	0	192	
	3	11	0	0	11	
	5	1	0	0	1	
		795	**0**	**546**	**249**	
152	1	168	0	66	102	**193**
	2	86	0	0	86	
	3	4	0	0	4	
	5	1	0	0	1	
		259	**0**	**66**	**193**	

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
159	1	927	3	927	0	**1,473**
	2	682	3	61	621	
	3	681	5	0	681	
	4	170	2	0	170	
	7	1	0	0	1	
		2,461	**13**	**988**	**1,473**	
169	1	2,477	12	2,354	123	**1,981**
	2	1,419	7	0	1,419	
	3	375	2	0	375	
	4	58	0	0	58	
	5	5	0	0	5	
	9	1	0	0	1	
		4,335	**21**	**2,354**	**1,981**	
173	1	596	2	596	0	**980**
	2	516	3	418	98	
	3	553	2	0	553	
	4	327	1	0	327	
	5	2	0	0	2	
		1,994	**8**	**1,014**	**980**	
176	1	821	2	821	0	**1,484**
	2	1,023	4	160	863	
	3	607	1	0	607	
	5	12	0	0	12	
	6	1	0	0	1	
	9	1	0	0	1	
		2,465	**7**	**981**	**1,484**	
178	1	1,178	2	1,178	0	**987**
	2	1,968	6	1,040	928	
	3	47	0	0	47	
	4	9	0	0	9	
	5	2	0	0	2	
	9	1	0	0	1	
		3,205	**8**	**2,218**	**987**	
181	1	823	1	0	823	**1,977**
	2	1,022	3	0	1,022	
	3	26	0	0	26	
	4	9	0	0	9	
		1,880	**4**	**0**	**1,880**	

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
183	1	1,197	4	1,197	0	**983**
	2	1,367	7	839	528	
	3	416	1	0	416	
	4	34	2	0	34	
	5	1	0	0	1	
	6	1	0	0	1	
	9	3	0	0	3	
		3,019	**14**	**2,036**	**983**	
197	1	744	2	744	0	**492**
	2	490	0	490	0	
	3	490	2	490	0	
	4	533	7	41	492	
	5	0	1	0	0	
		2,257	**12**	**1,765**	**492**	
199	1	110	0	50	60	**100**
	2	32	0	0	32	
	3	6	0	0	6	
	4	2	0	0	2	
		150	**0**	**50**	**100**	
224	1	145	1	0	145	**296**
	2	90	0	0	90	
	3	2	0	0	2	
	4	1	0	0	1	
		238	**1**	**0**	**238**	
234	1	109	1	109	0	**93**
	2	112	1	20	92	
	3	1	0	0	1	
		222	**2**	**129**	**93**	
235	1	62	0	26	36	**63**
	2	20	0	0	20	
	3	5	0	0	5	
	4	2	0	0	2	
		89	**0**	**26**	**63**	
237	1	92	0	92	0	**47**
	2	151	1	151	0	
	3	71	2	25	46	
	4	1	0	0	1	
		315	**3**	**268**	**47**	

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
238	1	54	0	54	0	**49**
	2	44	0	12	32	
	3	17	0	0	17	
		115	**0**	**66**	**49**	
250	1	300	1	300	0	**274**
	2	253	0	48	205	
	3	69	0	0	69	
		622	**1**	**348**	**274**	
251	1	184	1	76	108	**192**
	2	76	0	0	76	
	3	8	0	0	8	
		268	**1**	**76**	**192**	
252	1	360	1	164	196	**375**
	2	169	2	0	169	
	3	9	0	0	9	
	5	1	0	0	1	
		539	**3**	**164**	**375**	
253	1	344	0	344	0	**345**
	2	281	1	135	146	
	3	197	1	0	197	
	4	2	0	0	2	
		824	**2**	**479**	**345**	
262	1	180	3	64	116	**274**
	2	131	1	0	131	
	3	27	0	0	27	
		338	**4**	**64**	**274**	
266	1	423	0	202	221	**473**
	2	213	2	0	213	
	3	38	1	0	38	
	4	1	0	0	1	
		675	**3**	**202**	**473**	
269	1	163	1	163	0	**136**
	2	207	0	191	16	
	3	120	0	0	120	
	4	0	1	0	0	
		490	**2**	**354**	**136**	

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
270	1	89	0	89	0	**23**
	2	103	0	103	0	
	3	84	0	84	0	
	4	59	0	36	23	
		335	**0**	**312**	**23**	
271	1	258	0	124	134	**323**
	2	180	1	0	180	
	3	6	1	0	6	
	4	3	0	0	3	
		447	**2**	**124**	**323**	
272	1	149	0	149	0	**194**
	2	155	1	101	54	
	3	109	0	0	109	
	4	30	1	0	30	
	9	1	0	0	1	
		444	**2**	**250**	**194**	
274	1	276	1	276	0	**218**
	2	216	1	24	192	
	3	23	0	0	23	
	4	2	0	0	2	
	9	1	0	0	1	
		518	**2**	**300**	**218**	
275	1	266	0	266	0	**235**
	2	257	2	243	14	
	3	217	0	0	217	
	4	4	1	0	4	
		744	**3**	**509**	**235**	
278	1	268	1	268	0	**175**
	2	247	0	247	0	
	3	239	1	176	63	
	4	111	0	0	111	
	7	1	1	0	1	
		866	**3**	**691**	**175**	
279	1	427	1	45	382	**517**
	2	124	1	0	124	
	3	10	0	0	10	
	4	1	0	0	1	
		562	**2**	**45**	**517**	

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
280	1	216	1	216	0	**93**
	2	180	0	172	8	
	3	82	0	0	82	
	4	2	0	0	2	
	5	0	1	0	0	
	9	1	0	0	1	
		481	**2**	**388**	**93**	
282	1	62	0	62	0	**24**
	2	60	0	60	0	
	3	41	0	40	1	
	4	23	0	0	23	
		186	**0**	**162**	**24**	
283	1	211	0	211	0	**185**
	2	194	0	157	37	
	3	147	0	0	147	
	6	1	0	0	1	
		553	**0**	**368**	**185**	
284	1	308	1	308	0	**190**
	2	316	2	313	3	
	3	181	1	0	181	
	4	4	0	0	4	
	5	2	0	0	2	
		811	**4**	**621**	**190**	
285	1	361	1	361	0	**280**
	2	378	3	378	0	
	3	338	0	61	277	
	4	3	0	0	3	
	5	0	1	0	0	
		1,080	**5**	**800**	**280**	
286	1	185	0	185	0	**181**
	2	257	0	131	126	
	3	53	0	0	53	
	4	2	0	0	2	
		497	**0**	**316**	**181**	
288	1	470	0	371	99	**462**
	2	348	0	0	348	
	3	13	2	0	13	
	4	2	0	0	2	
		833	**2**	**371**	**462**	

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
289	1	295	0	7	288	**407**
	2	108	0	0	108	
	3	9	1	0	9	
	4	1	0	0	1	
	9	1	0	0	1	
		414	**1**	**7**	**407**	
291	1	745	2	745	0	**735**
	2	704	2	242	462	
	3	271	1	0	271	
	4	2	2	0	2	
		1,722	**7**	**987**	**735**	
294	1	409	1	96	313	**458**
	2	135	1	0	135	
	3	8	0	0	8	
	4	1	1	0	1	
	5	1	0	0	1	
		554	**3**	**96**	**458**	
295	1	344	2	344	0	**269**
	2	296	0	253	43	
	3	224	1	0	224	
	4	1	2	0	1	
	5	1	0	0	1	
		866	**5**	**597**	**269**	
296	1	305	1	305	0	**269**
	2	263	0	172	91	
	3	175	1	0	175	
	4	3	0	0	3	
		746	**2**	**477**	**269**	
297	1	131	0	131	0	**98**
	2	95	0	46	49	
	3	49	0	0	49	
		275	**0**	**177**	**98**	
299	1	358	1	343	15	**352**
	2	302	1	0	302	
	3	32	1	0	32	
	4	2	1	0	2	
	5	1	0	0	1	
		695	**4**	**343**	**352**	
TOTAL		**45,001**	**180**	**24,616**	**20,385**	**20,540**

Table 15. 2017 Muzzleloader Lottery Distribution Report.

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	**Rejected**			
103	1 2 3 **10**	3 6 1 **10**	0 0 0 **0**	3 3 0 **6**	0 3 1 **4**	**4**
108	1 2 3 4 5 **24**	11 6 4 2 1 **24**	0 0 0 0 0 **0**	11 6 4 1 0 **22**	0 0 0 1 1 **2**	**2**
111	1 2 3 **4**	1 2 1 **4**	0 0 0 **0**	1 1 0 **2**	0 1 1 **2**	**2**
126	1 2 **8**	7 1 **8**	0 0 **0**	2 0 **2**	5 1 **6**	**6**
132	1 **4**	4 **4**	0 **0**	3 **3**	1 **1**	**1**
152	1 2 4 **9**	7 1 1 **9**	0 0 0 **0**	2 0 0 **2**	5 1 1 **7**	**7**
159	1 2 3 **45**	28 10 7 **45**	0 0 0 **0**	18 0 0 **18**	10 10 7 **27**	**27**
169	1 2 3 **42**	27 14 1 **42**	0 0 0 **0**	23 0 0 **23**	4 14 1 **19**	**19**
173	1 2 3 **40**	23 10 7 **40**	0 0 0 **0**	20 0 0 **20**	3 10 7 **20**	**20**

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
176	1	13	0	10	3	**16**
	2	13	0	0	13	
		26	**0**	**10**	**16**	
178	1	27	0	27	0	**13**
	2	16	0	3	13	
		43	**0**	**30**	**13**	
181	1	11	0	0	11	**23**
	2	11	0	0	11	
		22	**0**	**0**	**22**	
183	1	26	0	26	0	**17**
	2	20	0	8	12	
	3	4	0	0	4	
	4	1	0	0	1	
		51	**0**	**34**	**17**	
197	1	21	0	21	0	**8**
	2	7	0	6	1	
	3	5	0	0	5	
	4	2	0	0	2	
		35	**0**	**27**	**8**	
224	1	2	0	0	2	**4**
	2	1	0	0	1	
		3	**0**	**0**	**3**	
234	1	7	1	7	0	**7**
	2	8	0	1	7	
		15	**1**	**8**	**7**	
235	1	12	0	2	10	**12**
	2	2	0	0	2	
		14	**0**	**2**	**12**	
237	1	6	0	6	0	**3**
	2	12	0	10	2	
	3	1	0	0	1	
		19	**0**	**16**	**3**	
238	1	2	0	1	1	**1**
		2	**0**	**1**	**1**	
250	1	31	0	27	4	**26**
	2	22	0	0	22	
		53	**0**	**27**	**26**	

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
251	1	7	0	3	4	**8**
	2	3	0	0	3	
	3	1	0	0	1	
		11	**0**	**3**	**8**	
252	1	20	0	9	11	**25**
	2	13	0	0	13	
	3	1	0	0	1	
		34	**0**	**9**	**25**	
253	1	54	0	54	0	**55**
	2	50	0	4	46	
	3	9	0	0	9	
		113	**0**	**58**	**55**	
262	1	19	0	3	16	**26**
	2	9	0	0	9	
	3	1	0	0	1	
		29	**0**	**3**	**26**	
266	1	26	0	10	16	**27**
	2	11	0	0	11	
		37	**0**	**10**	**27**	
269	1	18	0	18	0	**14**
	2	25	0	13	12	
	3	2	0	0	2	
		45	**0**	**31**	**14**	
270	1	9	0	9	0	**2**
	2	7	0	7	0	
	3	4	0	4	0	
	4	3	0	1	2	
		23	**0**	**21**	**2**	
271	1	25	0	8	17	**27**
	2	10	0	0	10	
		35	**0**	**8**	**27**	
272	1	7	0	7	0	**6**
	2	5	0	1	4	
	3	2	0	0	2	
		14	**0**	**8**	**6**	
274	1	38	0	34	4	**32**
	2	26	0	0	26	
	3	2	0	0	2	
		66	**0**	**34**	**32**	

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
275	1	16	0	16	0	**15**
	2	20	1	15	5	
	3	9	0	0	9	
	9	1	0	0	1	
		46	**1**	**31**	**15**	
278	1	46	0	46	0	**25**
	2	30	0	30	0	
	3	30	0	6	24	
	4	1	0	0	1	
		107	**0**	**82**	**25**	
279	1	67	0	0	67	**83**
	2	10	0	0	10	
	3	1	0	0	1	
		78	**0**	**0**	**78**	
280	1	17	0	17	0	**7**
	2	19	0	12	7	
		36	**0**	**29**	**7**	
282	1	5	0	5	0	**1**
	2	2	0	2	0	
	3	2	0	1	1	
		9	**0**	**8**	**1**	
283	1	22	1	22	0	**15**
	2	13	0	5	8	
	3	7	0	0	7	
		42	**1**	**27**	**15**	
284	1	28	0	28	0	**10**
	2	10	0	4	6	
	3	4	0	0	4	
		42	**0**	**32**	**10**	
285	1	38	0	38	0	**20**
	2	25	0	15	10	
	3	10	0	0	10	
		73	**0**	**53**	**20**	
286	1	24	0	24	0	**19**
	2	24	0	5	19	
		48	**0**	**29**	**19**	
288	1	40	0	25	15	**38**
	2	23	0	0	23	
		63	**0**	**25**	**38**	

Permit Area Number	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
289	1	30	0	0	30	**43**
	2	9	0	0	9	
	3	1	0	0	1	
		40	**0**	**0**	**40**	
291	1	74	0	74	0	**65**
	2	59	0	1	58	
	3	7	0	0	7	
		140	**0**	**75**	**65**	
294	1	41	0	5	36	**42**
	2	6	0	0	6	
		47	**0**	**5**	**42**	
295	1	44	0	44	0	**31**
	2	30	0	15	15	
	3	16	0	0	16	
		90	**0**	**59**	**31**	
296	1	38	0	38	0	**31**
	2	30	0	8	22	
	3	9	0	0	9	
		77	**0**	**46**	**31**	
297	1	3	0	3	0	**2**
	2	2	0	0	2	
		5	**0**	**3**	**2**	
299	1	48	0	35	13	**48**
	2	33	0	0	33	
	3	2	0	0	2	
		83	**0**	**35**	**48**	
TOTAL		**1,902**	**3**	**977**	**925**	**935**

Table 16. 2017 Special Firearms Hunt Lottery Distribution Report.

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
900 - Cascade River SP	1 2 3 **23**	21 1 1 **23**	0 0 0 **0**	0 0 0 **0**	21 1 1 **23**	**100**
901 - Rice Lake NWR	1 2 **63**	43 20 **63**	0 0 **0**	21 0 **21**	22 20 **42**	**40**
902 - St. Croix SP	1 2 3 **502**	333 162 7 **502**	0 0 0 **0**	151 0 0 **151**	182 162 7 **351**	**350**
904 - Gooseberry Falls SP	1 2 **54**	43 11 **54**	0 0 **0**	24 0 **24**	19 11 **30**	**30**
905 - Split Rock Lighthouse SP	1 2 **38**	30 8 **38**	0 0 **0**	5 0 **5**	25 8 **33**	**30**
906 - Tettegouche SP	1 2 **100**	95 5 **100**	0 0 **0**	0 0 **0**	95 5 **100**	**125**
907 - Scenic SP	1 2 3 **28**	20 7 1 **28**	0 0 0 **0**	0 0 0 **0**	20 7 1 **28**	**30**
908 - Hayes Lake SP	1 2 3 **50**	46 3 1 **50**	0 0 0 **0**	0 0 0 **0**	46 3 1 **50**	**75**
909 - Lake Bemidji SP	1 2 **39**	25 14 **39**	0 0 **0**	8 0 **8**	17 14 **31**	**30**
910 - Zippel Bay SP	1 2 3 4 **83**	66 15 1 1 **83**	0 0 0 0 **0**	8 0 0 0 **8**	58 15 1 1 **75**	**75**
911 - Judge CR Magney SP	1 3 9 **23**	21 1 1 **23**	0 0 0 **0**	0 0 0 **0**	21 1 1 **23**	**75**
913 - Lake Carlos SP	1 2 **24**	22 2 **24**	0 0 **0**	2 0 **2**	20 2 **22**	**20**

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
914 - William O'Brien SP	1	102	0	102	0	**50**
	2	79	0	49	30	
	3	13	0	0	13	
	4	4	0	0	4	
	9	4	0	0	4	
		202	**0**	**151**	**51**	
915 - Lake Bronson SP	1	49	0	41	8	**30**
	2	20	0	0	20	
	3	2	0	0	2	
		71	**0**	**41**	**30**	
916 - Maplewood SP	1	164	0	164	0	**100**
	2	144	0	144	0	
	3	95	0	8	87	
	4	13	0	0	13	
	9	2	0	0	2	
		418	**0**	**316**	**102**	
919 - Glacial Lakes SP	1	42	0	16	26	**30**
	2	5	0	0	5	
		47	**0**	**16**	**31**	
920 - Zumbro Falls Woods SNA	1	18	0	13	5	**12**
	2	7	0	0	7	
		25	**0**	**13**	**12**	
922 - Old Mill SP	1	19	0	19	0	**10**
	2	22	0	11	11	
	3	1	0	0	1	
	4	1	0	0	1	
		43	**0**	**30**	**13**	
923 - Zumbro Falls Woods SNA	1	12	0	0	12	**12**
		12	**0**	**0**	**12**	
925A - Vermillion Highlands WMA	1	26	0	26	0	**18**
	2	29	0	29	0	
	3	21	0	4	17	
	9	1	0	0	1	
		77	**0**	**59**	**18**	
925B - Vermillion Highlands WMA	1	7	0	7	0	**2**
	2	2	0	0	2	
		9	**0**	**7**	**2**	
927 - Whitewater SP	1	65	0	55	10	**50**
	2	36	0	0	36	
	3	4	0	0	4	
		105	**0**	**55**	**50**	

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
930A - Carver Park Reserve	1 2 3 4 9 **394**	179 135 75 4 1 **394**	0 0 0 0 0 **0**	179 109 0 0 0 **288**	0 26 75 4 1 **106**	**104**
930B - Carver Park Reserve	1 2 3 **21**	12 4 5 **21**	0 0 0 **0**	12 3 0 **15**	0 1 5 **6**	**6**
931 - City of Grand Rapids	1 2 3 **52**	47 2 3 **52**	0 0 0 **0**	0 0 0 **0**	47 2 3 **52**	**52**
933 - Forestville - Mystery Cave SP	1 2 3 **123**	68 53 2 **123**	0 0 0 **0**	0 0 0 **0**	68 53 2 **123**	**130**
934 - Whitewater State Game Refuge	1 2 **94**	61 33 **94**	0 0 **0**	17 0 **17**	44 33 **77**	**75**
962- Great River Bluffs SP	1 2 3 **64**	50 11 3 **64**	0 0 0 **0**	14 0 0 **14**	36 11 3 **50**	**50**
TOTAL		**2,784**	**0**	**1,241**	**1,543**	**1,711**

Table 17. 2017 Special Muzzleloader Hunt Lottery Distribution Report.

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
921 - Minneopa SP	1	28	0	28	0	**12**
	2	16	0	12	4	
	3	11	0	0	11	
		55	**0**	**40**	**15**	
935 - Jay Cooke SP	1	107	0	95	12	**75**
	2	52	0	0	52	
	3	10	0	0	10	
	9	1	0	0	1	
		170	**0**	**95**	**75**	
936 - Crow Wing SP	1	45	0	45	0	**25**
	2	24	0	6	18	
	3	7	0	0	7	
	9	1	0	0	1	
		77	**0**	**51**	**26**	
937 - Soudan Underground Mine and Lake Vermillion SP	1	13	0	3	10	**25**
	2	14	0	0	14	
	3	1	0	0	1	
		28	**0**	**3**	**25**	
938 - City of Tower	1	11	0	0	11	**20**
		11	**0**	**0**	**11**	
939 - Myre-Big Island SP	1	50	0	50	0	**50**
	2	51	0	13	38	
	3	11	0	0	11	
	9	1	0	0	1	
		113	**0**	**63**	**50**	
940 - Frontenac SP	1	112	0	106	6	**50**
	2	37	0	0	37	
	3	7	0	0	7	
		156	**0**	**106**	**50**	
942 - Sibley SP	1	72	0	69	3	**60**
	2	52	0	0	52	
	3	3	0	0	3	
	4	1	0	0	1	
	9	1	0	0	1	
		129	**0**	**69**	**60**	
944 - Vermillion Highlands WMA	1	36	0	28	8	**20**
	2	10	0	0	10	
	3	2	0	0	2	
		48	**0**	**28**	**20**	
946 - City of Grand Rapids	1	10	0	0	10	**10**
		10	**0**	**0**	**10**	
947 - Lake Bemidji SP	1	25	0	0	25	**30**
	2	4	0	0	4	

Special Hunt	Preference Level	Applications		Unsuccessful	Winners	Permits Available
		Total	Rejected			
		29	**0**	**0**	**29**	
948 - Savanna Portage SP	1	15	0	0	15	**30**
		15	**0**	**0**	**15**	
949 - St. Croix SP	1	79	0	0	79	**100**
	2	7	0	0	7	
	3	1	0	0	1	
		87	**0**	**0**	**87**	
992 - Sakatah Lake SP	1	17	0	17	0	**15**
	2	10	0	5	5	
	3	5	0	0	5	
	4	4	0	0	4	
	5	1	0	0	1	
		37	**0**	**22**	**15**	
TOTAL		**965**	**0**	**477**	**488**	**522**

GRAND TOTAL		**50,652**	**183**	**27,311**	**23,341**	**23,708**

2017 MINNESOTA ELK HARVEST REPORT

Erik Thorson, Acting Big Game Program Leader

Ruth Anne Franke, Area Wildlife Supervisor (Karlstad)

Jason Wollin, Asst. Area Wildlife Manager (Karlstad)

Kyle Arola, Acting Wildlife Area Supervisor (Thief Lake)

INTRODUCTION

A limited number of licenses are offered to Minnesota residents to hunt elk. In 2017, there were two established zones open for elk hunting: 1) Zone 20 - Kittson County Central and 2) Zone 30 - Kittson County Northeast (Figure 1). Elk hunting in Zone 10, near Grygla, Minnesota, has been closed since 2013 because the population is below goal (Figure 2). In 2017, there were two regular season hunts held in both open zones: 1) Season A - September 9 through September 17 and 2) Season B - October 7 through October 15. The hunts were structured to fall within the breeding season when bull elk are most vulnerable and elk can be located by vocalizations.

METHODS

All elk hunters are required to attend a mandatory orientation session the day before their respective hunts begin. At this session, DNR staff provide hunters with their license and a kit to collect biological samples from their harvested animal. Field samples collected by the hunter include blood, hair with skin, muscle tissue, ticks (if found), and the whole liver. Hunters must register their animal in person within 24 hours at the local DNR office. DNR staff help map the harvest location, provide a possession tag, and take the hunter-collected biological samples. DNR staff also collect lymph nodes, the obex (brain stem), the whole brain (with consent), and a tooth so an accurate age can be determined at a later date. Alternative arrangements are made for the collection of some samples, if immediate collection would interfere with a hunter's planned taxidermy mount. DNR staff submit all biological samples to Wildlife Health for disease testing and other monitoring projects.

RESULTS

A total of 13 licenses (including one landowner permit each for Zones 20 and 30) were available and 1,695 individuals or parties (up to two hunters) applied for the opportunity to hunt elk for both zones and seasons (Table 1). Applicants were given the opportunity to select both zone and season in which to hunt. First, random drawings were held for landowners in their respective zones. Once landowner licenses were drawn and selected, two more drawings were held in the second round for applicants that had applied for 10 years or more and one elk license was drawn for each zone. All remaining landowners were then placed into the general drawing with all the other applicants for the remaining elk licenses available in the zone and season they had selected on their application. These licenses were distributed through a third random drawing conducted per zone.

In 2017, a total of 10 elk were harvested in zones 20 and 30 (Table 2). Long-term elk harvest for all zones is depicted in Tables 3 and 4.

Table 1. License allocation and application numbers of the 2017 Minnesota elk seasons

KITTSON COUNTY SEASON A

Zone	Either-Sex	Antlerless	Bull-only	Total	Total Applicants
Zone 20 – Kittson Central	0	1	3	4	595
Zone 30 – Kittson Northeast	0	0	2	2	463
Total	**0**	**1**	**5**	**6**	**1,058**

KITTSON COUNTY SEASON B

Zone	Either-Sex	Antlerless	Bull-only	Total	Total Applicants
Zone 20 – Kittson Central	0	1	3	4	303
Zone 30 – Kittson Northeast	0	0	3	3	334
Total	**0**	**1**	**6**	**7**	**637**

Table 2. Distribution of the 2017 Minnesota elk harvest.

KITTSON COUNTY CENTRAL HUNT ZONE (20)

Season	Bulls-only Licenses	Antlerless Licenses	Bulls taken	Antlerless taken	Total elk taken
Season A (Sept 9 – 17)	3	1	3	1	4
Season B (Oct 7 – 15)	3	1	2	0	2
Total	**6**	**2**	**5**	**1**	**6**

KITTSON COUNTY NORTHEAST HUNT ZONE (30)

Season	Bulls-only Licenses	Antlerless Licenses	Bulls taken	Antlerless taken	Total elk taken
Season A (Sept 9 – 17)	2	0	2	0	2
Season B (Oct 7 – 15)	3	0	2	0	2
Total	**5**	**0**	**4**	**0**	**4**

Table 3. Grygla elk harvests, 1987-2017

	Grygla Elk Harvests			
	Bulls (or Either-Sex)		Antlerless	
Year	Permits	Harvest	Permits	Harvest
1987	2	1	2	1
1996	2	2	7 (1 alternate)	6
1997	5 (2 alternate)	1	5 (2 alternate)	2
1998	4 (2 alternate)	2	0	0
2004	1	1	4	2
2005	1	0	4	0
2006	2	2	6	2
2007	0	0	6	6
2008	2	2	10	6
2009	2	3*	12	11
2010	2	1	5	3
2011	2	2	3	0
2012	2	1	3	0
2013	Closed	0	Closed	0
2014	Closed	0	Closed	0
2015	Closed	0	Closed	0
2016	Closed	0	Closed	0
2017	Closed	0	Closed	0
Total	**27**	**18**	**67**	**39**

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

Table 4. Kittson County elk harvests, 2008-2017

	Kittson County (Combined Zone 20 & 30)			
	Bulls (or Either-Sex)		Antlerless	
Year	**Permits**	**Harvest**	**Permits**	**Harvest**
2008	1	1	10	10
2009	12	9[a]	4	5
2010	1	1	3	3
2011	2	3[b]	8[c]	4
2012	5	4[d]	13	3
2013	8	6	15	6
2014	9	6	0	0
2015	7	5	0	0
2016	7	5	0	0
2017	11	9	2	1
Total	**63**	**49**	**55**	**32**

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 t8.5

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

d One bull was a sub-legal spike and was confiscated.

Figure 1. Kittson County Elk Hunt Zones.

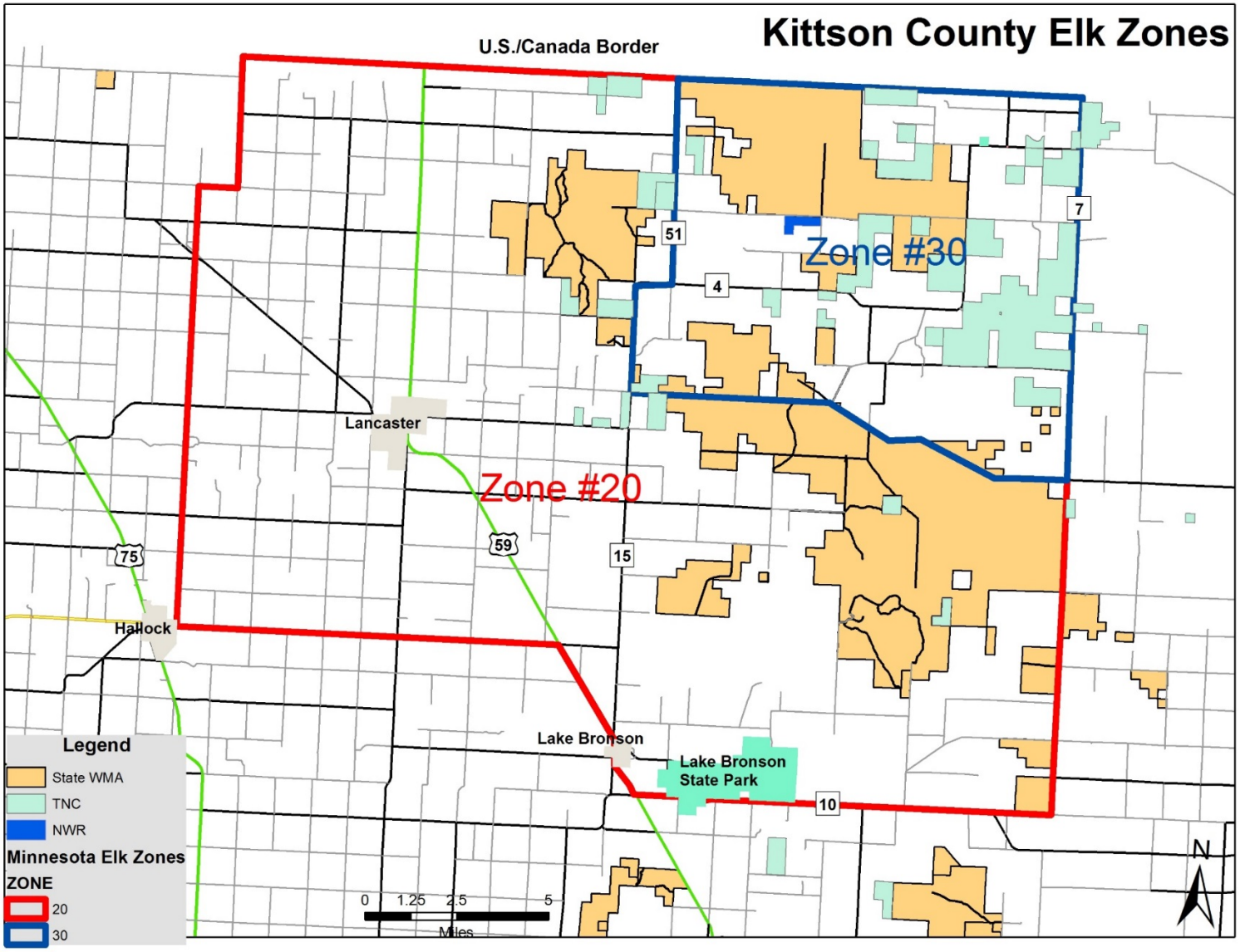
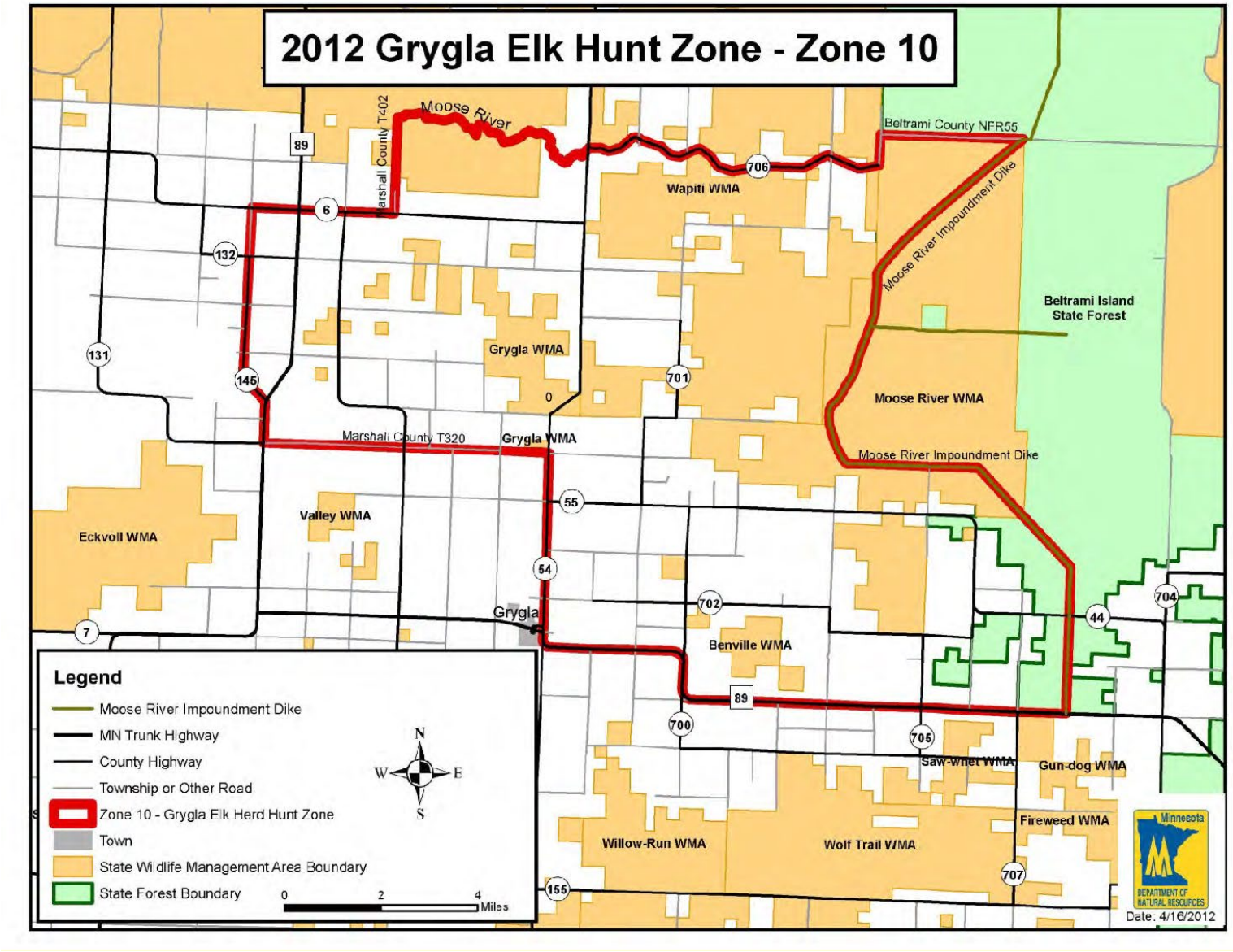


Figure 2. Grygla Elk Hunt Zone



MINNESOTA SANDHILL CRANE HARVEST REPORT, 2017

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 for the first two years with a daily limit of 2 and a possession limit of 4 (Table 1). In 2012 the season was shifted to a week later but the limits remained the same. The possession limit increased from 4 to 6 in 2013. In 2014 limits were reduce to 1 daily and 3 in possession. The season was shifted to open the third Saturday in September and close the fourth Sunday in October in 2017 with no changes to the daily and possession limits. 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 2).

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.

Dubovsky, J.A. 2016. 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. 15pp.) http://www.fws.gov/migratorybirds/NewReportsPublications/PopulationStatus.html

Table 1. Sandhill Crane season dates and limits in Minnesota, 2010 – 2017.

Year	Dates	Daily limit	Possession limit
2010	4 Sept – 10 Oct	2	4
2011	3 Sept – 9 Oct	2	4
2012	15 Sept – 21 Oct	2	4
2013	14 Sept – 20 Oct	2	6
2014	13 Sept – 19 Oct	1	3
2015	12 Sept – 18 Oct	1	3
2016	10 Sept – 16 Oct	1	3
2017	16 Sept – 22 Oct	1	3

Table 2. Sandhill crane permit sales, estimated number of active hunters and harvest for NW Minnesota, 2010-2017. (Kruse, K.L. et al. 2015).

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
2014	1,216	401	247
2015	1,199	424	212
2016	1,139	471	287
2017	1,125	397	196

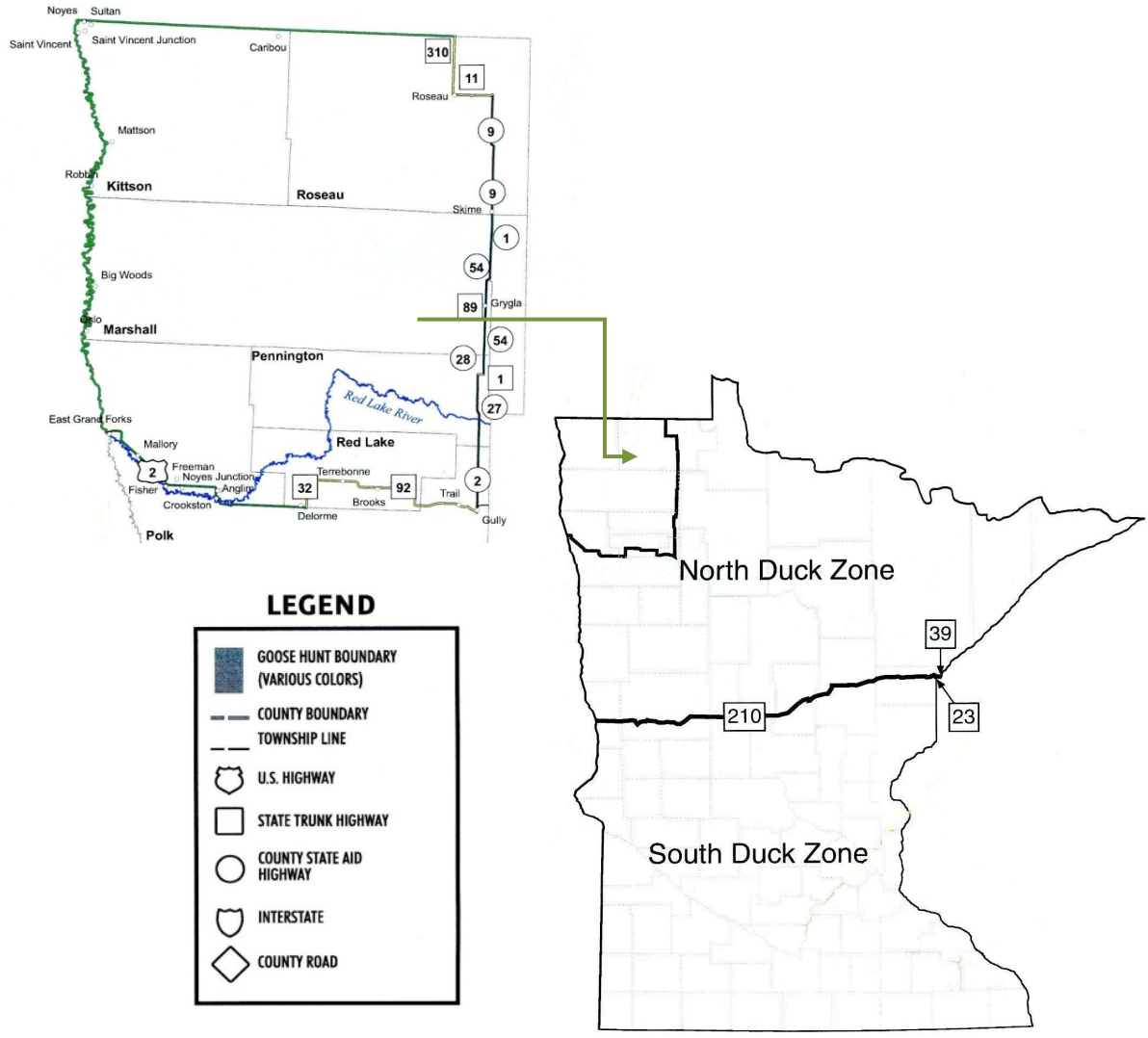


Figure 1. Sandhill crane hunting zone in Minnesota, 2010-2017.