

HUNTING HARVEST STATISTICS

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2018 SMALL GAME HUNTER MAIL SURVEY

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INTRODUCTION

The Minnesota Department of Natural Resources (DNR), Division of Fish and Wildlife, Wildlife Research unit annually conducts a 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 (Figure 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 2018-19 small game hunting season (N=225,932). A stratified random sample (n=7,000, 3.1%), 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=219,214) and "Nonresident" (N=6,718) (Figure 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 2018-19 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 were tabulated using Viking Data Entry VDE+ software and analyzed using Program R (ver. 3.5.2; R Development Core Team 2018).

RESULTS

Survey Response and Overall License Sales Trends

Statewide (resident and nonresident) small game license sales and survey response rate are shown in Figure 2. Of the 7,000 mailed surveys, 181 surveys were returned as undeliverable; 2,904 surveys were completed and returned for an adjusted response rate of 43%. The percent of respondents who said they hunted or did not hunt is reported in Table 1. Overall, statewide license sales (225,932 small game licenses) declined 7% from the previous year (Figure 2,

Table 2) and were at their lowest level since 1969. Nonresident small game license sales (6,718 licenses) declined slightly in 2018 but was slightly above the 10-year average (6,591 stamps; Table 3).

Estimates by Species

Harvest trends for the four most sought-after small game species (ducks – all species, Canada geese, ruffed grouse, and ring-necked pheasants) in Minnesota since 2002 are shown in Figure 3 and discussed separately below. For all other species, estimated harvest (Table 2) and number of statewide hunters (Table 4) declined compared to 2017. Similarly, the estimated harvest per active hunter declined for most species except gray partridge which increased slightly (Table 5). Most successful hunters harvested fewer animals except for those hunting American woodcock, gray partridge, and white-tailed jackrabbit who harvested a similar number of animals compared to 2017 (Table 6). Most hunter success rates declined or held steady from last year except for gray partridge and white-tailed jackrabbits success rates which both increased (Table 6).

Ducks – all species

Fewer state duck stamps (82,955 stamps) were sold in 2018 than in each of the previous 10 years (Table 2). The 2018 duck harvest (614,780) was lower than 2017 (688,225 ducks; Table 2) but there were also fewer duck hunters (61,618) afield in 2018 compared to 2017 (63,426 duck hunters; Table 4). Although the estimated harvest per active duck hunter (10.0 ducks/hunter; Table 5) and the mean harvest for successful duck hunters (11.3 ducks/successful hunter; Table 6) were lower in 2018 than 2017 (10.9 ducks/hunter and 12.5 ducks/successful hunter, respectively), the duck hunter success rate (89%) was slightly better than 2017 (87%; Table 6). Despite there being 28% fewer nonresident duck hunters in 2018 than last year, the estimated nonresident harvest was comparable (Table 3).

Canada geese

The 2018 Canada goose harvest (187,578) was well-below the estimated 2017 harvest (267,192 geese) and was the second lowest harvest total in the last 11 years (Table 2). The estimated number of goose hunters (38,278) was also lower than 2017 (44,678 hunters) and the 10-year average (51,526 hunters; Table 4). The estimated harvest per active hunter (4.9) was below the 2017 estimate (6.0 geese/hunter) but comparable to the 10-year average (4.8 geese/hunter; Table 5). Similarly, the mean harvest for successful hunters (6.3) was below the 2017 estimate (7.4 geese/successful hunter) but comparable to the 10-year average of 6.4 geese/successful hunter (Table 6). The 2018 goose hunter success rate (77%) was down from 2017 (81%) but was slightly greater than the 10-year average (75%; Table 6). The number of nonresident goose hunters declined by 27% and their estimated goose harvest (2,940) declined 58% from last year's record high (6,994 geese) (Table 3).

Ruffed grouse

The 2018 ruffed grouse harvest (195,515) declined 30% from the 2017 estimate (285,180 grouse) and was the lowest harvest in the last 11 years (Table 2) while the estimated number of grouse hunters (67,765) was the lowest on record (spanning more than 40 years). The harvest per active hunter (2.9 grouse/hunter) was below the 2017 estimate (3.5 grouse/hunter) and the 10-year average (3.9 grouse/hunter), and the mean harvest for successful hunters (4.3 grouse/successful hunter) was below the 2017 estimate (4.8 grouse/successful hunter) and the 10-year average (5.4 grouse/successful hunter) (Tables 4, 5, and 6, respectively). The 2018 ruffed grouse hunter success rate was 67%, which was below 2017 (73%) and the 10-year average (72%; Table 6). Although a similar number of nonresidents hunted ruffed grouse in

2018 (2,270 hunters) compared to the previous year (2,280 hunters), they harvested 63% fewer grouse (2,856 grouse in 2018 compared to 6,994 grouse in 2017; Table 3).

Ring-necked pheasants

Slightly more pheasant stamps were sold in 2018 (72,192) than in 2017 but these sales have been declining overall in the last 10 years (Table 2). The pheasant harvest increased 19% with 205,395 roosters harvested in 2018 compared to 171,883 roosters the previous year (Table 2). The estimated number of pheasant hunters (55,861) increased from 2017 (45,263 hunters) but is well-below the 10-year average of 73,341 hunters (Table 4). The estimated harvest per active hunter was 3.7 pheasants/hunter which was similar to 2017 (3.8 pheasants/hunter) and slightly above the 10-year average (3.5 pheasants/hunter; Table 5). The mean harvest per successful hunter in 2018 was similar to 2017 (5.4 vs. 5.5 roosters) and slightly above the 10-year average (5.2 roosters; Table 6). Pheasant hunter success in 2018 (68%) was similar to 2017 (69%) and the 10-year average (68%; Table 6). The number of nonresident pheasant hunters increased 54% (2,350 hunters in 2018 vs. 1,520 hunters in 2017) but their harvest was down 17% from last year (6,048 roosters in 2018 vs. 7,274 roosters in 2017) (Table 3).

ACKNOWLEDGMENTS

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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 2018-2019 small game hunting season (**March 2018-February 2019**). We need information to estimate the season's harvest and to help set future small game seasons. Answer only for your Minnesota 2018 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

2018 Small Game Hunter Report

1. Did you hunt small game, listed below, in Minnesota this year (March 2018 - Feb 2019)? ☐ 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 | 95 | | |
| Coyote (brush wolf) | 97 | | |
| Gray fox | 96 | | |
| Raccoon | 94 | | |
| Red fox | 95 | | |

Figure 1. Sample of Small Game Hunter survey card.

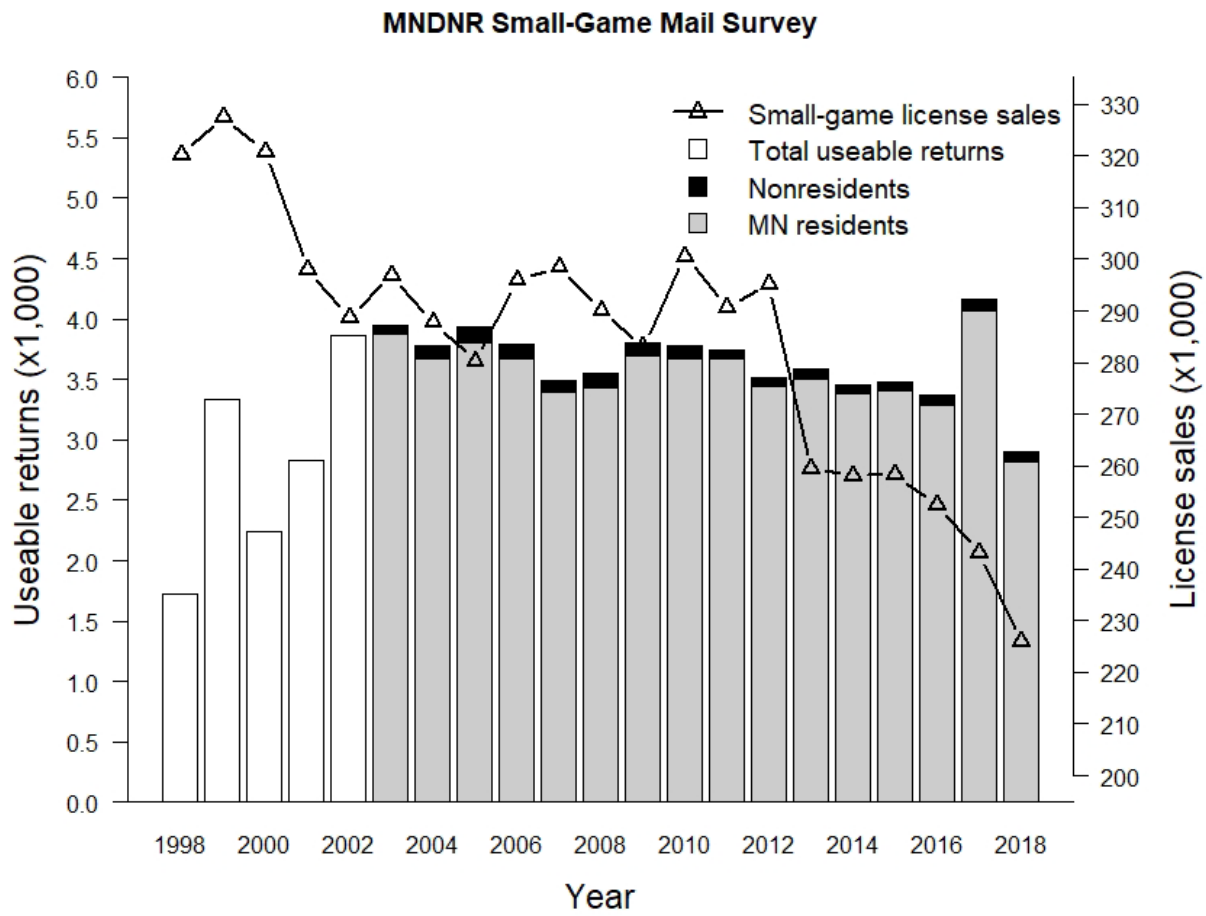


Figure 1. Number of Minnesota small game licenses sold and usable returned surveys, 1998-2018. Includes resident and non-resident licenses, and excludes duplicate and free licenses.

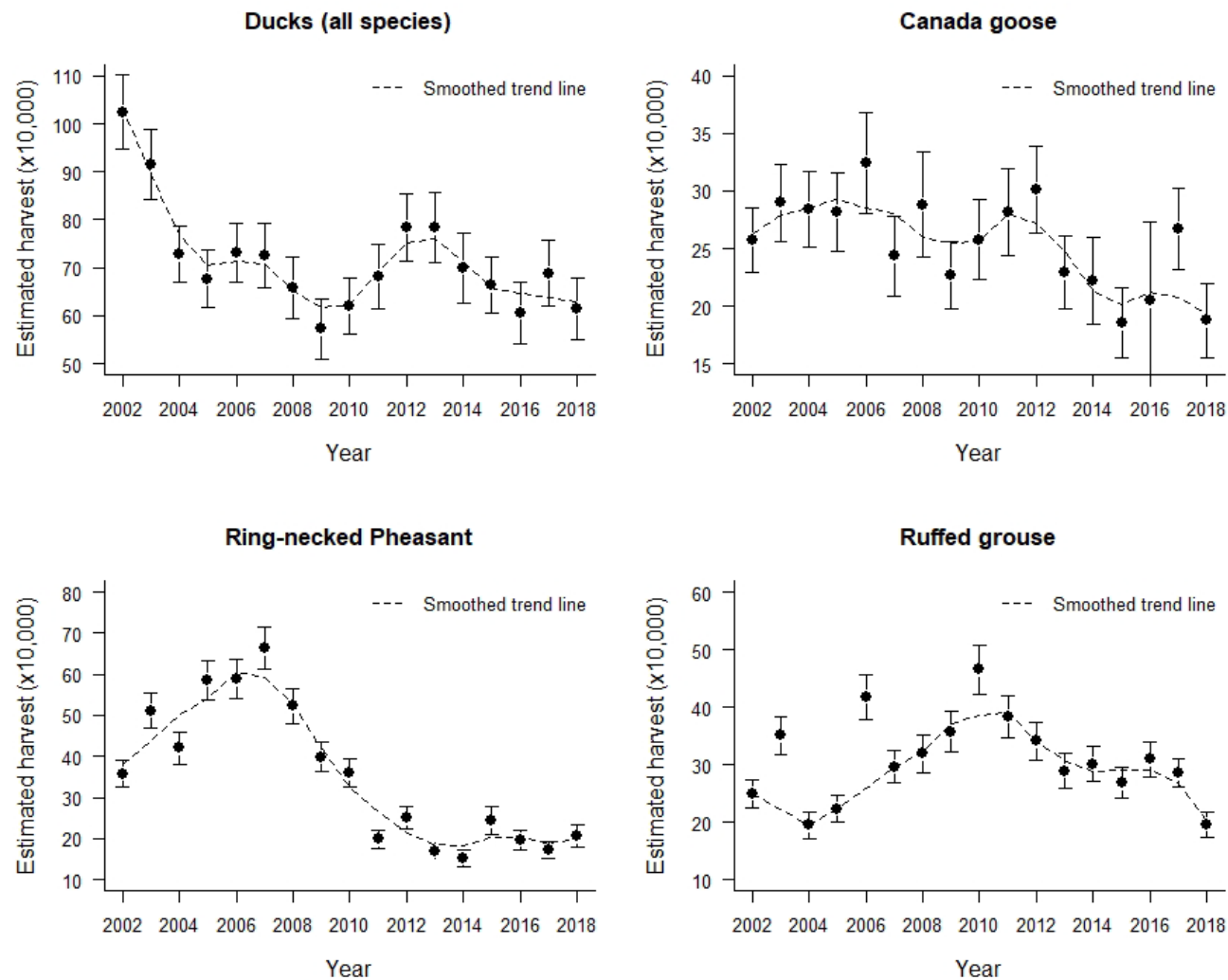


Figure 3. Harvest trends for top four small game species harvested in Minnesota, 2002-2018.

Table 1. Percent of respondents who hunted small game, 2008-09 through 2018-2019^a.

| | | Returns from mail survey | Projections from license sales |
|---------|------------------------|---|-------------------------------------|
| 2008-09 | Hunted Did not hunt | 2,678 (75%) <u>873 (25%)</u> 3,551 (100.0%) | 218,753 <u>71,311</u> 290,064 |
| 2009-10 | Hunted Did not hunt | 2,850 (75%) <u>952 (25%)</u> 3,802 (100.0%) | 212,126 <u>70,857</u> 282,983 |
| 2010-11 | Hunted Did not hunt | 2,824 (75%) <u>953 (25%)</u> 3,777 (100.0%) | 210,129 <u>70,911</u> 281,040 |
| 2011-12 | Hunted Did not hunt | 2,761 (74%) <u>987 (26%)</u> 3,748 (100.0%) | 214,137 <u>76,549</u> 290,686 |
| 2012-13 | Hunted Did not hunt | 2,669 (76%) <u>851 (24%)</u> 3,520 (100%) | 223,808 <u>71,360</u> 295,168 |
| 2013-14 | Hunted Did not hunt | 2,586 (72%) <u>1,003 (28%)</u> 3,589 (100%) | 186,317 <u>72,264</u> 258,581 |
| 2014-15 | Hunted Did not hunt | 2,476 (72%) <u>975 (28%)</u> 3,451 (100%) | 185,186 <u>72,923</u> 258,109 |
| 2015-16 | Hunted Did not hunt | 2,505 (72%) <u>980 (28%)</u> 3,485 (100%) | 185,604 <u>72,612</u> 258,216 |
| 2016-17 | Hunted Did not hunt | 2,426 (72%) <u>945 (28%)</u> 3,371 (100%) | 181,614 <u>70,744</u> 252,358 |
| 2017-18 | Hunted Did not hunt | 2,768 (66%) <u>1,395 (34%)</u> 4,163 (100%) | 161,658 <u>81,472</u> 243,130 |
| 2018-19 | Hunted Did not hunt | 2,000 (69%) <u>904 (31%)</u> 2,904 (100%) | 155,601 <u>70,331</u> 225,932 |

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

Table 2^a. Statewide (resident and non-resident) small game hunting license sales and estimated hunter harvest, 2008-09 through 2018-19.

| | 2008-09 | 2009-10 | 2010-11 | 2011-12 ^b | 2012-13 ^b | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---------------------------------------|---------|---------|---------|----------------------|----------------------|---------|---------|---------|-------------------|---------|-------------------|
| Small game license sales ^c | 290,064 | 282,983 | 282,227 | 271,768 | 264,063 | 258,581 | 258,109 | 258,208 | 252,358 | 243,130 | 225,932 |
| State duck stamp sales | 95,675 | 89,942 | 88,069 | 89,681 | 90,052 | 93,412 | 94,265 | 92,176 | 88,905 | 86,258 | 82,955 |
| Pheasant stamp sales | 123,270 | 110,456 | 104,286 | 86,868 | 90,541 | 77,597 | 74,295 | 77,750 | 76,920 | 71,925 | 72,192 |
| Estimated harvest^d | | | | | | | | | | | |
| Ducks | 658,186 | 572,220 | 619,600 | 681,550 | 784,360 | 782,810 | 699,620 | 663,811 | 606,458 | 688,225 | 614,780 |
| Canada geese | 288,411 | 227,160 | 257,530 | 281,630 | 301,550 | 229,120 | 221,620 | 185,012 | 204,825 | 267,192 | 187,578 |
| Other geese | 13,895 | 6,250 | 3,940 | 4,800 | 8,820 | 7,130 | 6,510 | 4,448 | 7,188 | 8,062 | 1,557 |
| American coot | 23,871 | 14,810 | 26,340 | 10,520 | 16,720 | 15,130 | 17,050 | 15,861 | 21,564 | 19,976 | 10,663 |
| Common snipe | 2,210 | 1,490 | 1,940 | 1,390 | 1,420 | 2,310 | 520 | 223 | 1,948 | 1,928 | 1,401 |
| Rails / gallinules | 163 | 300 | 80 | 390 | 80 | 70 | 80 | 1,039 | n.a. ^e | 1,697 | n.a. ^f |
| Crow | 51,742 | 56,350 | 57,300 | 81,500 | 90,260 | 67,440 | 56,020 | 57,576 | 48,590 | 110,034 | 34,940 |
| American woodcock | 29,210 | 35,430 | 29,770 | 24,980 | 30,360 | 31,920 | 25,810 | 37,270 | 46,867 | 38,546 | 30,500 |
| Mourning dove | 132,577 | 109,940 | 100,230 | 74,000 | 92,760 | 80,480 | 103,370 | 96,552 | 58,618 | 88,021 | 54,623 |
| Ring-necked pheasant | 522,071 | 398,130 | 359,400 | 198,500 | 250,140 | 169,100 | 152,800 | 243,176 | 196,141 | 171,883 | 205,395 |
| Ruffed grouse | 318,338 | 357,420 | 465,580 | 383,150 | 341,320 | 288,410 | 301,190 | 267,997 | 308,955 | 285,180 | 195,515 |
| Spruce grouse | 16,997 | 19,130 | 14,960 | 18,640 | 11,980 | 13,110 | 14,590 | 9,856 | 15,348 | 12,032 | 7,081 |
| Sharp-tailed grouse | 13,695 | 9,530 | 16,820 | 11,600 | 10,650 | 7,130 | 8,530 | 7,929 | 8,610 | 11,097 | 5,681 |
| Gray partridge | 9,660 | 8,040 | 9,150 | 3,950 | 5,160 | 2,380 | 3,590 | 3,187 | 3,745 | 4,557 | 3,893 |
| Gray squirrel | 121,534 | 109,790 | 138,920 | 115,840 | 126,110 | 84,010 | 91,250 | 96,400 | 95,374 | 105,712 | 71,888 |
| Fox squirrel | 51,079 | 53,970 | 61,690 | 48,100 | 49,750 | 33,940 | 40,840 | 46,383 | 39,603 | 41,994 | 28,398 |
| Eastern cottontail | 79,927 | 57,760 | 53,870 | 34,640 | 64,140 | 40,710 | 38,820 | 41,716 | 49,187 | 47,135 | 32,057 |
| White-tailed jack rabbit | 6,446 | 2,610 | 7,220 | 5,180 | 1,910 | 1,870 | 1,050 | 742 | 1,124 | 585 | 623 |
| Snowshoe hare | 11,343 | 5,360 | 6,770 | 8,430 | 16,800 | 6,200 | 7,860 | 6,374 | 5,990 | 10,864 | 3,191 |
| Raccoon | 72,026 | 66,700 | 77,690 | 44,080 | 48,340 | 46,690 | 52,800 | 38,387 | 22,312 | 68,685 | 29,332 |
| Red fox | 4,408 | 10,270 | 8,780 | 7,120 | 7,990 | 5,190 | 3,220 | 3,780 | 2,247 | 9,229 | 1,868 |
| Gray fox | 2,443 | 1,860 | 2,380 | 1,160 | 250 | 430 | 600 | 816 | 225 | 3,798 | 78 |
| Coyote | 45,689 | 46,070 | 44,050 | 33,410 | 51,990 | 23,630 | 17,430 | 35,123 | 24,481 | 56,184 | 22,408 |
| Badger | 490 | 750 | 600 | 230 | 330 | 290 | 80 | 149 | 375 | 760 | 78 |

^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 No respondents indicated they hunted rails.

Table 3. Mail survey results of nonresident small game hunters, 2008-09 through 2018-19.

| | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Nonresident licenses issued^a | 7,114 | 6,934 | 6,695 | 6,312 | 6,456 | 6,031 | 6,056 | 6,755 | 6,701 | 6,854 | 6,718 |
| Questionnaires: | | | | | | | | | | | |
| Number mailed | 226 | 196 | 163 | 169 | 166 | 162 | 165 | 169 | 190 | 200 | 200 |
| Number not delivered | 15 | 10 | 6 | 11 | 11 | 10 | 12 | 5 | 15 | 19 | 16 |
| Number (percent) returned | 89 (42) | 105 (54) | 107 (66) | 91 (54) | 71 (43) | 81 (50) | 70 (42) | 73 (43) | 78 (41) | 99 (50) | 80 (40) |
| Estimated nonresidents and (percent) of all licensed nonresidents hunting: | | | | | | | | | | | |
| Ducks | 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) | 1,680 (25) |
| Canada goose | 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) | 1,260 (18.8) |
| Ruffed grouse | 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) | 2,270 (33.8) |
| Ring-necked pheasant | 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) | 2,350 (35) |
| Raccoon ^{b,c} | 0 (0) | 0 (0) | 63 (0.9) | 0 (0) | 0 (0) | 80 (1.2) | 0 (0) | 0 (0) | 170 (2.6) | 70 (1.0) | 0 |
| Estimated nonresident take: | | | | | | | | | | | |
| Ducks | 15,463 | 11,755 | 17,055 | 13,840 | 20,380 | 20,410 | 13,060 | 16,863 | 17,701 | 15,717 | 15,792 |
| Canada goose | 5,762 | 3,698 | 6,334 | 4,050 | 2,270 | 3,650 | 2,680 | 1,484 | 1,462 | 6,994 | 2,940 |
| Ruffed grouse | 6,938 | 8,651 | 12,600 | 8,980 | 10,090 | 4,990 | 9,090 | 13,805 | 11,772 | 6,994 | 2,856 |
| Ring-necked pheasant | 10,642 | 6,274 | 8,076 | 4,860 | 6,820 | 3,430 | 3,720 | 6,581 | 4,040 | 7,274 | 6,048 |
| Raccoon ^{b, c} | 0 | 0 | 593 | 0 | 0 | 1,280 | 0 | 0 | 172 | 770 | 0 |

^a Excludes duplicate licenses and nonresident shooting preserve licenses.

^b In 2008, 2009, 2011, 2012, 2014, 2015 and 2018 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.

Table 4. Estimated number of statewide hunters by species, 2008-09 through 2018-19.

| | 2008-09 | 2009-10 | 2010-11 | 2011-12 ^a | 2012-13 ^a | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-------------------------|---------|---------|---------|----------------------|----------------------|---------|---------|---------|---------|---------|-------------------|
| Ducks | 81,358 | 77,480 | 72,770 | 76,090 | 80,770 | 76,950 | 75,170 | 76,243 | 67,301 | 63,426 | 61,618 |
| Canada goose | 59,222 | 55,520 | 53,430 | 57,220 | 58,900 | 51,160 | 48,240 | 45,938 | 40,950 | 44,678 | 38,278 |
| Other geese | 4,411 | 3,280 | 3,650 | 2,710 | 3,830 | 2,810 | 2,770 | 2,520 | 2,321 | 2,512 | 1,323 |
| American coot | 4,166 | 4,090 | 4,610 | 3,480 | 3,990 | 3,820 | 4,410 | 3,261 | 3,519 | 3,446 | 3,113 |
| Common snipe | 1,797 | 1,340 | 1,340 | 1,160 | 1,160 | 1,370 | 820 | 667 | 899 | 1,285 | 934 |
| Rails / gallinules | 408 | 370 | 220 | 230 | 500 | 140 | 300 | 445 | 75 | 234 | n.a. ^b |
| Crow | 10,047 | 10,640 | 9,380 | 10,360 | 11,480 | 8,570 | 7,400 | 7,410 | 7,412 | 11,564 | 4,669 |
| American woodcock | 12,171 | 11,760 | 10,790 | 9,430 | 13,310 | 12,030 | 9,650 | 12,596 | 12,877 | 12,615 | 10,737 |
| Mourning dove | 11,599 | 10,500 | 10,640 | 8,970 | 9,230 | 10,380 | 9,950 | 8,966 | 7,636 | 8,878 | 6,536 |
| Ring-necked pheasant | 106,763 | 99,440 | 89,140 | 72,840 | 76,950 | 62,110 | 57,590 | 63,350 | 59,965 | 45,263 | 55,861 |
| Ruffed grouse | 86,505 | 87,230 | 92,490 | 88,620 | 91,260 | 81,130 | 83,020 | 79,058 | 82,348 | 80,654 | 67,765 |
| Spruce grouse | 8,332 | 9,750 | 8,860 | 10,210 | 7,400 | 10,810 | 10,320 | 8,225 | 9,658 | 8,819 | 7,314 |
| Sharp-tailed grouse | 6,616 | 5,510 | 7,140 | 6,190 | 6,570 | 6,700 | 5,460 | 5,113 | 6,214 | 5,198 | 4,202 |
| Gray partridge | 4,411 | 4,240 | 3,720 | 2,400 | 3,080 | 2,450 | 2,540 | 2,075 | 2,097 | 2,103 | 1,479 |
| Gray squirrel | 22,382 | 22,260 | 23,740 | 23,280 | 24,710 | 21,690 | 21,240 | 22,303 | 23,806 | 20,967 | 17,972 |
| Fox squirrel | 13,233 | 13,180 | 15,630 | 12,060 | 14,220 | 12,030 | 12,790 | 13,411 | 13,625 | 11,798 | 9,803 |
| Eastern cottontail | 17,644 | 16,300 | 15,030 | 12,300 | 16,390 | 14,550 | 13,160 | 11,633 | 16,096 | 14,368 | 12,449 |
| White-tailed jackrabbit | 2,451 | 1,790 | 2,230 | 2,320 | 1,750 | 1,220 | 1,350 | 890 | 1,423 | 643 | 623 |
| Snowshoe hare | 4,574 | 3,500 | 3,800 | 3,250 | 4,820 | 3,750 | 4,560 | 4,076 | 3,369 | 4,439 | 2,101 |
| Raccoon | 7,433 | 7,300 | 8,260 | 8,040 | 8,570 | 7,640 | 6,880 | 5,632 | 5,840 | 8,936 | 4,746 |
| Red fox | 5,800 | 7,820 | 7,220 | 6,030 | 5,820 | 5,910 | 4,560 | 4,150 | 3,594 | 5,549 | 3,035 |
| Gray fox | 1,879 | 1,790 | 1,640 | 1,390 | 1,580 | 1,730 | 1,050 | 1,186 | 899 | 2,103 | 623 |
| Coyote | 19,278 | 19,280 | 19,420 | 17,940 | 21,050 | 17,650 | 17,580 | 18,302 | 15,871 | 22,193 | 14,394 |
| Badger | 490 | 370 | 600 | 310 | 330 | 500 | 80 | 297 | 375 | 701 | 234 |

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

^b No respondents indicated they hunted rails.

Table 5. Estimated harvest per active hunter by species, 2008-09 through 2018-19.

| | 2008-09 | 2009-10 | 2010-11 | 2011-12 ^a | 2012-13 ^a | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-------------------------|---------|---------|---------|----------------------|----------------------|---------|---------|---------|-------------------|---------|-------------------|
| Ducks | 8.1 | 7.4 | 8.5 | 9.0 | 9.7 | 10.2 | 9.3 | 8.7 | 9.0 | 10.9 | 10.0 |
| Canada geese | 4.9 | 4.1 | 4.8 | 4.9 | 5.1 | 4.5 | 4.6 | 4.0 | 5.0 | 6.0 | 4.9 |
| Other geese | 3.2 | 1.9 | 1.1 | 1.8 | 2.3 | 2.5 | 2.4 | 1.8 | 3.1 | 3.2 | 1.2 |
| American coot | 5.7 | 3.6 | 5.7 | 3.0 | 4.2 | 4.0 | 3.9 | 4.9 | 6.1 | 5.8 | 3.4 |
| Common snipe | 1.2 | 1.1 | 1.4 | 1.2 | 1.2 | 1.7 | 0.6 | 0.3 | 2.2 | 1.5 | 1.5 |
| Rails/gallinules | 0.4 | 0.8 | 0.3 | 1.7 | 0.2 | 0.5 | 0.2 | 2.3 | n.a. ^b | 7.2 | n.a. ^c |
| Crow | 5.2 | 5.3 | 6.1 | 7.9 | 7.9 | 7.9 | 7.6 | 7.8 | 6.6 | 9.5 | 7.5 |
| American woodcock | 2.4 | 3.0 | 2.8 | 2.6 | 2.3 | 2.7 | 2.7 | 3.0 | 3.6 | 3.1 | 2.8 |
| Mourning dove | 11.4 | 10.5 | 9.4 | 8.2 | 10.0 | 7.8 | 10.4 | 10.8 | 7.7 | 9.9 | 8.4 |
| Ring-necked pheasant | 4.9 | 4.0 | 4.0 | 2.7 | 3.3 | 2.7 | 2.7 | 3.8 | 3.3 | 3.8 | 3.7 |
| Ruffed grouse | 3.7 | 4.1 | 5.0 | 4.3 | 3.7 | 3.6 | 3.6 | 3.4 | 3.8 | 3.5 | 2.9 |
| Spruce grouse | 2.0 | 2.0 | 1.7 | 1.8 | 1.6 | 1.2 | 1.4 | 1.2 | 1.6 | 1.4 | 1.0 |
| Sharp-tailed grouse | 2.1 | 1.7 | 2.4 | 1.9 | 1.6 | 1.1 | 1.6 | 1.6 | 1.4 | 2.1 | 1.4 |
| Gray partridge | 2.2 | 1.9 | 2.5 | 1.6 | 1.7 | 1.0 | 1.4 | 1.5 | 1.8 | 2.2 | 2.6 |
| Gray squirrel | 5.4 | 4.9 | 5.9 | 5.0 | 5.1 | 3.9 | 4.3 | 4.3 | 4.0 | 5.0 | 4.0 |
| Fox squirrel | 3.9 | 4.1 | 3.9 | 4.0 | 3.5 | 2.8 | 3.2 | 3.5 | 2.9 | 3.6 | 2.9 |
| Eastern cottontail | 4.5 | 3.5 | 3.6 | 2.8 | 3.9 | 2.8 | 2.9 | 3.6 | 3.1 | 3.3 | 2.6 |
| White-tailed jackrabbit | 2.6 | 1.5 | 3.2 | 2.2 | 1.1 | 1.5 | 0.8 | 0.8 | 0.8 | 0.9 | 1.0 |
| Snowshoe hare | 2.5 | 1.5 | 1.8 | 2.6 | 3.5 | 1.7 | 1.7 | 1.6 | 1.8 | 2.4 | 1.5 |
| Raccoon | 9.7 | 9.1 | 9.4 | 5.5 | 5.6 | 6.1 | 7.7 | 6.8 | 3.8 | 7.7 | 6.2 |
| Red fox | 0.8 | 1.3 | 1.2 | 1.2 | 1.4 | 0.9 | 0.7 | 0.9 | 0.6 | 1.7 | 0.6 |
| Gray fox | 1.3 | 1.0 | 1.5 | 0.8 | 0.2 | 0.2 | 0.6 | 0.7 | 0.2 | 1.8 | 0.1 |
| Coyote | 2.4 | 2.4 | 2.3 | 1.9 | 2.5 | 1.3 | 1.0 | 1.9 | 1.5 | 2.5 | 1.6 |
| Badger | 1.0 | 2.0 | 1.0 | 0.8 | 1.0 | 0.6 | 1.0 | 0.5 | 1.0 | 1.1 | 0.3 |

^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 No respondents indicated they hunted rails.

Table 6. Mean harvest for successful hunters and hunter success rates (%), 2008-09 through 2018-19.

| | 2008-09 | 2009-10 | 2010-11 | 2011-12 ^a | 2012-13 ^a | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-------------------------|-----------|-----------|-----------|----------------------|----------------------|-----------|-----------|-----------|-------------------|-----------|-------------------|
| Ducks | 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) | 11.3 (89) |
| Canada geese | 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) | 6.3 (77) |
| Other geese | 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) | 3.3 (35) |
| American coot | 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) | 5.3 (65) |
| Common snipe | 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) | 2.6 (58) |
| Rails / gallinules | 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) | n.a. ^c |
| Crow | 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) | 9.4 (80) |
| American woodcock | 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) | 4.4 (65) |
| Mourning dove | 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) | 10.2 (82) |
| Ring-necked pheasant | 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) | 5.4 (68) |
| Ruffed grouse | 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) | 4.3 (67) |
| Spruce grouse | 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) | 1.9 (50) |
| Sharp-tailed grouse | 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) | 3.0 (44) |
| Gray partridge | 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) | 4.5 (58) |
| Gray squirrel | 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) | 4.8 (83) |
| Fox squirrel | 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) | 3.6 (81) |
| Eastern cottontail | 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 (83) | 3.6 (71) |
| White-tailed jackrabbit | 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) | 1.6 (62) |
| Snowshoe hare | 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) | 2.7 (56) |
| Raccoon | 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) | 7.4 (84) |
| Red fox | 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) | 1.2 (51) |
| Gray fox | 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) | 1.0 (12) |
| Coyote | 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) | 2.9 (53) |
| Badger | 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) | 1.0 (33) |

^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 No respondents indicated they hunted rails.

MIGRATORY BIRD HUNTING ACTIVITY AND HARVEST DURING THE 2017 - 2018 AND 2018-19 HUNTING SEASONS.

The following information has been excerpted from: U.S. Fish and Wildlife Service. Migratory bird hunting activity and harvest during the 2017 - 2018 and 2018-19 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland, U.S.A. The entire report is available on-line at

<https://fws.gov/migratorybirds/pdf/surveys-and-data/HarvestSurveys/MBHActivityHarvest2017-18and2018-19.pdf>



Hunter setting decoys.

USFWS/Milton Friend

Table 1. Species composition of the Minnesota waterfowl harvest, 2017 and 2018. (from: Raftovich, R.V., S.C. Chandler, and C.M. Cain. 2019. Migratory bird hunting activity and harvest during the 2017-18 and 2018-19 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland. USA August, 2019. 75 pp).

| Species | Minnesota Harvest | | | | | Mississippi Flyway Harvest | | |
|---------------------------------|-------------------|--------------|---------|--------------|---------------------------------|----------------------------|-----------|------------------------------|
| | 2017 | % of Harvest | 2018 | % of Harvest | Percent change in Harvest 17-18 | 2017 | 2018 | Percent change Harvest 17-18 |
| Mallard | 159,718 | 25.36 | 105,149 | 21.79 | -34 | 1,643,472 | 1,407,353 | -17 |
| Domestic mallard | 0 | | 212 | 0.04 | | 1,184 | 1,397 | 15 |
| American black duck | 308 | 0.05 | 212 | 0.04 | -31 | 17,855 | 16,032 | -11 |
| Black x mallard | 0 | | 0 | 0.00 | | 477 | 1,186 | 60 |
| Gadwall | 29,543 | 4.69 | 22,471 | 4.66 | -24 | 623,532 | 421,296 | -48 |
| American wigeon | 11,386 | 1.81 | 10,812 | 2.24 | -5 | 108,267 | 65,348 | -66 |
| Green-winged teal | 60,317 | 9.58 | 37,947 | 7.86 | -37 | 717,625 | 452,685 | -59 |
| Blue-winged /cinnamon teal | 78,166 | 12.41 | 61,479 | 12.74 | -21 | 439,383 | 399,992 | -10 |
| Northern shoveler | 11,079 | 1.76 | 5,724 | 1.19 | -48 | 237,247 | 127,236 | -86 |
| Northern pintail | 13,541 | 2.15 | 5,300 | 1.10 | -61 | 134,643 | 68,949 | -95 |
| Wood duck | 116,326 | 18.47 | 85,010 | 17.62 | -27 | 610,542 | 407,754 | -50 |
| Redhead | 21,234 | 3.37 | 13,144 | 2.72 | -38 | 57,348 | 60,193 | 5 |
| Canvasback | 6,155 | 0.98 | 6,148 | 1.27 | 0 | 40,087 | 30,592 | -31 |
| Greater scaup | 2,462 | 0.39 | 3,180 | 0.66 | 29 | 28,929 | 35,375 | 18 |
| Lesser scaup | 8,617 | 1.37 | 10,812 | 2.24 | 25 | 185,503 | 86,568 | -114 |
| Ring-necked duck | 80,321 | 12.75 | 81,618 | 16.92 | 2 | 267,900 | 182,667 | -47 |
| Goldeneye | 6,770 | 1.07 | 5,936 | 1.23 | -12 | 31,870 | 44,721 | 29 |
| Bufflehead | 12,925 | 2.05 | 16,960 | 3.52 | 31 | 96,285 | 98,519 | 2 |
| Ruddy duck | 615 | 0.10 | 848 | 0.18 | 38 | 7,142 | 6,721 | -6 |
| Scoters | 1,231 | 0.20 | 424 | 0.09 | -66 | 3,451 | 5,740 | 40 |
| Hooded merganser | 8,309 | 1.32 | 8,904 | 1.85 | 7 | 47,789 | 33,738 | -42 |
| Other mergansers | 923 | 0.15 | 212 | 0.04 | -77 | 11,140 | 7,334 | -52 |
| Total Duck Harvest ^a | 629,900 | | 482,500 | | | 5,339,800 | 3,979,000 | |
| (retrieved kill) | ±15% | | ±16% | | -23 | ±5% | ±9% | -34 |

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

Table 2. Top 10 states in number of **adult duck hunters**, 2018, and number of hunter-days and retrieved duck kill. (from: Raftovich, R.V., S.C. Chandler, and C.M. Cain. 2019. Migratory bird hunting activity and harvest during the 2017-18 and 2018-19 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland. USA August, 2019. 75 pp).

| State | Number of active duck hunters | Duck hunter days afield | Total duck harvest | Seasonal duck harvest per hunter |
|--------------------|-------------------------------|-------------------------|--------------------|----------------------------------|
| Texas | 74,300 ± 29% | 358,200 ± 28% | 955,900± 23% | 12.9 ± 37% |
| Arkansas | 60,700 ± 15% | 500,900 ± 26% | 1,006,200 ± 25% | 16.6 ± 29% |
| Minnesota | 53,200 ± 15% | 264,900 ± 15% | 482,500 ± 16% | 9.7 ± 22% |
| California | 51,400 ± 14% | 370,000 ± 11% | 1,083,300 ± 16% | 21.1 ± 21% |
| Wisconsin | 47,600 ± 19% | 287,000 ± 26% | 366,400 ± 21% | 7.7 ± 28% |
| North Carolina | 41,000 ± 25% | 229,300 ± 27% | 476,300 ± 27% | 11.6 ± 36% |
| Louisiana | 36,300 ± 17% | 222,200 ± 37% | 505,800 ± 32% | 13.9 ± 37% |
| Missouri | 35,100 ± 18% | 256,100 ± 30% | 314,100 ± 20% | 9.0 ± 27% |
| North Dakota | 33,800 ± 11% | 160,400 ± 13% | 470,800 ± 14% | 14.0 ± 18% |
| Michigan | 33,200 ± 22% | 165,500 ± 18% | 239,600 ± 20% | 7.2 ± 30% |
| Mississippi Flyway | | 2,452,800 ± 8% | 3,979,000 ± 9% | |
| United States | | 5,491,500 ± 5% | 10,813,400 ± 5% | |

Table 3. Top 10 states in number of **adult goose hunters**, 2018, and number of hunter-days and retrieved goose kill.(from: Raftovich, R.V., S.C. Chandler, and C.M. Cain. 2019. Migratory bird hunting activity and harvest during the 2017-18 and 2018-19 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland. USA August, 2019. 75 pp).

| State | Number of active goose hunters | Goose hunter days afield | Total goose harvest | Seasonal goose harvest per hunter |
|----------------------------|-----------------------------------|--------------------------|---------------------|--------------------------------------|
| Texas | 43,600 ± 28% | 166,600 ± 50% | 149,500 ± 40% | 3.4 ± 49% |
| Minnesota | 43,200 ± 17% | 215,800 ± 21% | 144,200 ± 26% | 3.3 ± 31% |
| California ^B | 36,800 ± 12% | 245,900 ± 15% | 198,200 ± 19% | 5.4 ± 23% |
| Wisconsin | 36,000 ± 16% | 221,600 ± 19% | 128,600 ± 26% | 3.6 ± 30% |
| Michigan | 31,800 ± 22% | 163,000 ± 27% | 93,900 ± 26% | 3.0 ± 35% |
| Arkansas | 26,500 ± 19% | 138,900 ± 28% | 126,700 ± 42% | 4.8 ± 46% |
| North Dakota | 23,300 ± 10% | 104,400 ± 13% | 138,500 ± 34% | 6.0 ± 36% |
| Maryland ^B | 20,700 ± 9% | 96,000 ± 13% | 94,300 ± 16% | 4.6 ± 19% |
| Pennsylvania | 19,500 ± 25% | 100,300 ± 25% | 90,500 ± 29% | 4.6 ± 38% |
| Washington ^B | 18,000 ± 8% | 108,600 ± 17% | 118,500 ± 40% | 6.5 ± 40% |
| Mississippi Flyway | | 1,334,300 ± 9% | 843,900 ± 11% | |
| United States ^b | | 3,030,800 ± 6% | 2,499,700 ± 6% | |

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



2019 LIGHT GOOSE CONSERVATION ORDER HARVEST IN MINNESOTA

Steve Cordts, Wildlife Populations and Regulations Unit

Margaret Dexter, Wildlife Populations and Research Unit

J. Giudice, MNDNR Biometrics Unit

INTRODUCTION

This report documents results of the 2019 Light Goose Conservation Order hunter mail questionnaire survey.

METHODS

Minnesota held a light goose Conservation Order harvest from 15 February - 30 April 2019. Participants were required to obtain a \$2.50 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 (except for youth <18 years old) were sent a questionnaire after the season. Survey questions are listed in Figure 1.

RESULTS AND DISCUSSION

A total of 965 permits were issued and 348 responses (41%) to the questionnaire were obtained (Table 1). In calculating harvest estimates, we assume that the 507 non-respondents participated in the conservation action and took light geese in the same manner as respondents. An estimated 444 hunters attempted to take light geese during the conservation order period. Active participants pursued light geese for 1,537 days and 1,612 light geese were shot and retrieved. This was an average retrieved take of 4 geese per active participant. An estimated 206 light geese were wounded and not retrieved.

ACKNOWLEDGMENTS

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

MINNESOTA 2019 LIGHT GOOSE HARVEST SURVEY

For the Period of February 15 - April 30, 2019 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, 2019. 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 2019 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, 2019? 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, 2019? _____
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? _____

Figure 1. Light Goose Conservation Order hunter mail questionnaire, 2019.

Table 1. Summary of Light Goose Conservation Order harvest in Minnesota, 2007 – 2019.

| Statistic | Year | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| Total permits sold | 1,292 | 1,406 | 1,670 | 952 | 994 | 1,048 | 1,405 | 1,278 | 1,141 | 1,143 | 974 | 912 | 965 |
| Useable returns | 921 | 910 | 1,057 | 671 | 659 | 675 | 810 | 759 | 520 | 491 | 393 | 353 | 348 |
| Response rate (%) | 71.0 | 65.0 | 63.0 | 72.3 | 67.1 | 65.3 | 58.3 | 60.0 | 46 | 43 | 41 | 43 | 41 |
| Active hunters (%) | 39.8 | 54.9 | 66.0 | 40.8 | 45.7 | 56.9 | 54.9 | 44.0 | 50 | 47 | 48 | 35 | 46 |
| Estimated total hunters | 514 | 773 | 1,103 | 389 | 455 | 600 | 770 | 560 | 569 | 534 | 471 | 321 | 444 |
| Estimated hunter days | 2,302 | 3,404 | 4,647 | 1,475 | 1,830 | 2,270 | 3,070 | 2,580 | 2,434 | 2,605 | 1,966 | 1,204 | 1537 |
| Mean days/hunter | 4.5 | 4.4 | 4.2 | 3.8 | 4.0 | 3.8 | 4.0 | 4.6 | 4 | 5 | 4 | 3.8 | 4 |
| Estimated harvest (shot & retrieved) | 1,786 | 2,409 | 4,366 | 559 | 1,554 | 2,620 | 2,430 | 2,880 | 3,266 | 2,121 | 1,713 | 1,021 | 1612 |
| Mean harvest/hunter | 3.5 | 3.1 | 4.0 | 1.4 | 3.4 | 4.4 | 3.2 | 5.1 | 6 | 4 | 4 | 3.2 | 4 |
| Estimated crippling losses | 172 | 302 | 640 | 70 | 145 | 210 | 370 | 210 | 349 | 215 | 298 | 78 | 206 |
| Percent using unplugged guns | 43.6 | 46.7 | 46.8 | 44.9 | 44.2 | 43.0 | 49.4 | 48.8 | NA | NA | NA | NA | NA |
| Est. number hunters using unplugged guns | 224 | 361 | 516 | 175 | 201 | 260 | 380 | 270 | NA | NA | NA | NA | NA |
| Est. number geese shot with unplugged guns | 1,032 | 1,275 | 2,413 | 348 | 742 | 1,510 | 1,670 | 2,060 | NA | NA | NA | NA | NA |
| Est. harvest with shell 4-5-6 | 277 | 339 | 822 | 131 | 311 | 460 | 620 | 770 | NA | NA | NA | NA | NA |
| Percent using electronic calls | 17.1 | 19.1 | 23.5 | 25.9 | 21.3 | 22.2 | 24.5 | 27.8 | NA | NA | NA | NA | NA |
| Est. number hunters using e-calls | 88 | 148 | 260 | 101 | 97 | 130 | 190 | 160 | NA | NA | NA | NA | NA |
| Est. harvest while using e-calls | 329 | 566 | 1,171 | 192 | 531 | 460 | 620 | 1,710 | NA | NA | NA | NA | NA |
| Percent hunting 1/2-hr after sunset | 38.3 | 42.3 | 43.1 | 39.7 | 39.7 | 42.4 | 33.4 | 36.2 | NA | NA | NA | NA | NA |
| Est. number hunting after 1/2-hr sunset | 197 | 326 | 475 | 154 | 180 | 250 | 260 | 200 | NA | NA | NA | NA | NA |
| Est. harvest 1/2-hr after sunset | 209 | 511 | 713 | 87 | 238 | 240 | 260 | 550 | NA | NA | NA | NA | NA |



MINNESOTA'S WILD TURKEY HARVEST – FALL 2018, SPRING 2019

Lindsey Messinger, Farmland Wildlife Populations and Research Group

SUMMARY OF SEASON STRUCTURE

This report summarizes the fall 2018 and spring 2019 Minnesota wild turkey harvest. The fall turkey season was 30 days in length (29 September – 28 October) and allowed for an unlimited number of hunters to take one wild turkey of either sex in one of 12 hunter declared permit areas (501-512, Figure 1). Fall permits for youth hunters were valid statewide (i.e., no restrictions on permit area); all other hunters were restricted to a declared permit area.

There were no major changes to the spring turkey season structure in 2019. The spring turkey season was 45 days in length (17 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 (A-F) with permits valid during a specified time period 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: 17-23 April, and B: 24-30 April). Permits not sold during the lottery process were available for over-the-counter surplus sales. Permits for the remaining time periods (C: 1-7 May, D: 8-14 May, E: 15-21 May, F: 22-31 May) 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 2018 SEASON

Permits Issued

Permits issued to hunters decreased 12% from 7,650 permits in 2017 to 6,719 permits in 2018 (Table 1, Figure 2), and was 10% below the 10-year average (7,488 permits issued). Youth permit sales accounted for 21% of total license sales during the fall 2018 season which was similar to 2017.

Harvest

There were 834 harvested turkeys registered during the fall 2018 season which decreased 18% from 1,015 harvested turkeys registered in 2017 and was 29% below the 10-year average (1,181 harvested turkeys registered) (Table 1; Figure 2). A hunter success rate of 12% in 2018 was similar to 2017 (13%), and was 23% below the 10-year average (16.1%). The greatest number of permits were issued in permit areas 507, 508, and 501 (Table 2). These three permit areas also had the highest registered harvest (Table 2). Statewide, females (hens) represented 56% of the total harvest while juvenile males (jakes) and mature males (toms) represented 15% and 28% of the total harvest respectively (Table 2).

SPRING 2019 SEASON

Permits Issued

There were 46,424 permits issued during the spring 2019 season, including 8,901 general lottery and landowner permits, 15,664 surplus over-the-counter permits, 10,032 youth permits, and 11,792 archery permits (Table 3). The total number of permits purchased increased 2% in 2019 from 2018 but was 13% below the 10-year average (39,724 permits issued) (Table 4). Youth permit sales comprised 22% of total permit sales while archery permits accounted for 25% of total permit sales (Table 3). These percentages were similar to 2018 (Table 4) and may indicate archery and youth permit sales are leveling after regulation changes in 2016 which allowed archery and youth hunters to hunt statewide during any time period. Purchase of lottery permits increased 2% from 2018; however, lottery permit applications remained under-subscribed in many permit areas. Surplus permits issued in 2019 were similar to 2018. The greatest number of regular gun permits were issued in permit areas 507, 501, and 508 (in descending order; Table 5). Permit areas 507 and 501 represent the core turkey range in Minnesota. Permit area 508 represents an area of potentially expanding opportunity as this permit area was expanded in 2016 to include the entire north-central and northeastern regions of Minnesota. Permit sales for the first non-lottery time period (C) were the highest statewide, followed by lottery time periods A and B, respectively (Table 6).

Harvest

Hunters registered 10,699 turkeys (Tables 3, 4, 5, & 7), which was 6% below the 10-year average (11,372 turkeys, Figure 3, Table 4). Although harvest remained the highest in the core turkey range in permit areas 507 (2,821 turkeys) and 501 (2,237 turkeys), harvest in permit area 508 (1,623 turkeys) continued to surpass 503 (1,139 turkeys) for the third year in a row (Table 5). Youth (1,835 turkeys), lottery (3,171 turkeys), and archery (1,721 turkeys) harvest each increased 4% from 2018 whereas surplus harvest (3,966 turkeys) decreased 6% from 2018 (Table 3). These trends may be attributable to weather conditions (see below).

Weather Summary

Weather conditions can impact wild turkey abundance and behavior as well as wild turkey hunter participation. Weather may help to explain short-term trends in hunter participation and harvest, particularly during the spring wild turkey hunting season when a majority of wild turkey hunter harvest occurs. Winter 2018-2019 was mild through mid-January 2019. Record-breaking low and persistent sub-zero temperatures occurred in the final week of January and multiple snowfall events in February and March blanketed much of the core turkey range with deep snow exceeding 6 inches from mid-February through mid-March. Prolonged periods of deep snow can impede the ability of adult turkeys to locate food resources which are critical for maintaining optimal body condition and may impact overwinter survival. Spring weather was wet and cold across much of the turkey range with multiple rain events throughout the spring hunting season. Lingering snow and colder than normal temperatures likely delayed nesting activities and vegetation “green up” was later than normal. Cold and wet weather conditions may have impacted hunter participation and effort, and therefore harvest, in some areas.

Table 1. Permits available, number of applicants, permits issued, registered harvest, and hunter success rates for the ten most recent fall wild turkey seasons in Minnesota, 2009-2018.

| Year | Permits available | Applicants | Permits issued | Registered harvest | Hunter success (%)^a |
|-------------------|--------------------------|-------------------|-----------------------|---------------------------|---------------------------------------|
| 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 |
| 2018 | Unlimited | N/A | 6,719 | 834 | 12.4 |

^a Total hunter success (all permits issued divided by registered harvest). Success rates not adjusted for non-participation or un-registered harvest.

^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 harvest, and hunter success rates during the 2018 fall wild turkey season in Minnesota.

| Permit area | Regular permits issued ^a | Toms ^b | Jakes ^b | Hens ^b | Total registered harvest ^b | Regular harvest ^c | Regular success rates (%) ^d |
|--------------|-------------------------------------|-------------------|--------------------|-------------------|---------------------------------------|------------------------------|--|
| 501 | 730 | 32 | 12 | 52 | 96 | 86 | 11.8 |
| 502 | 64 | 0 | 2 | 3 | 5 | 5 | 7.8 |
| 503 | 515 | 21 | 5 | 39 | 65 | 55 | 10.7 |
| 504 | 119 | 2 | 4 | 4 | 10 | 10 | 8.4 |
| 505 | 267 | 12 | 5 | 18 | 35 | 31 | 11.6 |
| 506 | 185 | 9 | 2 | 14 | 25 | 23 | 12.4 |
| 507 | 1,386 | 81 | 43 | 175 | 299 | 264 | 19.0 |
| 508 | 1,162 | 41 | 32 | 96 | 169 | 147 | 12.7 |
| 509 | 162 | 9 | 9 | 24 | 42 | 27 | 16.7 |
| 510 | 586 | 34 | 11 | 37 | 82 | 74 | 12.6 |
| 511 | 65 | 1 | 0 | 3 | 4 | 4 | 6.2 |
| 512 | 68 | 1 | 0 | 1 | 2 | 2 | 2.9 |
| TOTAL | 5,309 | 243 | 125 | 466 | 834 | 728 | 13.7 |

^a Youth permits were not included as there is no declared permit area (valid in all permit areas). No separate license type for archery hunters was available so archery hunters are reflected in regular permits issued.

^b Total harvest for all license types.

^c All firearm and archery harvest, excluding youth.

^d Overall youth success rate was 7.5% in 2018; unable to quantify by permit area as youth permits were valid in all permit areas).

Table 3. Total permits issued, harvest, and success rate by permit type during the spring 2019 wild turkey season in Minnesota.

| | Total permits issued | Harvest | Success (%)^a |
|-----------------|-----------------------------|----------------|--------------------------------|
| Lottery | 8,901 | 3,171 | 35.6 |
| Surplus | 15,664 | 3,966 | 25.3 |
| Youth | 10,032 | 1,835 | 18.3 |
| Archery | 11,792 | 1,721 | 14.6 |
| Military | 35 | 6 | 17.1 |
| Total | 46,424 | 10,699 | 23.0 |

^a Success rates not adjusted for non-participation.

Table 4. Permits available, permits issued, registered harvest, and hunter success rates for the ten most recent spring wild turkey hunting seasons in Minnesota, 2010-2019.

| | | Permits | | | Harvest | |
|-------------------------|------------------|---------------------------|-------------------|-------------------------------|---------------------------|--------------------------------|
| Year^a | Available | Issued^b | Issued (%) | Archery permits issued | Registered harvest | Success (%)^c |
| 2010 ^d | 55,982 | 46,548 | 83.0 | 2,910 | 13,467 | 27.2 |
| 2011 ^d | Unlimited | 43,521 | N/A | 2,462 | 10,055 | 21.9 |
| 2012 ^d | Unlimited | 38,155 | N/A | 3,325 | 11,276 | 27.2 |
| 2013 ^d | Unlimited | 40,430 | N/A | 3,885 | 10,321 | 23.3 |
| 2014 ^d | Unlimited | 42,134 | N/A | 4,760 | 11,425 | 24.4 |
| 2015 ^d | Unlimited | 40,824 | N/A | 4,930 | 11,694 | 25.6 |
| 2016 ^d | Unlimited | 38,895 | N/A | 10,132 | 12,277 | 25.0 |
| 2017 ^d | Unlimited | 37,882 | N/A | 11,043 | 11,803 | 24.1 |
| 2018 ^d | Unlimited | 34,214 | N/A | 11,200 | 10,706 | 23.6 |
| 2019 | Unlimited | 34,632 | N/A | 11,792 | 10,699 | 23.0 |

^a Youth hunt data included.

^b Permits issued to archery hunters were not included to facilitate comparison to previous years.

^c Total hunter success (registered harvest divided by all permits issued). Success rates not adjusted for non-participation or un-registered harvest.

^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. Regular (non-youth) firearm permits issued, registered harvest, and hunter success during the 2019 spring wild turkey season in Minnesota.

| Permit area | Regular permits issued ^a | Total registered harvest ^b | Regular gun harvest ^c | Regular gun success rates (%) ^d |
|--------------|-------------------------------------|---------------------------------------|----------------------------------|--|
| 501 | 5,927 | 2,237 | 1,747 | 29.5 |
| 502 | 533 | 149 | 110 | 20.6 |
| 503 | 2,801 | 1,139 | 828 | 29.6 |
| 504 | 623 | 253 | 160 | 25.7 |
| 505 | 1,859 | 749 | 571 | 30.7 |
| 506 | 895 | 332 | 191 | 21.3 |
| 507 | 6,036 | 2,821 | 1,792 | 29.7 |
| 508 | 3,546 | 1,623 | 1,013 | 28.6 |
| 509 | 354 | 250 | 115 | 32.5 |
| 510 | 1,801 | 1,060 | 573 | 31.8 |
| 511 | 123 | 48 | 24 | 19.5 |
| 512 | 102 | 38 | 19 | 18.6 |
| TOTAL | 24,600 | 10,699 | 7,143 | 29.0 |

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

^b Total harvest for all license types.

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

^d Regular gun success (regular gun harvest divided by regular permits issued). Success rates not adjusted for non-participation or un-registered harvest.

Table 6. Permits available and issued by license type and time period for the spring 2019 wild turkey season in Minnesota.

| Time period | Permits available | General lottery ^a permits issued | Surplus permits issued | Youth permits issued | Archery permits issued |
|----------------|-------------------|---|------------------------|--|------------------------|
| A: 17-23 April | 7,010 | 5,117 | 781 | Not applicable – Youth and archery permits were valid during all time periods. | |
| B: 24-30 April | 7,010 | 3,801 | 1,997 | | |
| C: 1-7 May | Unlimited | 6 | 7,241 | | |
| D: 8-14 May | Unlimited | 9 | 2,984 | | |
| E: 15-21 May | Unlimited | 2 | 1,860 | | |
| F: 22-31 May | Unlimited | 1 | 801 ^b | | |
| Total | Unlimited | 8,936 | 15,664 | 10,032 | 11,792 |

^a Includes landowner and military permits.

^b Number of surplus licenses sold for this time period. Actual number of hunters is 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 2019 wild turkey season in Minnesota.

| Time period | Total harvest | Harvest (%) |
|--------------|---------------|-------------|
| A | 3,608 | 33.7 |
| B | 2,436 | 22.8 |
| C | 2,306 | 21.6 |
| D | 897 | 8.4 |
| E | 537 | 5.0 |
| F | 915 | 8.6 |
| Total | 10,699 | 100 |

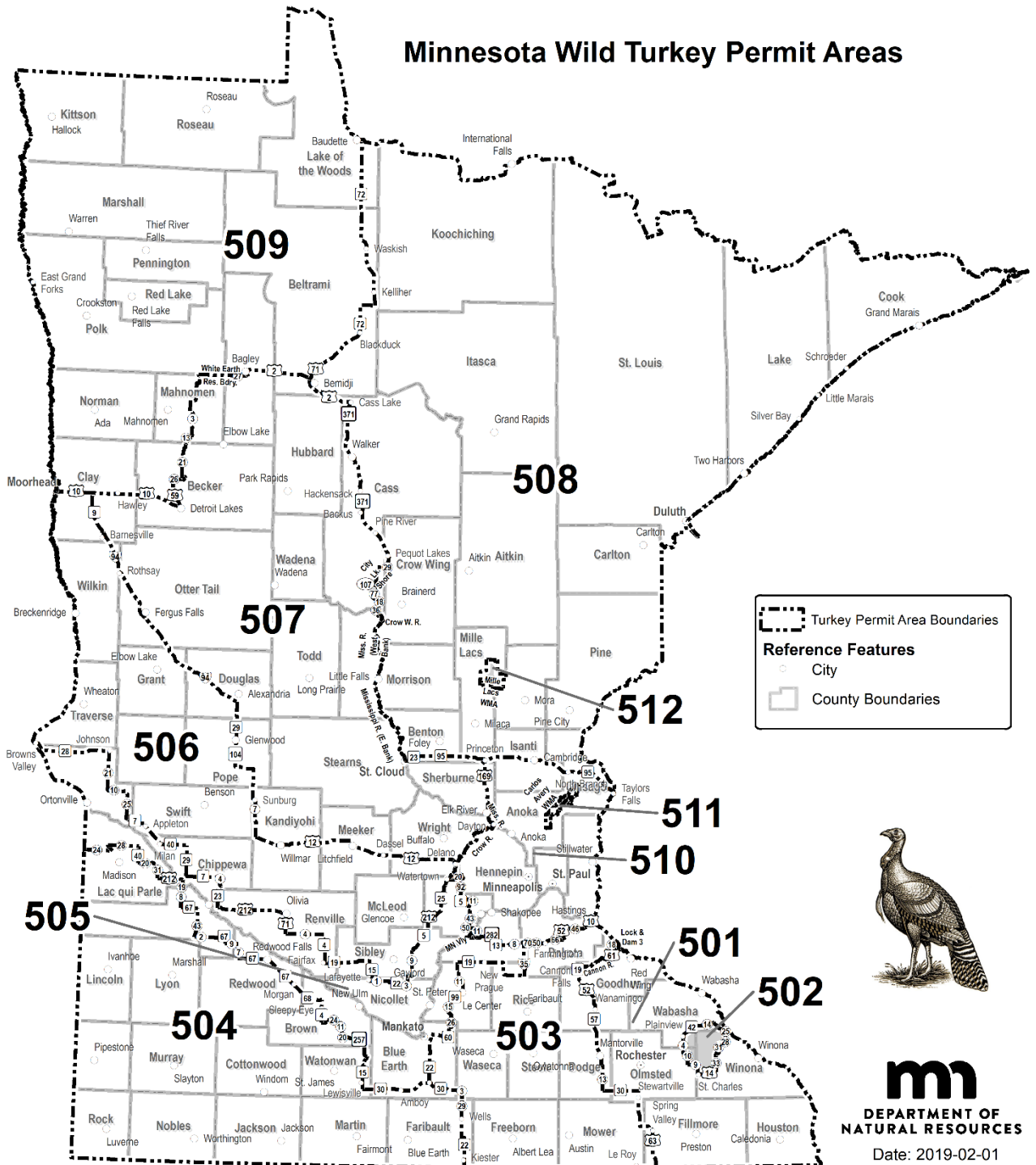


Figure 2. Permit areas open for hunting, fall 2018 and spring 2019 wild turkey seasons in Minnesota.

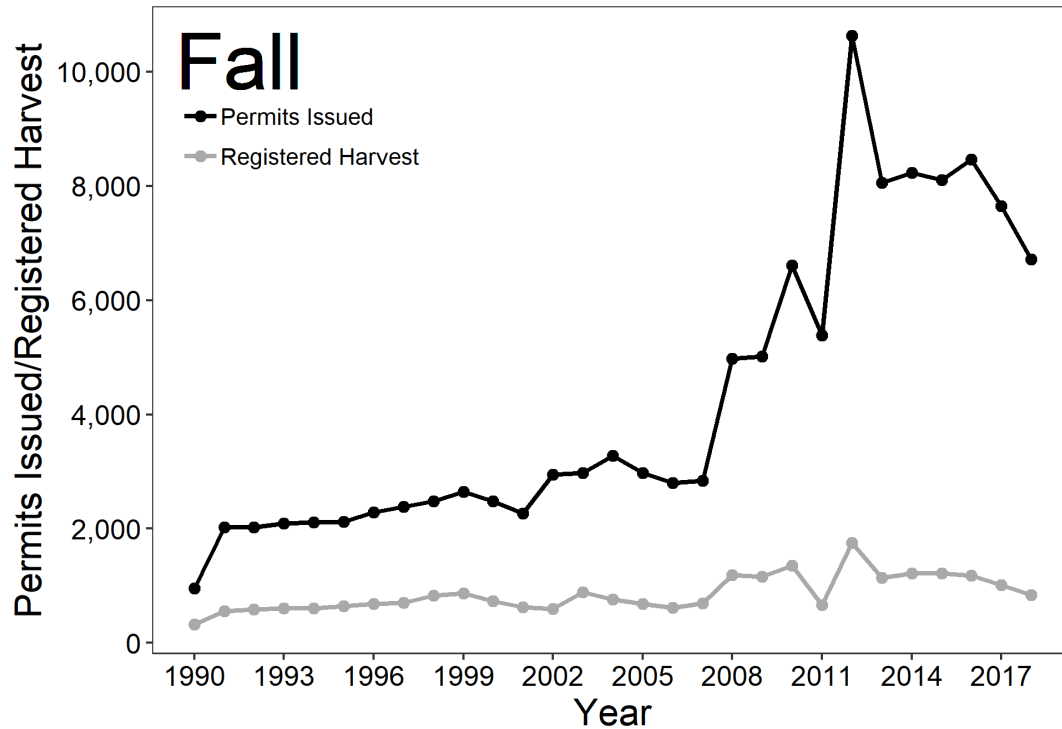


Figure 3. Permits issued and registered harvest for fall wild turkey seasons in Minnesota, 1990-2018.

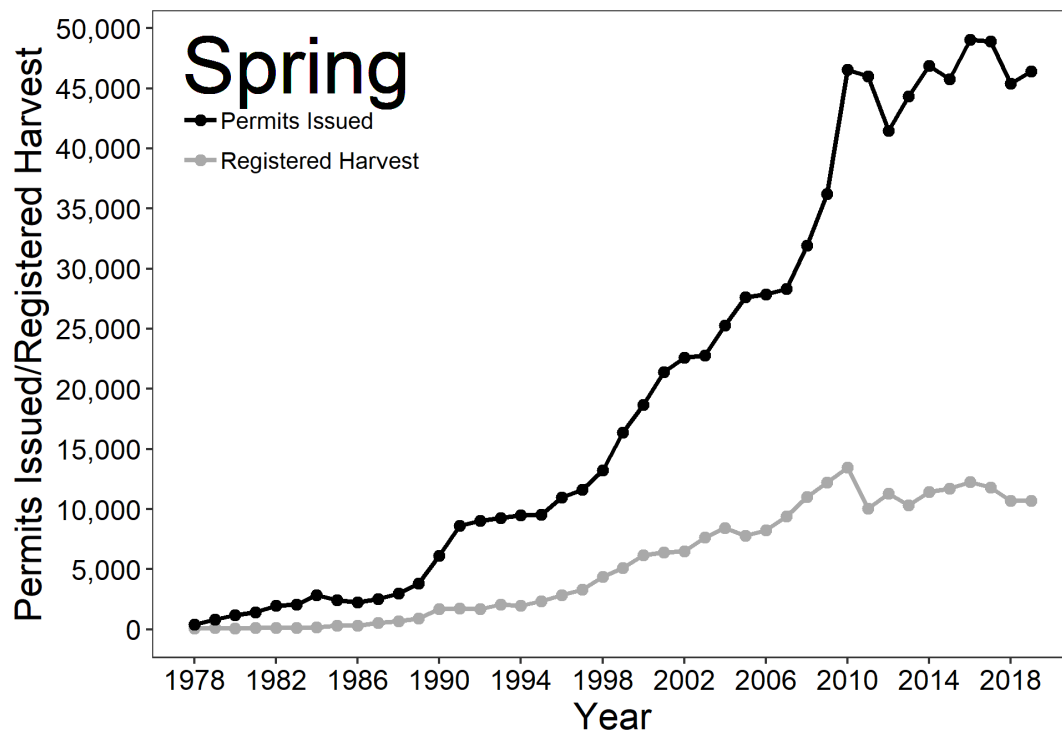


Figure 4. Permits issued and registered harvest for spring wild turkey seasons in Minnesota, 1978-2019.



2018 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 2018, 104 hunters were estimated to have gone afield and harvested 82 prairie-chickens and 36 sharp-tailed grouse (*Tympanuchus phasianellus*) during prairie-chicken hunts. Hunter success (0.51) 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 2018, the prairie-chicken season opened 29 September and closed 7 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 $\leq 20\%$ 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 or reported hunting 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 days afield or the number of sharp-tailed grouse harvested between respondents to the first and second mailings. However, a nonresponse bias was detected in the number of respondents that hunted and the number of prairie-chickens 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 2018 was 125 permits, and 303 individuals applied in the lottery (Table 1). Of the 128 lottery winners, 104—including 4 landowners—later purchased a permit. One additional winner who was not on the list of purchasers returned a survey indicating that he/she hunted, so he/she was added to the sample of “purchasers” for this analysis and summary. All permit areas had more applicants than permits available.

Ninety permit purchasers (86%, $n = 105$) responded to the survey; 79 (76%) responded to the first mailing and 11 (11%) to the second mailing. This response rate is similar to survey response rates since 2010 (mean: 87%; range: 83–95%). Respondents to the first mailing reported harvesting prairie-chickens at higher rates (60% vs. 30%) and reported harvesting more chickens (0.9 vs. 0.3 birds per hunter). Thus, hunters that were more successful were more likely to respond to the survey. Respondents to the first mailing were more likely than respondents to the second mailing to have hunted (100% vs. 91% of respondents), they hunted a similar number of days (2.2 vs. 2.9), harvested a similar number of sharp-tailed grouse (0.4 vs. 0.4 birds per hunter), and reported similar satisfaction (mean 4.1 vs. 3.1, median 5 vs. 3), with 90% and 87% of respondents reporting satisfaction scores >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-nine respondents reported that they hunted prairie-chickens (Table 2). I estimated the total number of hunters to be 104 (i.e., purchasers who went afield) after accounting for hunting by non-respondents. Hunters reported harvesting 79 prairie-chickens and total harvest after accounting for non-respondents was estimated as 82 prairie-chickens. An estimated 53 hunters bagged >1 chicken. Survey respondents reported harvesting 36 sharp-tailed grouse while

hunting prairie-chickens from permit areas 803A, 804A, 805A, and 807A, 808A, and 810A (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 2018 were similar to 2013-2017, 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.

Table 1. Prairie-chicken hunt lottery applicants, winners, and hunting permit purchasers in Minnesota during 2018.

| Permit area | Permits available | No. of applicants | Lottery winners | | Permit purchasers ^a | | Surplus purchasers ^c |
|-------------|-------------------|-------------------|------------------|------------|--------------------------------|------------|---------------------------------|
| | | | No. ^b | Proportion | No. | Proportion | |
| 803A | 8 | 19 | 9 | 0.47 | 8 | 0.89 | 0 |
| 804A | 10 | 20 | 10 | 0.50 | 9 | 0.90 | 0 |
| 805A | 10 | 61 | 10 | 0.16 | 10 | 1.00 | 0 |
| 806A | 12 | 31 | 13 | 0.42 | 8 | 0.62 | 0 |
| 807A | 20 | 38 | 21 | 0.55 | 20 | 0.95 | 0 |
| 808A | 20 | 40 | 20 | 0.50 | 14 | 0.70 | 0 |
| 809A | 15 | 30 | 15 | 0.50 | 12 | 0.80 | 0 |
| 810A | 15 | 33 | 15 | 0.45 | 13 | 0.87 | 0 |
| 811A | 5 | 5 | 5 | 1.00 | 3 | 0.60 | 0 |
| 812A | 5 | 18 | 5 | 0.28 | 4 | 0.80 | 0 |
| 813A | 5 | 8 | 5 | 0.63 | 4 | 0.80 | 0 |
| All | 125 | 303 | 128 | 0.42 | 105 | 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 available in 2018.

Table 2. Prairie-chicken harvest in Minnesota during 2018.

| Permit area | No. of hunters ^a | | Birds harvested | | Birds per harvester ^b | Success rate ^c |
|-------------|-----------------------------|------------------|-----------------|-----------------|----------------------------------|---------------------------|
| | Self-reported | Estimated | Self-reported | Estimated | | |
| 803A | 7 | 8 | 7 | 7 | 1.4 | 0.63 |
| 804A | 8 | 9 | 5 | 5 | 1.3 | 0.44 |
| 805A | 9 | 10 | 8 | 8 | 2.0 | 0.40 |
| 806A | 5 | 8 | 5 | 6 | 1.5 | 0.50 |
| 807A | 18 | 20 | 19 | 20 | 1.5 | 0.65 |
| 808A | 12 | 13 | 13 | 13 | 1.6 | 0.62 |
| 809A | 9 | 12 | 10 | 11 | 1.8 | 0.50 |
| 810A | 12 | 13 | 3 | 3 | 1.0 | 0.23 |
| 811A | 2 | 3 | 2 | 2 | 1.0 | 0.67 |
| 812A | 3 | 4 | 1 | 1 | 1.0 | 0.25 |
| 813A | 4 | 4 | 6 | 6 | 2.0 | 0.75 |
| All | 89 | 104 ^d | 79 | 82 ^d | 1.5 ^d | 0.51 ^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 2003–2018.

| 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 |
| 2018 | 125 | 303 | 104 | 82 ^f | 0.51 ^f | 3.9 ^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, 2017, and 2018.

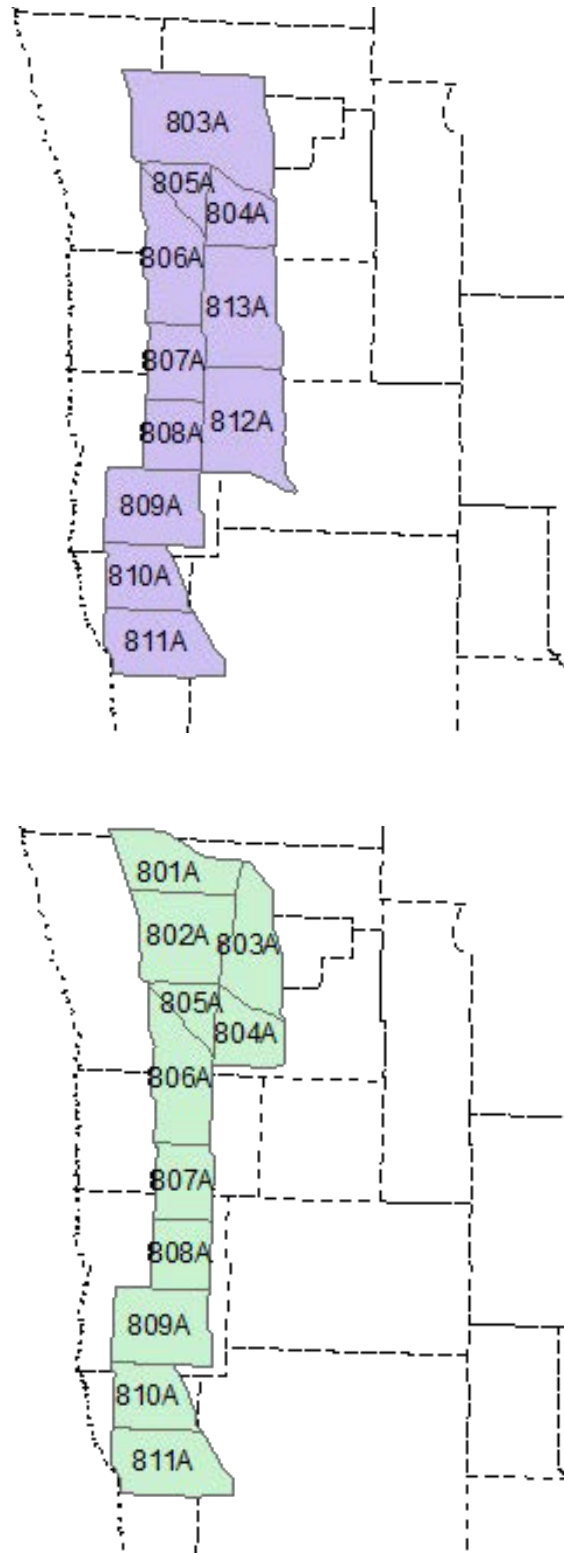


Figure 1. Prairie-chicken hunting permit area boundaries in northwestern Minnesota since 2013 (top) compared to during 2006–2012 (bottom). County boundaries are indicated by dashed lines. Permit areas 812A and 813A were added, 801A was eliminated, and 802A and portions of 803A were combined into a revised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

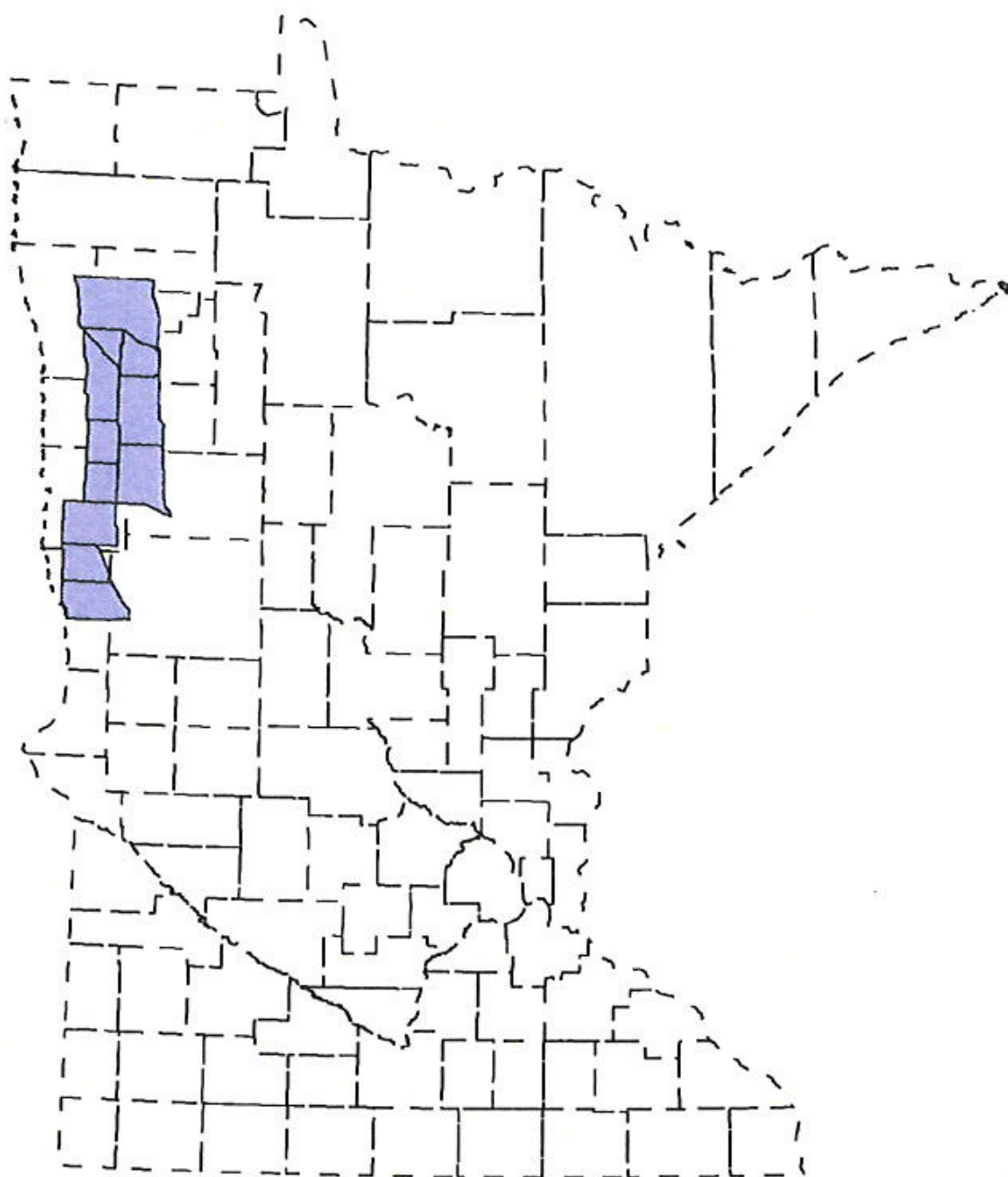


Figure 2. Northwestern location of prairie-chicken hunting permit areas within the state relative to county boundaries (dashed lines).



STATUS OF MINNESOTA BLACK BEARS, 2018

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 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 21,000 again in 2018 (as they did in 2017) (Table 1). Of these, >3,200 (15%), 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 the same as in 2017, but the harvest was 13% lower because natural food availability was high during fall of 2018, making hunters' baits less attractive. Hunting success is inversely related to the number of hunters but also strongly affected by fall foods. (Figure 1).

Bear Management Units

There are currently 13 Bear Management Units (BMUs) where license sales are limited by a quota, and 4 BMUs with no quota (Figure 2). The BMU divisions in the no-quota zone are for internal data analysis purposes only: hunters do not have to choose a BMU in which to hunt within this zone. In the quota zone, hunters must apply for a certain BMU and are drawn through a preference lottery based on their number of previously unsuccessful applications (Table 4). The first digit in each BMU (1–5) refers to 5 larger BMUs in which each was previously a part (when numbering began in 1985). Since then several BMUs have been split, to better adjust hunting pressure. The most recent split was in 2016, when 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). This split, along former BMU lines, allows current data to be regrouped into these former BMUs and thereby compared to older data (which is done in this report).

Quota zone permits and licenses

The number of quota zone permits available in 2018 was the same as it was for 2017 for all BMUs (Table 2). This is the 6th year (since 2013) that permits have been kept low (<3,900). This was the 8th year (since 2011) 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 17% over the past 10 years (Figure 3), 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, and was one of the few BMUs with higher applications in 2018 than in 2017 (Figure 3).

Quota zone lottery

The low quota zone permit availability over the past 6 years has made it increasingly difficult to succeed in the lottery (Table 4). This year, although quotas were the same as last year, a higher level of preference was needed to secure a permit because a large number of hunters who had accumulated preference points by previously applying to area 99 entered the lottery for a BMU. First-time applicants were successful only in BMU 22 (wilderness area hunt), and second-time applicants were successful only in BMUs 22 and 13. Four BMUs required a preference level of at least 4 for a chance of success, and BMU 45 required a preference level of 5 or above. This high threshold for BMU 45 is due to the increasing number of applicants (Figure 3), not a change in number of available permits (Table 2).

Harvest by BMU

The statewide harvest in 2018 was lower than in 2017 (Table 5). However, BMUs along the northern edge of the state (BMU 11, 12, 13, 25) had slightly higher harvests in 2018. The most extreme declines from 2017 to 2018 were in the east-central portion of the bear range (BMUs 51 and 52; BMU 51 was the lowest since the division of these 2 BMUs in 1987; Figure 2). The sex ratio of the harvest was $\geq 60\%$ males in all BMUs except one (BMU 31). The statewide harvest sex ratio of 66% males equaled the record set in 2015. The statewide harvest sex ratio has exceeded 60% in all years since 2013 (Table 1), when permits were reduced. However, these same highly male-biased sex ratios have also occurred in the no-quota area, suggesting that it is not just due to low hunter density.

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, with stabilization of the number of quota-zone permits available, but nevertheless was a record high this year (28%), most of it occurring in BMU 11 (16% of statewide harvest; Table 5). Nearly half the bear hunters were hunting with a no-quota license in 2017 and 2018.

Hunting success by BMU

Record-breaking success was experienced by hunters in 2016 and 2017 (Table 6). In 2018, success was generally lower, yet was still exceptionally high in many areas (>50% in BMUs 12, 13, 25; 60% in BMU 28 [which has a high proportion of guided hunters]). Success rate in the no-quota zone as a whole (15%) was less than half that in the quota zone (38%). The distribution of hunters within the no-quota zone is gleaned from where they said they would hunt when they purchased their license: a growing proportion indicated that they planned to hunt in BMU 10 (although the hunting success rate in this area is lowest in the state).

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). During years with abundant fall foods, the harvest is shifted later in the season, with <60% occurring during the first week. This delayed pattern occurred in 2018.

Predictions of harvest

The 2018 statewide harvest was close, but slightly higher than expected (1766 actual vs. 1715 predicted), based on regression of harvest as a function of hunter numbers and the fall food productivity index (Figure 5). This regression is even stronger (and has accurately predicted previous harvests) when only the past 15 years are considered. For the quota zone, the actual harvest in 2018 was also close but higher (1272 actual vs. 1201 predicted) than predicted by this regression.

Harvest sex ratios

Harvest sex ratios within BMUs varied considerably year-to-year over the past 2 decades. Five BMUs have shown a significantly increasing trend in percent males during 1998–2018; these were not concentrated in a single region but rather represent the northwest (BMU 13), north-central (BMU 25, 26), and southeastern (BMU 51, 52) portions of the bear range (and include both quota and no-quota areas). Statewide there has been a clear shift toward more males in the harvest (see Figure 9). 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, hunter selectivity, and possibly density of baits). (Figure 6).

Harvest ages

Statewide, the median age of harvested females dipped below 3 years old, breaking what had been a 3-year upward trend (Figure 7). Likewise, the proportion of the female harvest composed of 1–2 year-olds increased slightly and 4–10 year-olds decreased. On a BMU-basis, median ages of harvested females has not shown an obvious trend over the past 20 years. However, it is notable that BMUs 45 and 52 had especially young females harvested in 2018 (median ages <2 years in both of these BMUs, Figure 8). This was likely a result of the abundant fall foods in the southern portion of the bear range: it is common for older females in particular to shun hunters' baits when natural foods are abundant. The median age of harvested males (slightly over 2 years old statewide) has been relatively stable (Figure 9), but creeping upward.

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 during 2014–2017, which spurred a higher initial compliance the following years (>80%). However, ~90% compliance was achieved only through a reminder mailing (Figure 10). In 2018 no reminder mailing was sent and compliance was 85%. 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 (Figure 11). Less than 80% of successful hunters in BMUs 41, 46, and 10 submitted a tooth.

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 (Figure 12). However, older-aged harvested bears (≥ 8 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). Based on this method, harvest rates since 2015 have been significantly less than what they were in the early 1980s, when the bear population was increasing.

One problem in using this very simple method is that it assumes that the relative difference for males versus females in their vulnerability to harvest does not change systematically through time. This may not be true, given the steadily increasing male-skewed harvests since the late 1990s, and especially in recent years (Figure 9).

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, 1998–2018.

| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|-------------------|-------------------|-----------------|
| Permit applications ^a | 30245 | 29384 | 29275 | 26824 | 21886 | 16431 | 16466 | 16153 | 15725 | 16345 | 17362 | 17571 | 18647 | 19184 | 18103 | 18107 | 18885 | 18422 | 19958 | 21034 | 21184 |
| Permits available ^b | 18210 | 20840 | 20710 | 20710 | 20610 | 20110 | 16450 | 15950 | 14850 | 13200 | 11850 | 10000 | 9500 | 7050 | 6000 | 3750 | 3750 | 3700 | 3850 | 3350 | 3350 |
| Licenses purchased (total) ^c | 16737 | 18355 | 19304 | 16510 | 14639 | 14409 | 13669 | 13199 | 13164 | 11936 | 10404 | 9892 | 9689 | 9555 | 8986 | 6589 | 6620 | 6962 | 7177 | 6655 | 6550 |
| Quota zone ^c | 14941 | 16563 | 17021 | 13632 | 12350 | 9833 | 10063 | 9340 | 9169 | 8905 | 7842 | 7342 | 7086 | 5684 | 4951 | 3188 | 3177 | 3257 | 3420 | 2954 | 2922 |
| Quota surplus/military ^c | | | | 235 | 209 | 2554 | 1356 | 1591 | 1561 | 526 | 233 | 77 | 83 | 1385 | 1070 | 578 | 583 | 446 | 441 | 401 | 428 |
| 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 | 3200 |
| % 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 | 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 | 87.2 |
| Estimated no. hunters ^e | 14500 | 15900 | 16800 | 15500 | 13800 | 13600 | 12900 | 12500 | 12500 | 11300 | 9900 | 9400 | 9200 | 9200 | 8600 | 6300 | 6300 | 6700 | 6900 | 6400 | 6300 |
| Harvest | 4110 | 3620 | 3898 | 4936 | 1915 | 3598 | 3391 | 3340 | 3290 | 3172 | 2135 | 2801 | 2699 | 2131 | 2604 | 1866 | 1627 | 1971 | 2641 | 2040 | 1766 |
| 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 | 66 ⁱ |
| 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 | 28 |
| Quota harvest/licenses | 25 | 20 | 20 | 28 | 14 | 25 | 26 | 25 | 25 | 28 | 21 | 30 | 30 | 24 | 33 | 37 | 33 | 39 ⁱ | 50 ⁱ | 46 ⁱ | 38 |

^a From 2008 to 2018, 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; 2018=3254 (record high); additionally, area 88 nuisance-only bear license applications counted in this total in 2017=3 and 2018=6 (people who selected area 88 as 1st preference).

^b Beginning in 2011 a procedure was implemented 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.

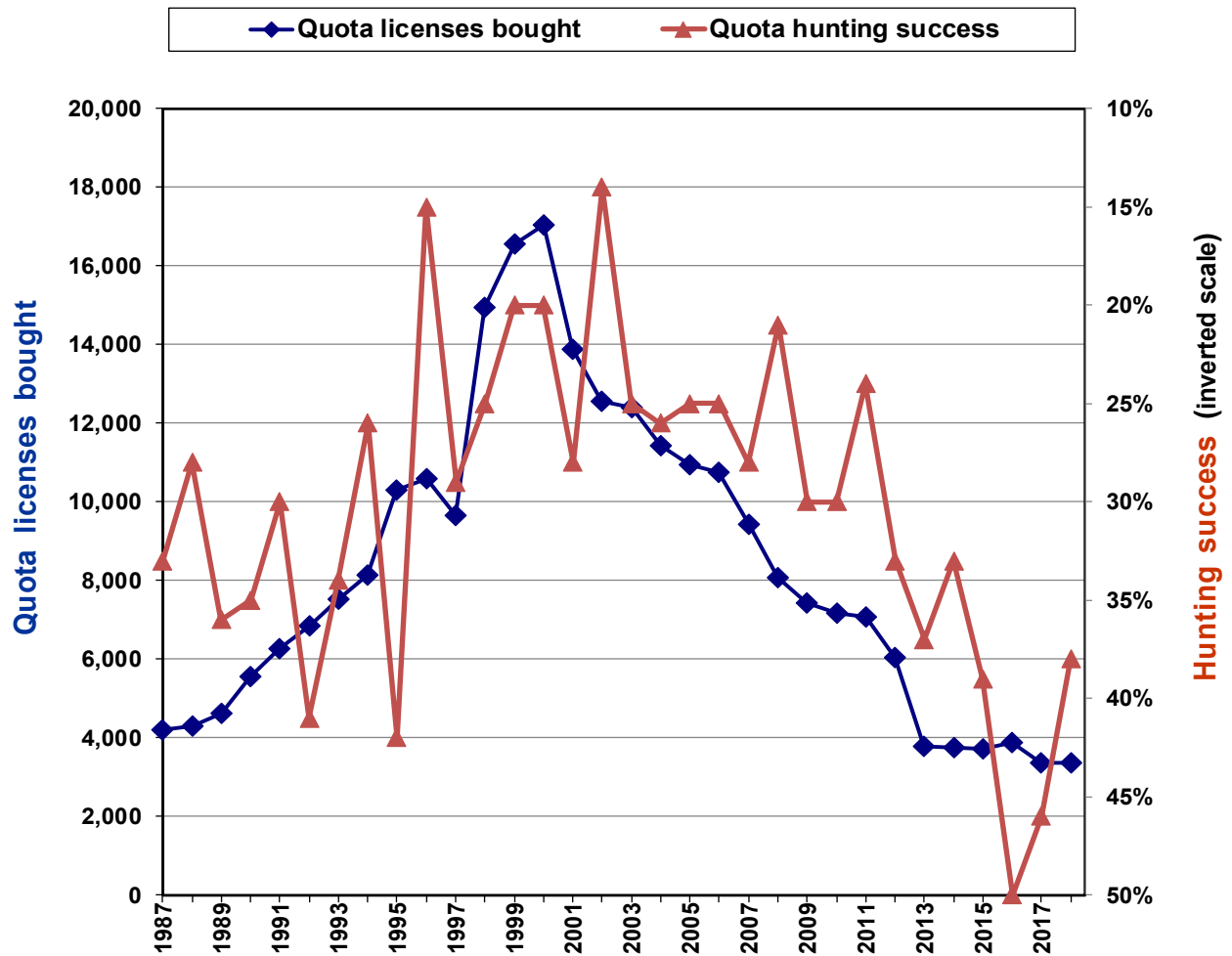


Figure 1. Relationship between licenses sold and hunting success (note inverted scale) in quota zone, 1987–2018 (no-quota zone first partitioned out in 1987). Number of licenses explains 47% of variation in hunting success during this period. Large variation in hunting success is also attributable to food conditions (e.g., during 2013–2018, when licenses were held relatively constant).

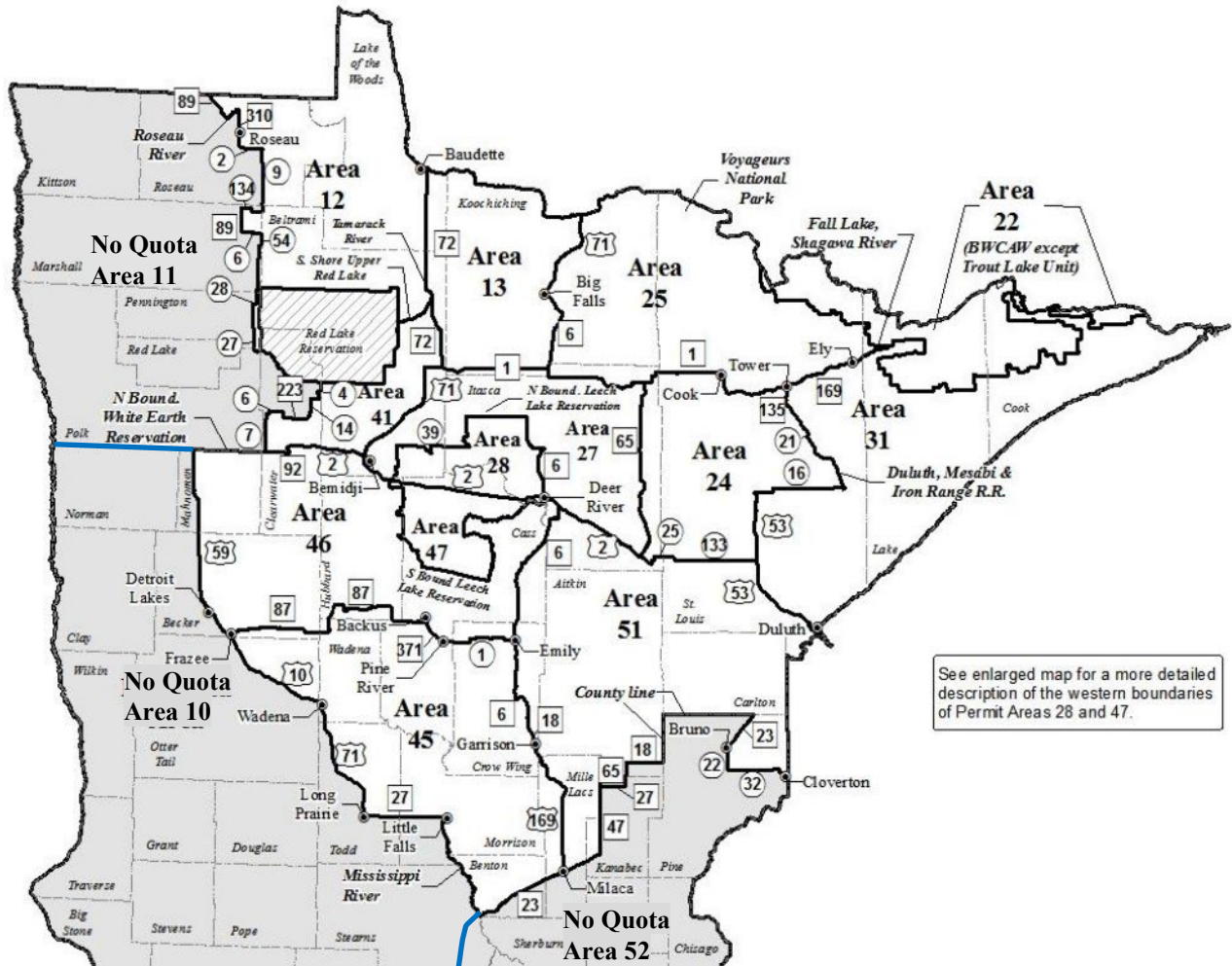


Figure 2. Bear management units (BMUs) within quota (white) and no-quota (gray) zones. Hunters in the quota zone are restricted to a single BMU. In 2016, BMU 26 was divided into 27 and 28, and BMU 44 was split into 46 and 47 (BMUs 28 and 47 comprise the Leech Lake Reservation). No-quota hunters can hunt 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, 2013–2018. 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 | 2016 | | | | | | 2017 | 2018 |
|--------------|-------------|-------------|-------------|-------------------------------|-----------------|-------------|-------------|------|
| | 2013 | 2014 | 2015 | Before BMU split ^a | After BMU split | | | |
| 12 | 200 | 200 | 150 | 150 | 150 | 125 | 125 | |
| 13 | 250 | 250 | 250 | 250 | 250 | 225 | 225 | |
| 22 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | |
| 24 | 200 | 200 | 200 | 200 | 200 | 175 | 175 | |
| 25 | 500 | 500 | 500 | 500 | 500 | 400 | 400 | |
| 26 | 350 | 350 | 350 | 325 | | | | |
| 27 | | | | | 250 | 225 | 225 | |
| 28 | | | | | 75 | 60 | 60 | |
| 31 | 550 | 550 | 550 | 550 | 550 | 500 | 500 | |
| 41 | 150 | 150 | 150 | 125 | 125 | 125 | 125 | |
| 44 | 450 | 450 | 450 | 450 | | | | |
| 46 | | | | | 400 | 350 | 350 | |
| 47 | | | | | 50 | 40 | 40 | |
| 45 | 150 | 150 | 150 | 250 | 250 | 175 | 175 | |
| 51 | 900 | 900 | 900 | 1000 | 1000 | 900 | 900 | |
| Total | 3750 | 3750 | 3700 | 3850 | 3850 | 3350 | 3350 | |

^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, 2013–2018^a. Shaded values indicate undersubscribed (applications less than permits available).

| BMU | 2013 | | | 2014 | | | 2015 | | | 2016 | | | 2017 | | | 2018 | | |
|--------------|-------|----------------|----------------|------|----------------|----------------|------|----------------|----------------|-------|----------------|----------------|------|----------------|----------------|-------|----------------|----------------|
| | 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 | 707 | 160 | 44 | 661 | 164 | 36 | 612 | 130 | 20 | 624 | 133 | 17 | 774 | 113 | 12 | 703 | 109 | 16 |
| 13 | 664 | 213 | 37 | 703 | 218 | 32 | 692 | 210 | 40 | 716 | 221 | 29 | 772 | 200 | 25 | 682 | 177 | 47 |
| 22 | 55 | 36 | 14 | 65 | 33 | 17 | 48 | 36 | 9 ^b | 52 | 37 | 13 | 47 | 34 | 16 | 76 | 36 | 14 |
| 24 | 763 | 170 | 30 | 875 | 174 | 26 | 771 | 171 | 29 | 884 | 173 | 27 | 945 | 158 | 17 | 928 | 155 | 20 |
| 25 | 1575 | 432 | 69 | 1533 | 424 | 76 | 1396 | 433 | 67 | 1443 | 440 | 60 | 1651 | 354 | 46 | 1561 | 355 | 44 |
| 26 | 1695 | 303 | 47 | 1696 | 298 | 52 | 1650 | 309 | 42 | | | | | | | | | |
| 27 | | | | | | | | | | 1224 | 219 | 31 | 1297 | 197 | 28 | 1265 | 204 | 21 |
| 28 | | | | | | | | | | 325 | 72 | 3 | 330 | 52 | 8 | 309 | 52 | 8 |
| 31 | 2261 | 478 | 72 | 2257 | 468 | 82 | 2021 | 488 | 62 | 2180 | 489 | 62 | 2076 | 441 | 59 | 2074 | 428 | 71 |
| 41 | 575 | 135 | 15 | 561 | 129 | 21 | 570 | 129 | 21 | 618 | 114 | 11 | 614 | 109 | 16 | 648 | 114 | 11 |
| 44 | 2682 | 386 | 65 | 2751 | 393 | 57 | 2626 | 402 | 48 | | | | | | | | | |
| 46 | | | | | | | | | | 2690 | 370 | 30 | 2774 | 319 | 31 | 2769 | 317 | 33 |
| 47 | | | | | | | | | | 194 | 45 | 5 | 214 | 33 | 7 | 182 | 35 | 5 |
| 45 | 1205 | 141 | 9 | 1403 | 127 | 23 | 1703 | 139 | 11 | 2046 | 227 | 23 | 2323 | 161 | 14 | 2383 | 160 | 15 |
| 51 | 3796 | 734 | 166 | 4003 | 748 | 152 | 3878 | 810 | 90 | 4321 | 880 | 121 | 4411 | 783 | 117 | 4344 | 779 | 123 |
| Total | 15978 | 3188 | 568 | 5406 | 875 | 175 | 5581 | 949 | 101 | 17317 | 3420 | 432 | 9722 | 1296 | 169 | 17924 | 2921 | 428 |

^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).

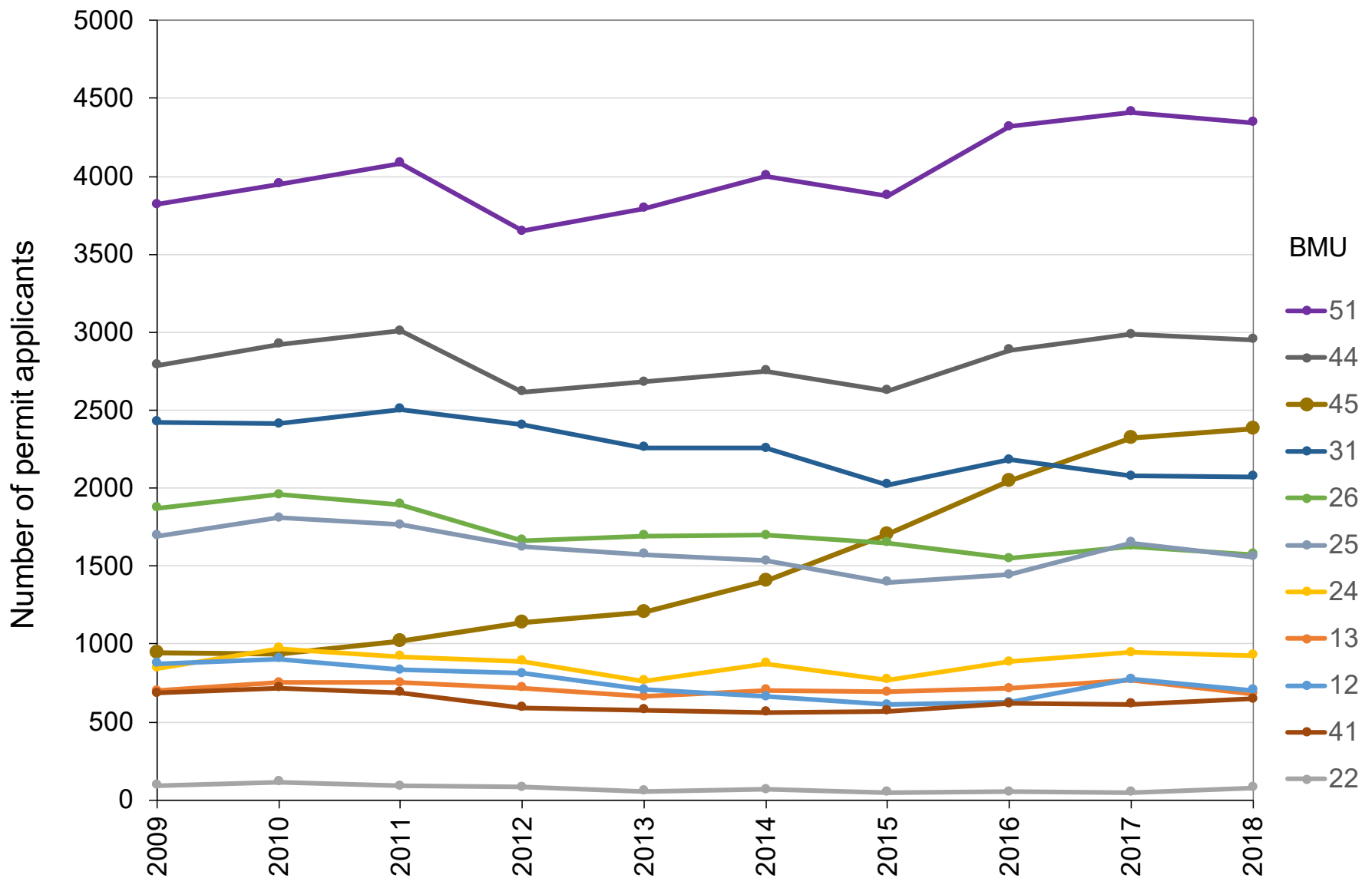


Figure 3. Trends in number of applicants for quota zone permits by BMU over past 10 years, 2009–2018. For 2016 - 2018, BMUs 27 and 28 were grouped into old BMU 26 and BMUs 46 and 47 were grouped into old BMU 44. BMU 45 is highlighted because applications there nearly tripled over this time period.

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 2013–2018. 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.

| BMU | 2013 | | | 2014 | | | 2015 | | | | 2016 | | | | 2017 | | | | 2018 | | | | |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 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 | Pref 1 | Pref 2 | Pref 3 | Pref 4 | Pref 5 |
| 12 | 0 | 46 | | 0 | 40 | | 0 | 17 | | | 0 | 0 | 98 | | 0 | 0 | 57 | | 0 | 0 | 41 | | |
| 13 | 4 | | | 0 | 72 | | 0 | 56 | | | 0 | 38 | | | 0 | 16 | | | 0 | 11 | | | |
| 22 | 89 | | | 72 | | | 100 | | | | 98 | | | | 100 | | | | 60 | | | | |
| 24 | 0 | 41 | | 0 | 13 | | 0 | 2 | | | 0 | 0 | 86 | | 0 | 0 | 57 | | 0 | 0 | 26 | | |
| 25 | 0 | 81 | | 0 | 57 | | 0 | 44 | | | 0 | 42 | | | 0 | 6 | | | 0 | 0 | 80 | | |
| 26 ^b | 0 | 7 | | 0 | 0 | 80 | 0 | 0 | 51 | | | | | | | | | | | | | | |
| 27 | | | | | | | | | | | 0 | 0 | 30 | | 0 | 0 | 2 | | 0 | 0 | 0 | 85 | |
| 28 | | | | | | | | | | | 0 | 0 | 0 | 99 | 0 | 0 | 0 | 76 | 0 | 0 | 0 | 46 | |
| 31 | 0 | 45 | | 0 | 15 | | 0 | 0 | 87 | | 0 | 0 | 75 | | 0 | 0 | 67 | | 0 | 0 | 48 | | |
| 41 | 0 | 43 | | 0 | 19 | | 0 | 0 | 99 | | 0 | 0 | 77 | | 0 | 0 | 56 | | 0 | 0 | 27 | | |
| 44 ^b | 0 | 0 | 68 | 0 | 0 | 41 | 0 | 0 | 18 | | | | | | | | | | | | | | |
| 46 | | | | | | | | | | | 0 | 0 | 0 | 85 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 24 | |
| 47 | | | | | | | | | | | 0 | 0 | 10 | | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 26 | |
| 45 | 0 | 0 | 75 | 0 | 0 | 30 | 0 | 0 | 0 | 81 | 0 | 0 | 0 | 63 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 72 |
| 51 | 0 | 53 | | 0 | 22 | | 0 | 0 | 89 | | 0 | 0 | 72 | | 0 | 0 | 54 | | 0 | 0 | 35 | | |

^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 2018 by Bear Management Unit (BMU)^a and sex^b compared to harvests during 2013–2017 and record high and low harvests (since establishment of each BMU).

| BMU | 2018 | | | | 2017 | 2016 | 2015 | 2014 | 2013 | 5-year mean | Record low harvest (yr) | Record high harvest (yr) |
|-----------------------|-------|-------------------|------|------------------|-------|------------------|-----------------|-------------------|------|-------------|-------------------------|--------------------------|
| | M | (%M) | F | Total | | | | | | | | |
| Quota | | | | | | | | | | | | |
| 12 | 42 | (64) | 24 | 66 | 54 | 78 | 60 | 38 ^d | 62 | 58 | 38 (14) | 263 (01) |
| 13 | 84 | (71) | 35 | 119 | 100 | 147 | 72 ^e | 91 | 95 | 101 | 71 (88) | 258 (95) |
| 22 | 3 | (75) | 1 | 4 | 8 | 5 | 7 | 5 | 9 | 7 | 3 (03) | 41 (89) |
| 24 | 37 | (62) | 23 | 60 | 81 | 96 | 97 | 50 ^f | 76 | 80 | 50 (14) | 288 (95) |
| 25 | 149 | (67) | 74 | 223 | 212 | 287 | 227 | 168 ^g | 197 | 218 | 149 (96) | 584 (01) |
| 26 | [94] | [67] | [47] | [141] | [162] | [171] | 121 | 117 ^h | 121 | 138 | 117 (14) | 513 (95) |
| 27 | 70 | (70) | 35 | 105 | 120 | 131 | | | | | | |
| 28 | 24 | (67) | 12 | 36 | 42 | 40 | | | | | | |
| 31 | 125 | (59) | 86 | 211 | 262 | 312 | 307 | 221 | 197 | 260 | 157 (88) | 697 (01) |
| 41 | 36 | (62) | 22 | 58 | 61 | 57 | 35 ⁱ | 36 | 40 | 46 | 35 (15) | 201 (01) |
| 44 | [102] | [66] | [52] | [154] | [158] | [215] | 158 | 170 | 181 | 176 | 130 (11) | 643 (95) |
| 46 | 93 | (67) | 46 | 139 | 141 | 190 | | | | | | |
| 47 | 9 | (60) | 6 | 15 | 17 | 25 | | | | | | |
| 45 | 33 | (64) | 18 | 51 | 77 | 102 ^m | 55 | 54 | 48 | 67 | 32 (11) | 178 (01) |
| 51 | 131 | (71) ^q | 54 | 185 ^d | 372 | 463 | 302 | 291 | 349 | 355 | 247 (91) | 895 (01) |
| Total | 836 | (66) | 436 | 1272 | 1547 | 1933 | 1441 | 1241 ^j | 1375 | 1507 | 1192 (88) | 4288 (01) |
| No-Quota ^b | | | | | | | | | | | | |
| 11 | 193 | (67) | 94 | 287 | 179 | 291 | 195 | 77 ^k | 136 | 176 | 38 (87) | 351 (05) |
| 10 | 16 | (76) | 5 | 21 ⁿ | 18 | 15 | 11 | 8 | 9 | 12 | | 18 (17) |
| 52 | 127 | (68) | 59 | 186 ^p | 295 | 402 | 324 | 301 | 346 | 334 | 105 (02) | 405 (12) |
| 60 | 0 | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | |
| Total | 336 | (68) | 158 | 494 | 493 | 708 ⁿ | 530 | 386 | 491 | 522 | 198 (87) | 708 (16) |
| State | 1172 | (66) ^q | 594 | 1766 | 2040 | 2641 | 1971 | 1627 ^j | 1866 | 2029 | | 4956 (95) |

^aSome tooth envelopes were received from hunters who did not register their bear. These were added to the harvest tally:

2013:6; 2014:3; 2015:6; 2016:7; 2017:4; 2018:2

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

2013:11; 2014:4; 2015:12; 2016:9; 2017:2; 2018:4*

*None were authorized NQ license-holders hunting in quota zone.

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. The only hunter-harvested bear in this area was in 2017..

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.

^q Record high % males (or tie for record).

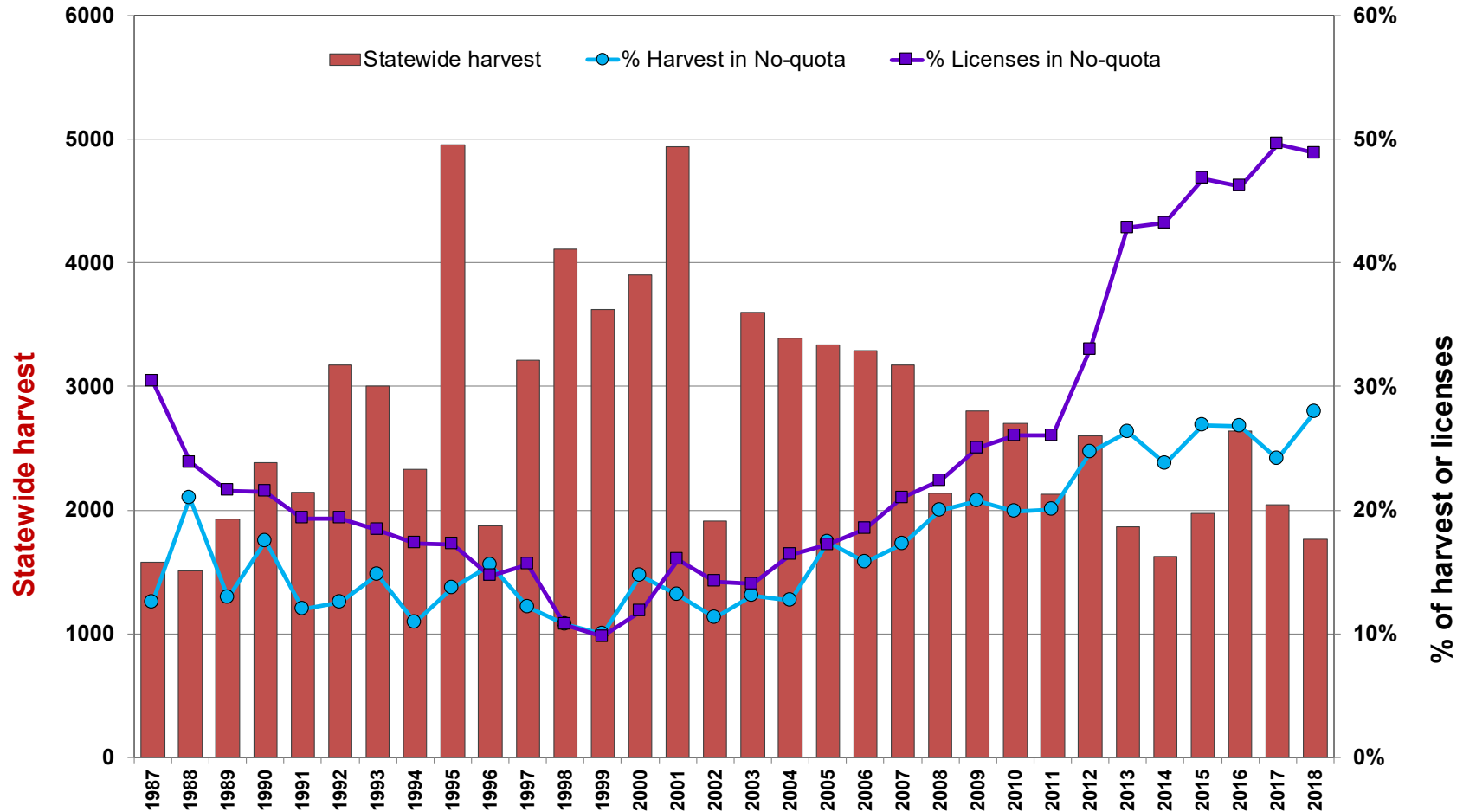


Figure 4. Trends in statewide bear harvest and proportions of harvest and licenses in the no-quota zones, 1987–2018.

Table 6. Bear hunting success (%) by BMU, measured as the registered harvest divided by the number of licenses sold ^a, 2013–2018

| BMU | Max success (yr) prior to 2018 | | Mean success 2013–2017 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 |
|-----------------|--------------------------------------|---------|------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 12 | 52 | (16) | 37 | 53 ^b | 43 | 52 ^c | 40 | 19 ^e | 30 |
| 13 | 59 | (95,16) | 41 | 53 ^c | 45 | 59 ^b | 29 | 36 | 38 |
| 22 | 21 | (92) | 13 | 8 | 16 | 10 | 13 | 10 | 18 ^c |
| 24 | 48 | (15,16) | 41 | 34 | 46 ^c | 48 ^b | 48 ^b | 25 | 38 |
| 25 | 57 | (16) | 46 | 56 ^c | 53 | 57 ^b | 45 | 34 | 39 |
| 26 | 59 | (95) | 42 | 49 | 57 ^c | 52 | 34 | 33 | 34 |
| 27 | | | | 47 | 53 | 52 | | | |
| 28 | | | | 60 | 70 ^d | 53 | | | |
| 31 | 56 | (15,16) | 48 | 42 | 52 | 56 ^b | 56 ^b | 40 | 36 |
| 141 | 50 | (95) | 34 | 46 | 49 ^c | 46 | 23 | 24 | 26 |
| 44 | 48 | (16) | 40 | 39 | 41 | 48 ^b | 35 | 38 | 40 |
| 46 | | | | 39 | 40 | 47 | | | |
| 47 | | | | 38 | 43 | 50 | | | |
| 45 | 44 | (17) | 37 | 29 | 44 ^b | 40 ^c | 36 | 36 | 32 |
| 51 | 46 | (16) | 38 | 21 | 41 ^c | 46 ^b | 33 | 32 | 39 |
| Quota | 50 | (16) | 41 | 38 | 46 ^c | 50 ^b | 39 | 33 | 37 |
| 11 ^f | | | 18 | 25 | 17 | 28 | 20 | 9 | 15 |
| 10 ^f | | | 9 | 9 | 8 | 9 | 7 | 7 | 12 |
| 52 ^f | | | 17 | 10 | 14 | 19 | 15 | 16 | 19 |
| No Quota | 32 | (95) | 18 | 15 | 15 | 21 | 16 | 13 | 17 |
| Statewide | 40 | (95) | 29 | 27 | 31 | 37 ^c | 28 | 25 | 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 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 |
|----------------|----------|-----------|-----------|-----------|----------|-----------|
| 11 | 34.6 | 29.8 | 30.3 | 29.3 | 28.5 | 30.0 |
| 10 | 7.4 | 6.6 | 4.9 | 4.4 | 4.1 | 2.6 |
| 52 | 55.3 | 59.2 | 61.2 | 63.9 | 64.7 | 62.6 |
| 60 (n) | 0.1 (4) | 0.1 (4) | 0.4 (12) | 0.2 (8) | 0.6 (17) | 0.4 (10) |
| Quota zone (n) | 2.6 (83) | 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, 1997–2018.

| 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 |
| 2018 | Sat | | 59 ^a | 75 | 91 |

^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.

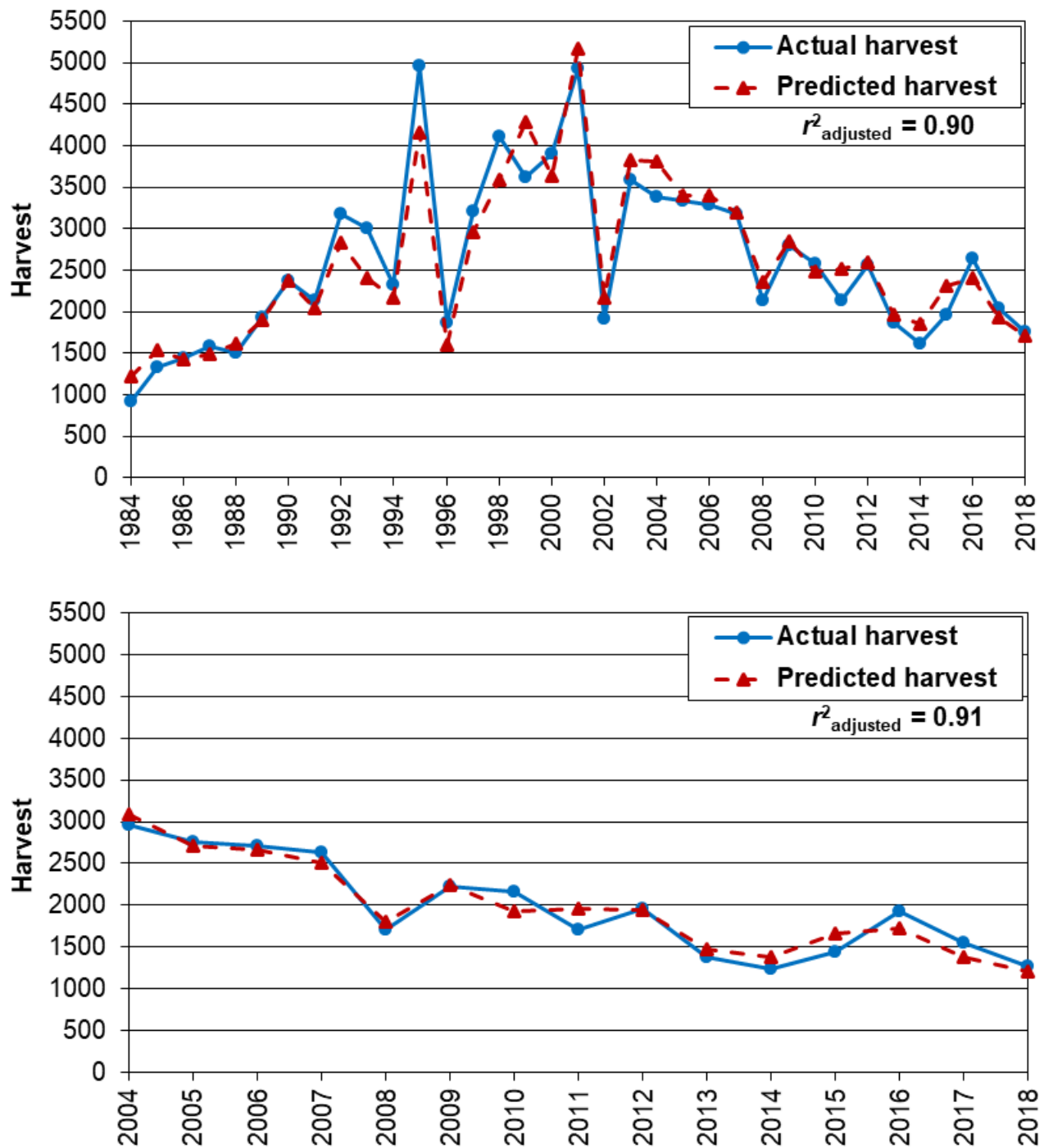


Figure 5. Number of bears harvested vs. number predicted to be harvested based on number of hunters and fall food production — top panel: statewide 1984–2018; bottom panel: quota zone only, most recent 15 years. Regression for the full dataset included an interaction term between food and hunters to better predict the drastic changes in harvest when fall foods were extremely high or low.

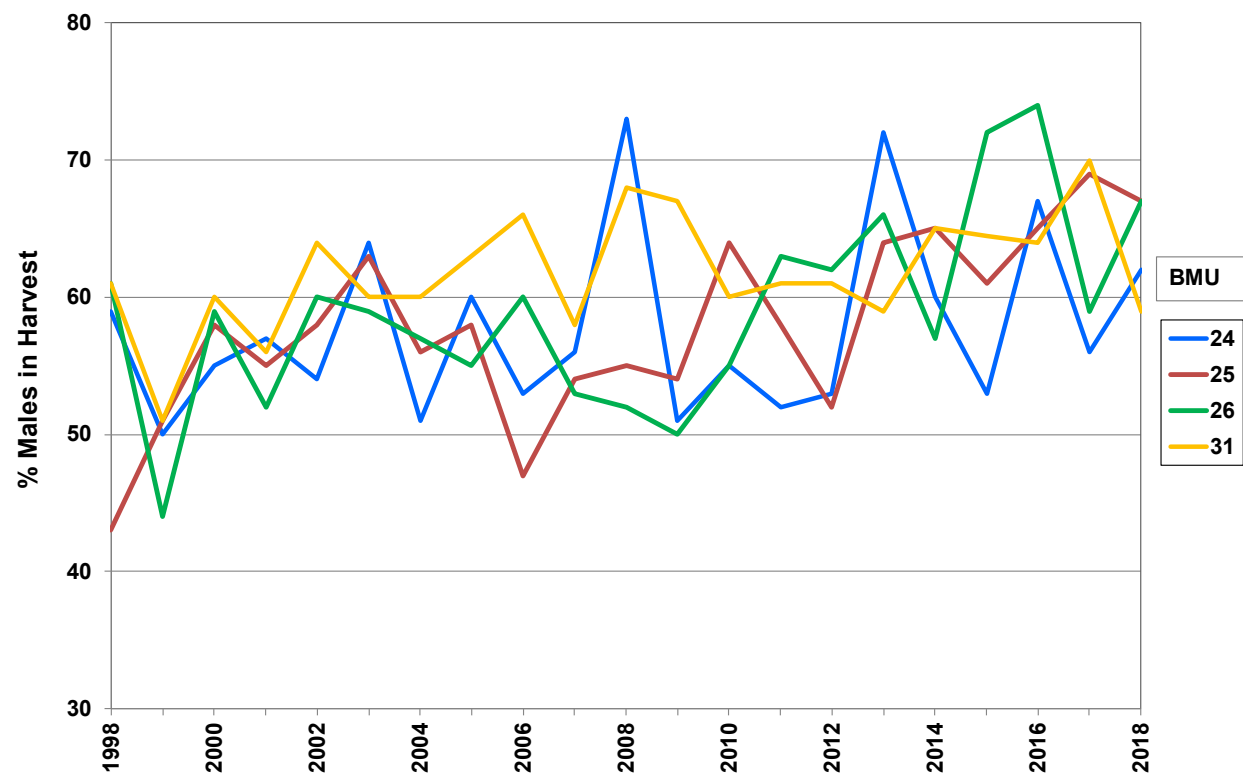
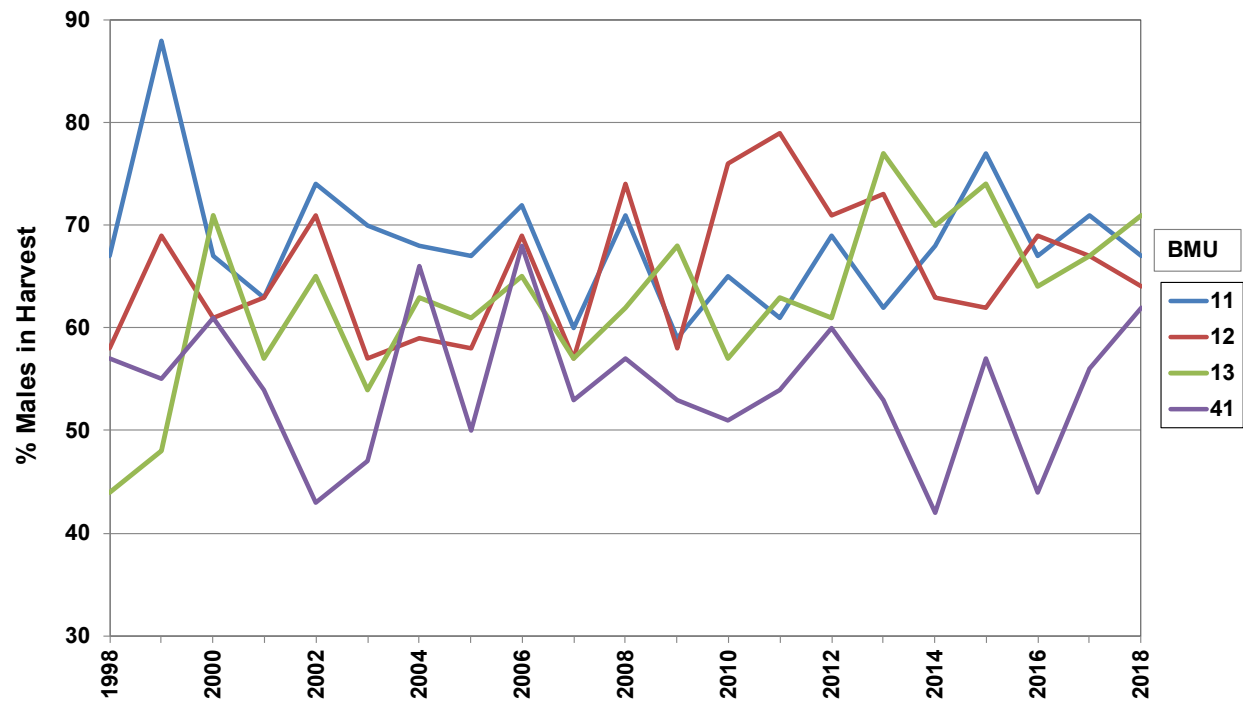


Figure 6. Sex ratios of harvested bears by BMU, 1998–2018. Thick lines show increasing trend across this period.

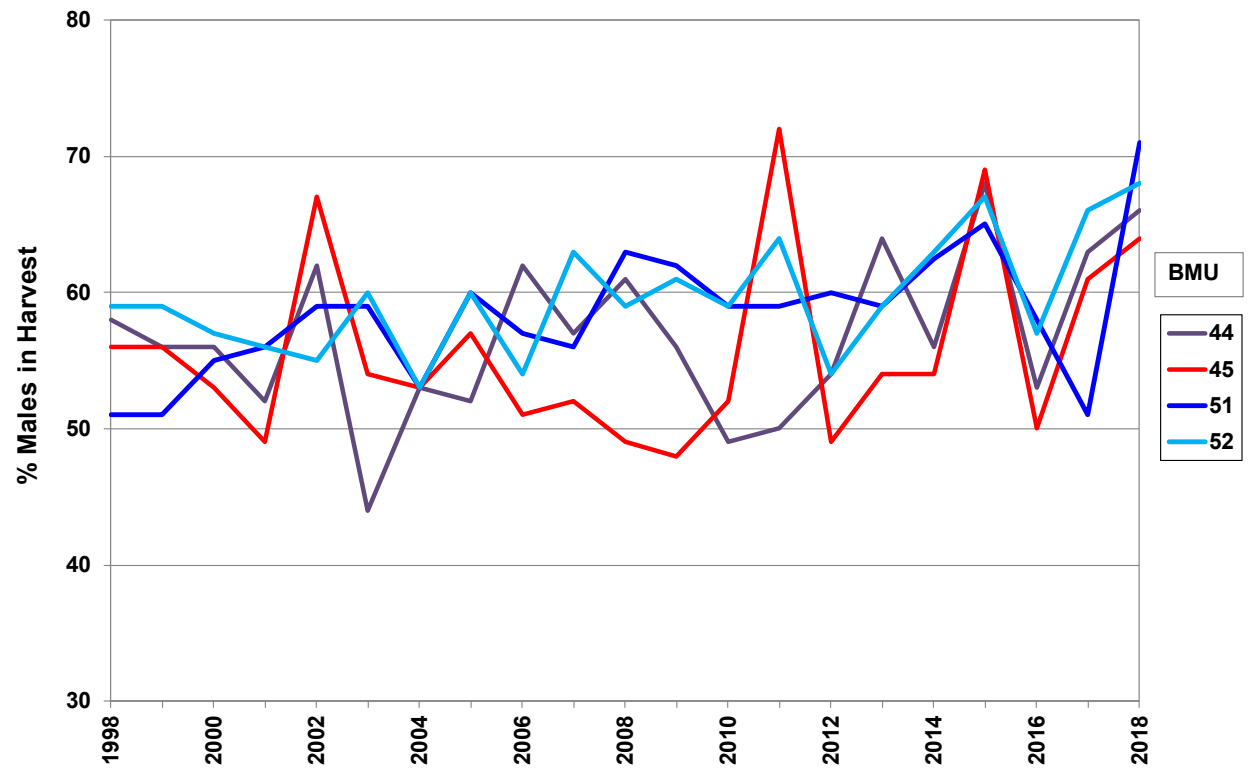


Figure 6 (continued)

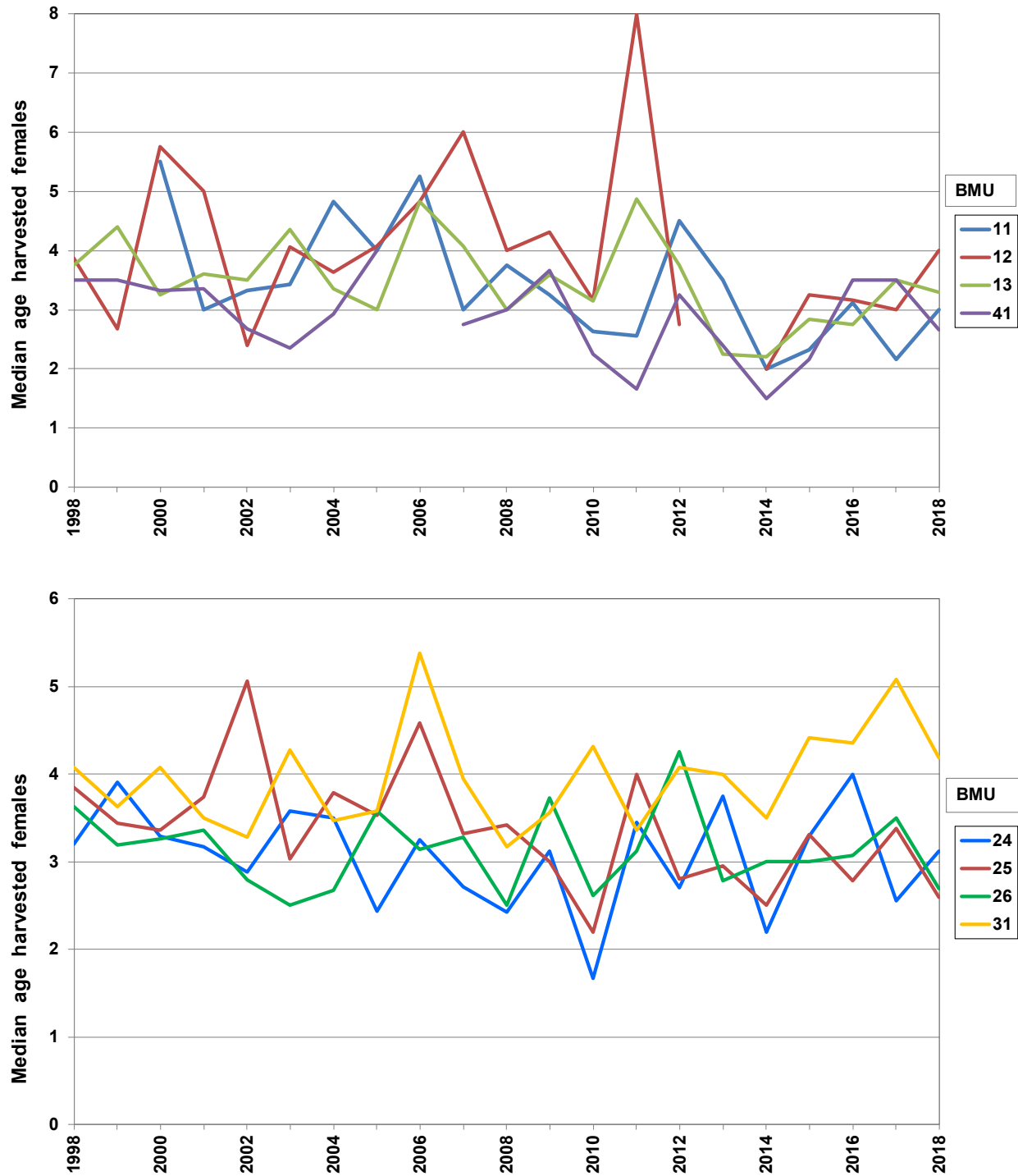


Figure 7. Median ages of harvested female bears by BMU, 1998–2018.

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

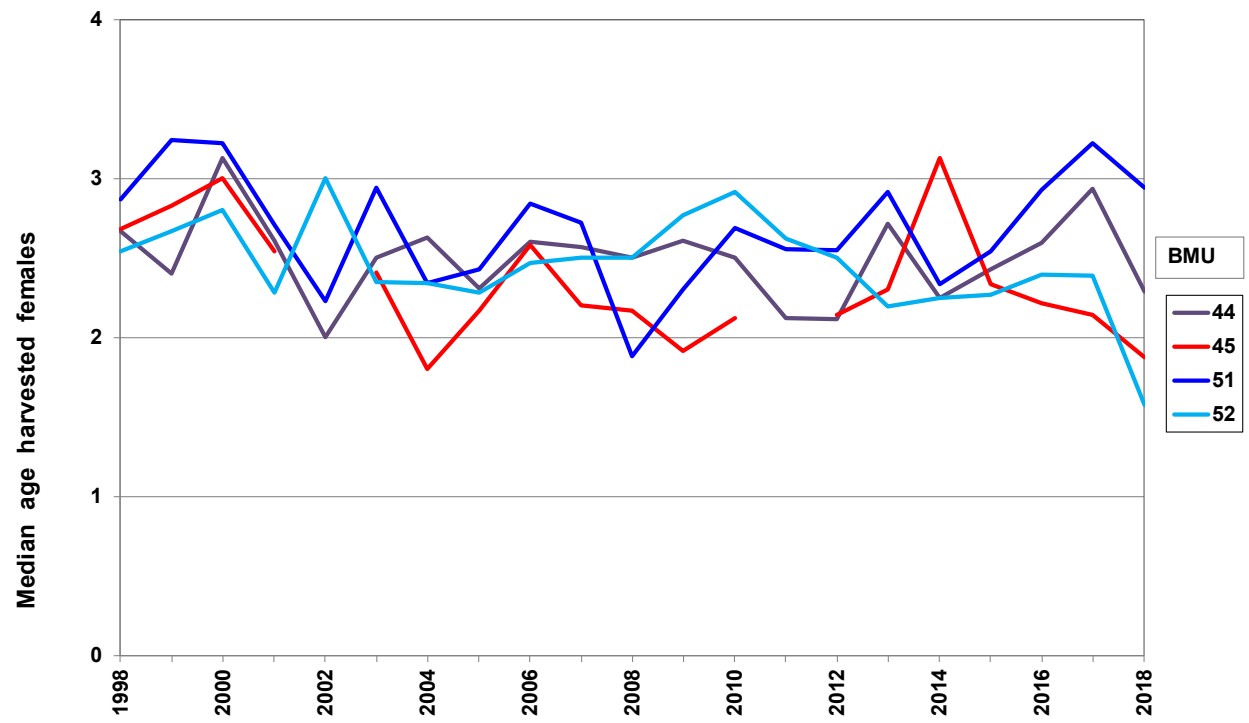


Figure 7. (continued)

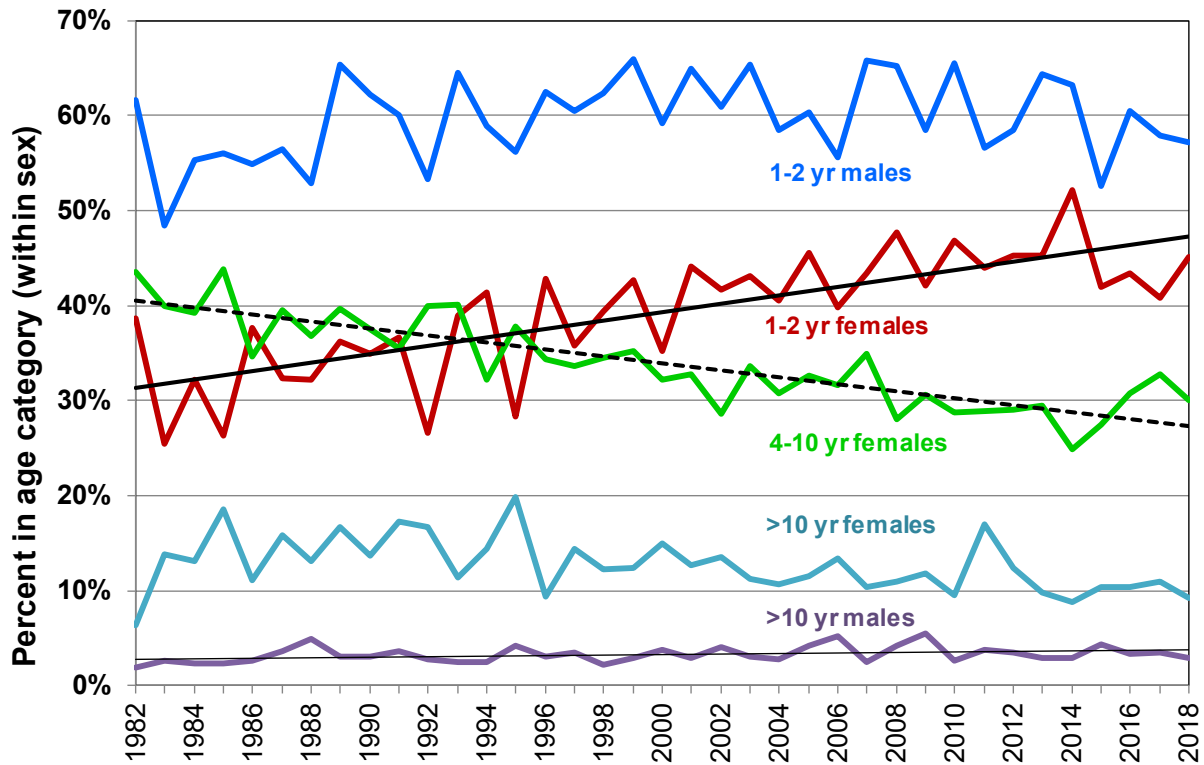


Figure 8. Statewide harvest structure: proportion of each sex in age category, 1982–2018. Trend lines are significant, but the last few years show a different trend.

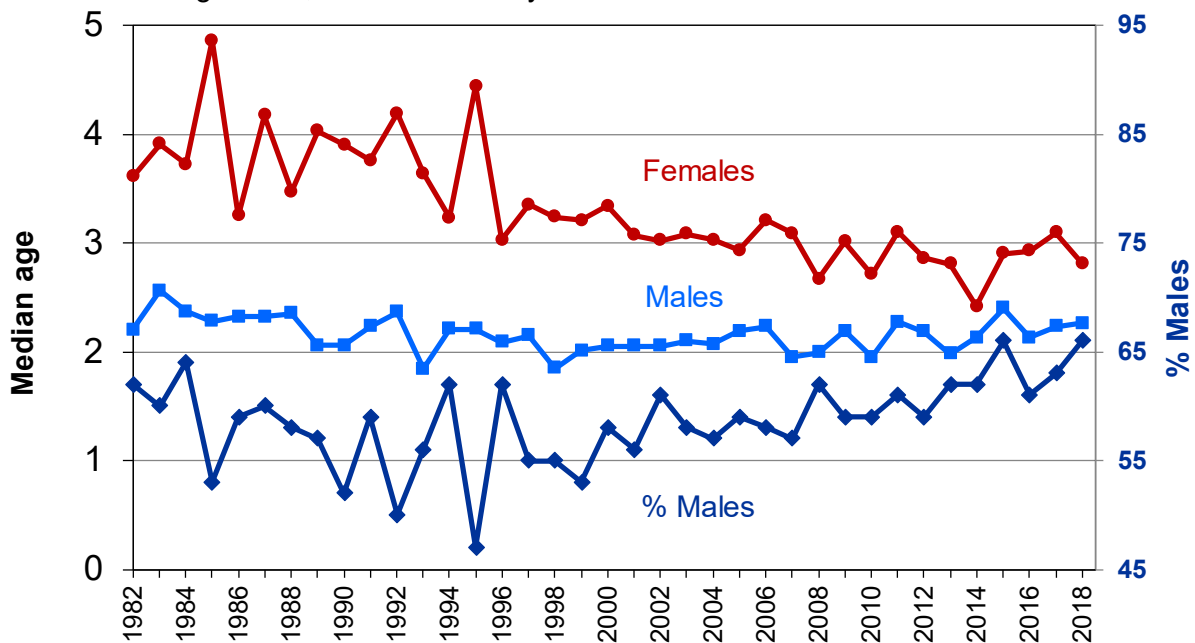


Figure 9. Statewide median ages (years) and sex ratio of harvested bears, 1982–2018.

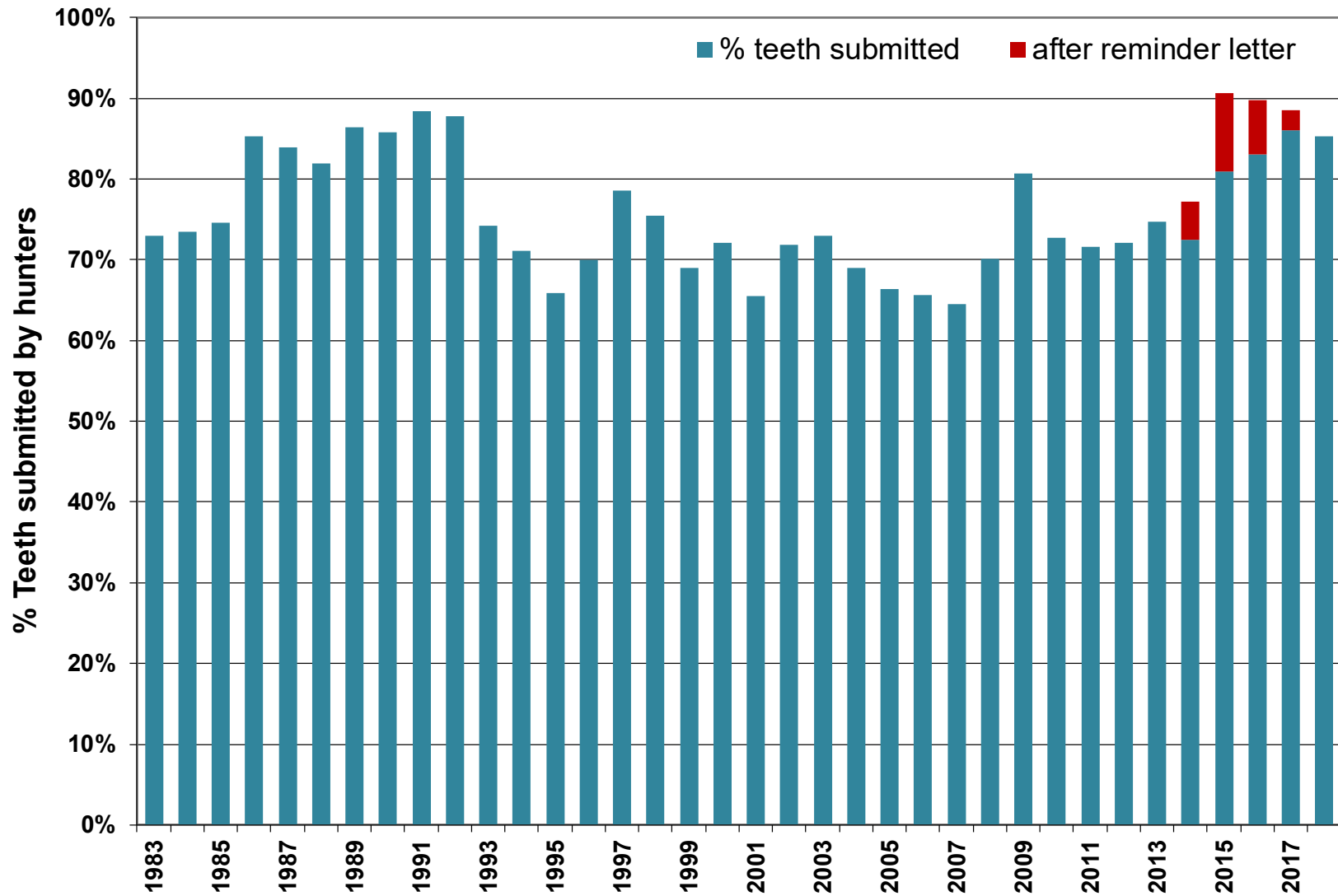


Figure 10. Percent of hunters submitting useable bear teeth for aging (vital for population monitoring, see Figs. 14–16). Cooperation levels exceeded 80% when registration stations were paid to extract teeth (this practice ended in 1993), and in recent years after a series of reminder letters (no letter was sent in 2018).

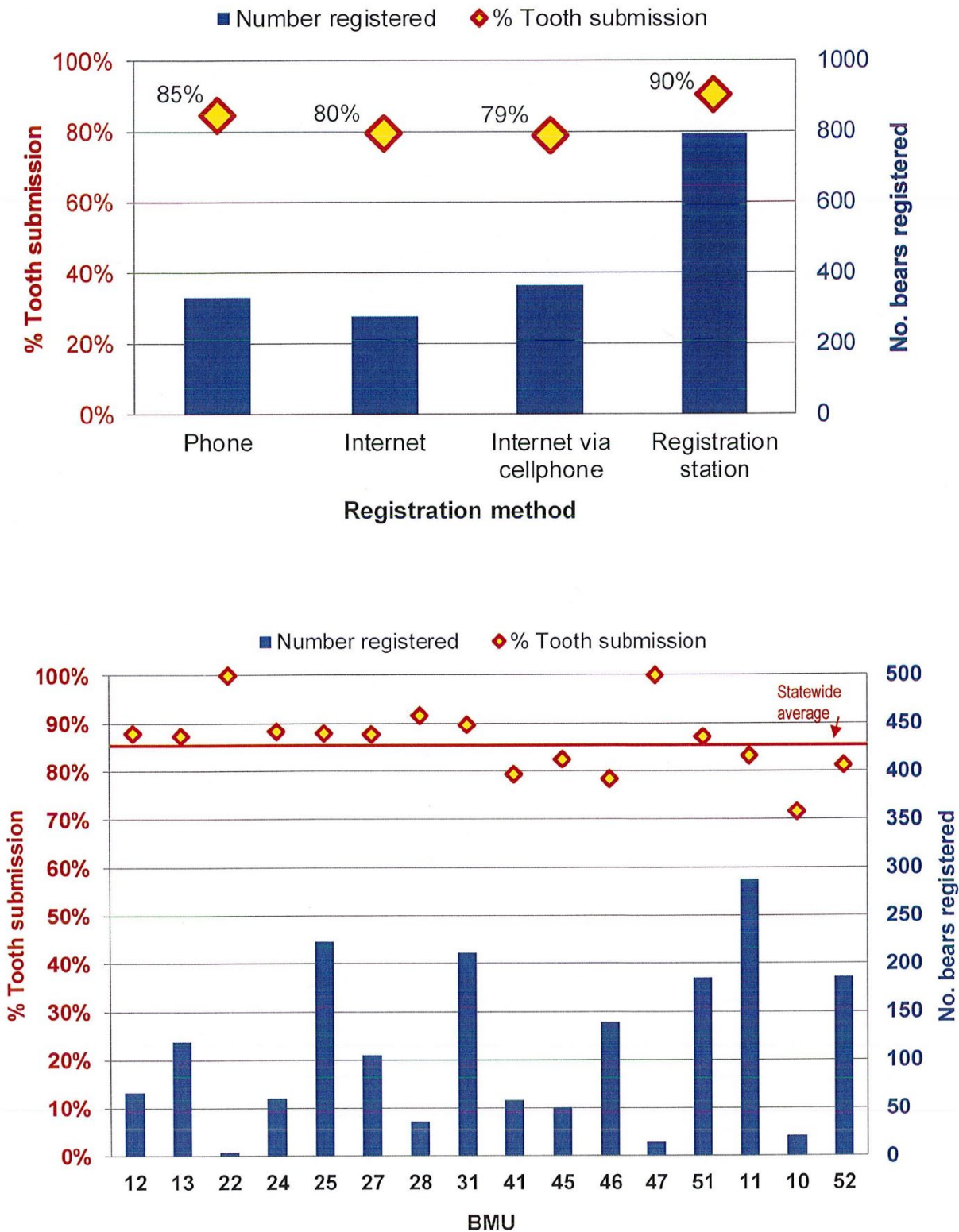


Figure 11. Percent of hunters who submitted a bear tooth in 2018 by method of registration (top panel) and by BMU (bottom panel). Beginning in 2013, hunters could register their bear by phone or internet, as well as in person at a station.

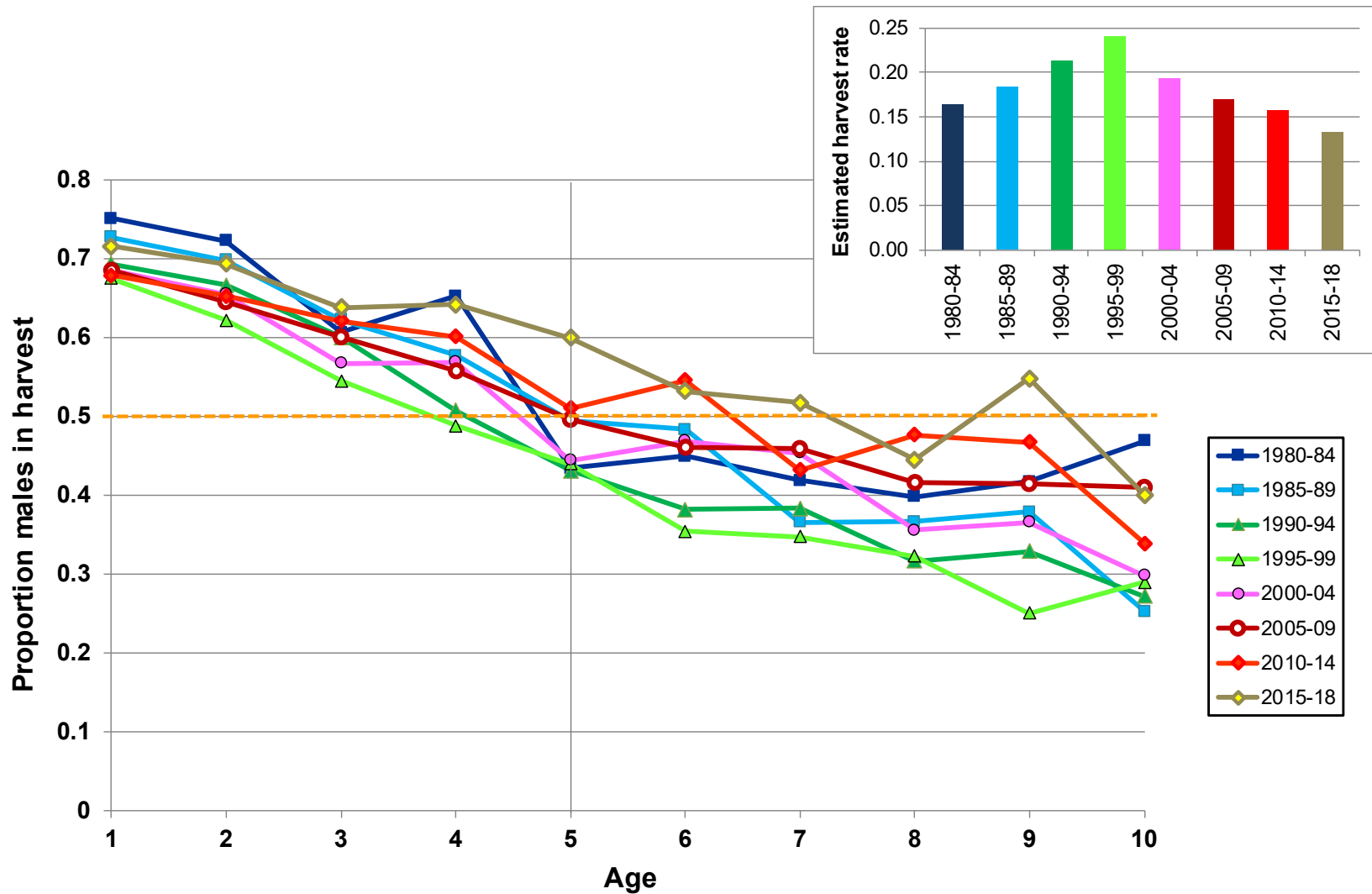


Figure 12. Trends in proportion of male bears in statewide harvest at each age, 1–10 years, grouped in 5-year time blocks, 1980–2018 (last interval is 4 years). Higher harvest rates result in steeper curves because males are reduced faster than females. Fitting a line to the data for each time block 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). Flatter curves in recent years indicate lower harvest rates.



2018 MINNESOTA DEER HARVEST REPORT

Barbara Keller, Big Game Program Leader, Division of Fish and Wildlife

INTRODUCTION

The white-tailed deer may be considered Minnesota's most popular wildlife species. In 2018, nearly 500,000 hunters participated in the season. 2018 was a generally liberal season designed to stabilize or reduce deer population growth across much of the central and southern portions of the state after they had mostly recovered from consecutive severe winters. Management of deer populations in the northcentral and northeastern regions remained conservative. During the archery, firearms and muzzleloader seasons, hunters registered 188,706 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. Beginning 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 2018 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 2018 deer harvest are presented in the following tables.

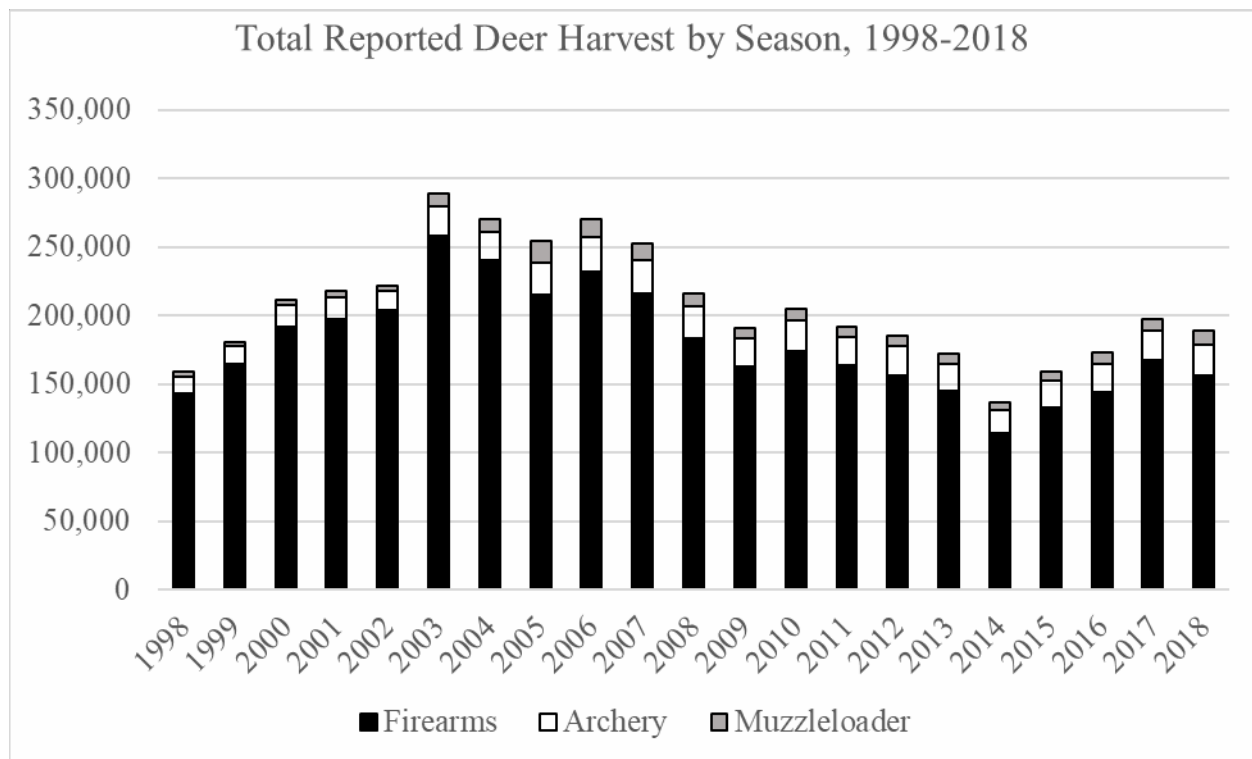


Figure 1. Total deer harvest by season, 1998-2018.

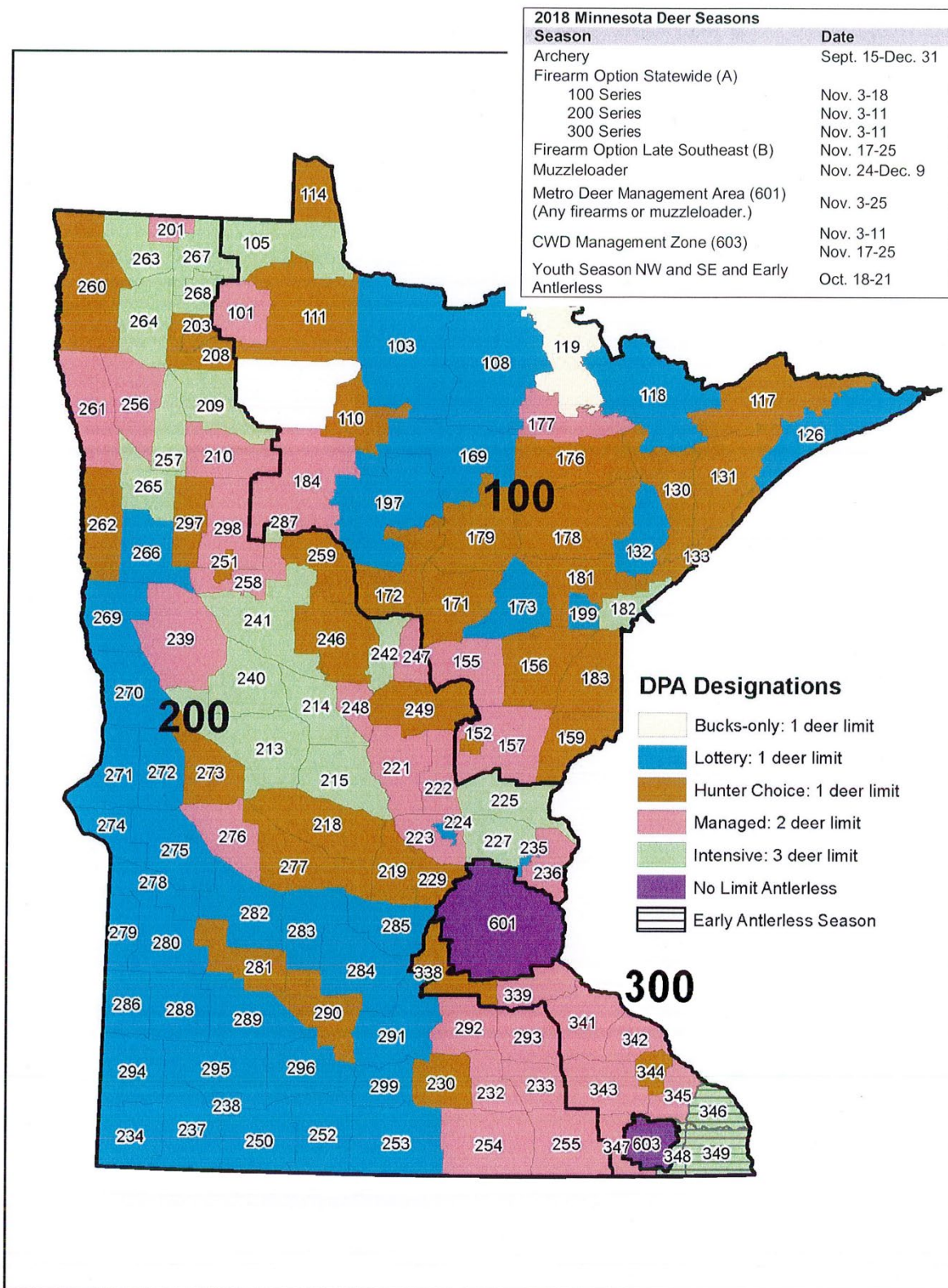


Figure 2. 2018 Deer Permit Areas, Seasons and Deer Management Designations.

Table 1. Statewide Firearms, Archery, and Muzzleloader Harvest, License Sales, and Success Rates, 2007-2018.

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| REGULAR FIREARMS | | | | | | | | | | | | |
| Resident License Sales | 285,286 | 376,006 | 377,077 | 379,866 | 382,668 | 391,822 | 391,967 | 374,314 | 371,612 | 372,645 | 368,407 | 360,873 |
| Non-Resident License Sales | 12,520 | 11,883 | 11,759 | 11,908 | 11,955 | 12,483 | 12,496 | 11,674 | 13,501 | 12,540 | 12,923 | 12,928 |
| Bonus Permit Sales | 145,522 | 190,156 | 140,920 | 143,763 | 142,049 | 89,750 | 97,402 | 29,642 | 31,065 | 44,365 | 93,309 | 117,640 |
| Multi-Zone Buck License Sales | 15,051 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Youth License Sales | 49,242 | 50,397 | 56,678 | 59,726 | 60,943 | 62,949 | 64,748 | 62,488 | 62,333 | 61,138 | 58,779 | 56,989 |
| All Season Deer License Sales | 76,385 | 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 | 584,006 | 628,442 | 586,434 | 595,263 | 597,615 | 557,004 | 566,613 | 478,118 | 478,511 | 490,688 | 533,418 | 548,430 |
| Registered Buck Harvest ¹ | 97,528 | 85,646 | 83,820 | 88,027 | 76,003 | 84,729 | 70,627 | 69,851 | 83,939 | 87,855 | 88,467 | 81,772 |
| Antlerless Permits Offered | 18,830 | 32,325 | 60,100 | 60,083 | 15,525 | 32,854 | 36,816 | 26,332 | 31,065 | 39,646 | 20,540 | 14,023 |
| Antlerless Permits Issued | 18,830 | 32,325 | 60,100 | 60,083 | 15,525 | 32,854 | 36,816 | 26,332 | 31,065 | 39,646 | 20,385 | 13,971 |
| Antlerless Permits App. | 31,403 | 31,403 | 90,882 | 86,783 | 21,071 | 67,308 | 68,811 | 96,580 | 95,656 | 97,056 | 45,001 | 29,302 |
| Registered AL Harvest ¹ | 118,860 | 98,147 | 78,525 | 86,077 | 88,197 | 71,140 | 67,885 | 44,038 | 48,758 | 52,338 | 79,033 | 74,203 |
| Registered Total Harvest ¹ | 216,388 | 183,793 | 162,345 | 174,104 | 164,200 | 155,869 | 145,449 | 113,889 | 132,697 | 144,470 | 167,500 | 155,975 |
| Registered % Successful ² | 41.7 | 34.8 | 33.8 | 35.9 | 32.9 | 32.0 | 29.7 | 25.3 | 28.9 | 31.2 | 33.7 | 31.7 |
| ARCHERY | | | | | | | | | | | | |
| Resident License Sales | 52,780 | 87,872 | 88,707 | 91,156 | 90,252 | 95,259 | 92,717 | 92,301 | 93,462 | 92,076 | 91,875 | 89,292 |
| Non-Resident License Sales | 1,509 | 1,509 | 1,610 | 1,638 | 1,718 | 1,814 | 1,952 | 1,946 | 2,032 | 2,062 | 2,016 | 2,020 |
| Youth Archery Sales | 7,663 | 9,005 | 9,157 | 9,577 | 10,306 | 11,276 | 12,212 | 11,965 | 11,905 | 10,846 | 9,961 | 9,052 |
| Total License Sales | 61,952 | 99,033 | 99,474 | 102,371 | 102,276 | 108,349 | 106,881 | 106,212 | 107,399 | 104,984 | 103,852 | 100,364 |
| Total Archery Harvest | 24,161 | 22,632 | 20,629 | 22,057 | 20,444 | 21,605 | 19,388 | 17,119 | 20,074 | 20,360 | 21,058 | 22,665 |
| Registered % Successful ² | 24.3 | 18.5 | 17.5 | 17.8 | 17.0 | 18.8 | 14.5 | 15.3 | 16.5 | 18.5 | 18.7 | 20.3 |
| MUZZLELOADER | | | | | | | | | | | | |
| Total Muzzleloader License Sales | 9,867 | 64,673 | 63,282 | 55,640 | 59,384 | 58,363 | 51,092 | 43,946 | 50,176 | 53,097 | 51,961 | 48,589 |
| Estimated All-Season Hunters | 26,813 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total Muzzleloader Harvest | 12,138 | 9,572 | 7,929 | 9,023 | 7,416 | 7,779 | 7,045 | 5,847 | 6,572 | 8,383 | 9,210 | 10,066 |
| Registered % Successful ² | 28.2 | 13.4 | 11.3 | 14.4 | 11.6 | 12.4 | 12.7 | 12.7 | 12.0 | 15.2 | 16.6 | 18.7 |
| Antlerless Permits Offered | | | | 5,792 | 1,997 | 1,626 | 2,144 | 1,593 | 1,434 | 1,352 | 935 | 874 |
| Antlerless Permits App. | | | | 7,260 | 2,615 | 3,743 | 3,544 | 4,588 | 3,393 | 2,930 | 1,902 | 1,592 |
| TOTAL Registered Harvest | 260,434 | 221,837 | 194,186 | 207,313 | 192,331 | 186,634 | 172,781 | 139,442 | 159,343 | 173,213 | 197,768 | 188,706 |

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, 2018.

| Season | Total Hunters | Buck Harvest | Antlerless Harvest | Total Harvest | Successful Hunters² | Overall Success |
|-------------------------------------|----------------------|---------------------|---------------------------|----------------------|---------------------------------------|------------------------|
| Archery | 96,936 | 9,009 | 13,656 | 22,665 | 19,661 | 20.3% |
| 100 Series A | 157,401 | 28,185 | 22,018 | 50,203 | 48,077 | 30.5% |
| 200 Series A | 230,562 | 45,962 | 41,847 | 7,809 | 79,289 | 34.4% |
| 300 Series A ¹ | 23,422 | 4,594 | 4,319 | 8,913 | 7,907 | 33.8% |
| 300 Series B ¹ | 10,033 | 1,221 | 3,189 | 4,410 | 3,746 | 37.3% |
| Metro Firearms (601) | 2,473 | 591 | 437 | 1,028 | 914 | 37.0% |
| Muzzleloader | 47,472 | 3,784 | 6,033 | 9,817 | 9,038 | 19.0% |
| Youth | N/A | 764 | 577 | 1,341 | 1,331 | N/A |
| Early Antlerless | 2,258 | 0 | 737 | 737 | 601 | 26.6% |
| Special Firearms Hunts ³ | 3,958 | 303 | 745 | 1,048 | 880 | 22.2% |
| Late CWD ⁴ | N/A | 181 | 554 | 735 | N/A | N/A |
| Total | 474,908 | 94,594 | 94,112 | 188,706 | 166,462 | 35.1% |

¹Includes deer harvested in area 603

²Number of individuals who harvested at least one deer

³Includes deer harvested from both special firearm and special muzzleloader hunt

⁴Harvest was underreported for the late CWD season, based on samples collected a least 1,003 deer were harvested.

Table 3. Firearms Deer Harvest by Sex and Age Class, 2018.

Includes regular, youth, and antlerless, 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 | 1,892 | 3.8 | 424 | 38 | 239 | 47 | 748 | 0.86 | 0.65 | 1.51 |
| 103 | 1,820 | 2,963 | 1.6 | 716 | 27 | 236 | 17 | 996 | 0.39 | 0.15 | 0.55 |
| 105 | 740 | 4,234 | 5.7 | 991 | 145 | 856 | 129 | 2,121 | 1.34 | 1.53 | 2.87 |
| 108 | 1,651 | 4,272 | 2.6 | 909 | 18 | 144 | 14 | 1,085 | 0.55 | 0.11 | 0.66 |
| 110 | 529 | 3,758 | 7.1 | 855 | 86 | 472 | 72 | 1,485 | 1.62 | 1.19 | 2.81 |
| 111 | 1,438 | 2,063 | 1.4 | 409 | 29 | 141 | 13 | 592 | 0.28 | 0.13 | 0.41 |
| 114 | 116 | 112 | 1.0 | 22 | 1 | 9 | 0 | 32 | 0.19 | 0.09 | 0.28 |
| 117 | 927 | 140 | 0.2 | 15 | 2 | 6 | 0 | 23 | 0.02 | 0.01 | 0.02 |
| 118 | 1,220 | 2,976 | 2.4 | 675 | 12 | 99 | 10 | 796 | 0.55 | 0.10 | 0.65 |
| 119 | 770 | 2,050 | 2.7 | 447 | 1 | 9 | 0 | 457 | 0.58 | 0.01 | 0.59 |
| 126 | 942 | 1,492 | 1.6 | 248 | 5 | 39 | 0 | 292 | 0.26 | 0.05 | 0.31 |
| 130 | 746 | 1,944 | 2.6 | 259 | 17 | 130 | 14 | 420 | 0.35 | 0.22 | 0.56 |
| 131 | 899 | 1,019 | 1.1 | 82 | 6 | 39 | 6 | 133 | 0.09 | 0.06 | 0.15 |
| 132 | 482 | 2,196 | 4.6 | 297 | 10 | 71 | 12 | 390 | 0.62 | 0.19 | 0.81 |
| 133 | 352 | 2,108 | 6.0 | 366 | 25 | 174 | 19 | 584 | 1.04 | 0.62 | 1.66 |
| 152 | 61 | 598 | 9.8 | 69 | 15 | 26 | 8 | 118 | 1.13 | 0.80 | 1.93 |
| 155 | 593 | 6,910 | 11.7 | 1,112 | 244 | 1,046 | 202 | 2,604 | 1.87 | 2.52 | 4.39 |
| 156 | 825 | 8,393 | 10.2 | 1,316 | 148 | 833 | 108 | 2,405 | 1.60 | 1.32 | 2.92 |
| 157 | 888 | 12,856 | 14.5 | 2,350 | 419 | 1,546 | 280 | 4,595 | 2.65 | 2.53 | 5.18 |
| 159 | 571 | 6,386 | 11.2 | 1,121 | 141 | 638 | 95 | 1,995 | 1.96 | 1.53 | 3.49 |
| 169 | 1,124 | 8,032 | 7.1 | 1,475 | 57 | 382 | 38 | 1,952 | 1.31 | 0.42 | 1.74 |
| 171 | 701 | 6,048 | 8.6 | 872 | 118 | 588 | 89 | 1,667 | 1.24 | 1.13 | 2.38 |
| 172 | 687 | 9,808 | 14.3 | 1,490 | 295 | 1,196 | 198 | 3,179 | 2.17 | 2.46 | 4.63 |
| 173 | 584 | 4,507 | 7.7 | 620 | 67 | 357 | 44 | 1,088 | 1.06 | 0.80 | 1.86 |
| 176 | 921 | 5,659 | 6.1 | 1,021 | 69 | 571 | 48 | 1,709 | 1.11 | 0.75 | 1.86 |
| 177 | 480 | 3,971 | 8.3 | 739 | 92 | 566 | 62 | 1,459 | 1.54 | 1.50 | 3.04 |
| 178 | 1,195 | 8,691 | 7.3 | 1,497 | 117 | 1,046 | 117 | 2,777 | 1.25 | 1.07 | 2.32 |
| 179 | 862 | 8,769 | 10.2 | 1,531 | 239 | 1,036 | 153 | 2,959 | 1.78 | 1.66 | 3.43 |
| 181 | 629 | 5,240 | 8.3 | 1,002 | 89 | 518 | 60 | 1,669 | 1.59 | 1.06 | 2.65 |
| 182 | 278 | 2,292 | 8.2 | 390 | 66 | 251 | 46 | 753 | 1.40 | 1.31 | 2.71 |
| 183 | 663 | 7,052 | 10.6 | 1,136 | 144 | 876 | 115 | 2,271 | 1.71 | 1.71 | 3.42 |
| 184 | 1,229 | 13,465 | 11.0 | 2,714 | 474 | 2,056 | 391 | 5,635 | 2.21 | 2.38 | 4.59 |
| 197 | 955 | 5,000 | 5.2 | 1,037 | 41 | 206 | 25 | 1,309 | 1.09 | 0.28 | 1.37 |
| 199 | 153 | 467 | 3.1 | 109 | 7 | 27 | 1 | 144 | 0.71 | 0.23 | 0.94 |
| 201 | 161 | 480 | 3.0 | 129 | 16 | 79 | 6 | 230 | 0.80 | 0.63 | 1.43 |
| 203 | 118 | 240 | 2.0 | 68 | 5 | 22 | 3 | 98 | 0.58 | 0.25 | 0.83 |

| 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 |
|-------------|----------------------|------------------|-------------------|--------------------|-------------------|----------------------|---------------------|---------------|-----------------|----------------------|-----------------|
| 208 | 379 | 1,031 | 2.7 | 256 | 22 | 110 | 11 | 399 | 0.68 | 0.38 | 1.05 |
| 209 | 640 | 2,562 | 4.0 | 579 | 90 | 393 | 83 | 1,454 | 0.91 | 0.89 | 1.79 |
| 210 | 615 | 3,874 | 6.3 | 827 | 137 | 535 | 100 | 1,599 | 1.34 | 1.25 | 2.60 |
| 213 | 1,057 | 10,030 | 9.5 | 2317 | 563 | 1514 | 432 | 4,826 | 2.19 | 2.37 | 4.57 |
| 214 | 554 | 7,099 | 12.8 | 1698 | 461 | 1297 | 379 | 3,835 | 3.06 | 3.86 | 6.92 |
| 215 | 701 | 7,006 | 10.0 | 1466 | 384 | 921 | 301 | 3,072 | 2.09 | 2.29 | 4.38 |
| 218 | 884 | 5,540 | 6.3 | 1034 | 150 | 518 | 132 | 1,834 | 1.17 | 0.91 | 2.07 |
| 219 | 391 | 3,270 | 8.4 | 592 | 83 | 274 | 79 | 1,028 | 1.51 | 1.11 | 2.63 |
| 221 | 642 | 5,750 | 9.0 | 1387 | 317 | 876 | 237 | 2,817 | 2.16 | 2.23 | 4.39 |
| 222 | 413 | 4,976 | 12.0 | 982 | 200 | 623 | 151 | 1,956 | 2.38 | 2.36 | 4.73 |
| 223 | 376 | 3,272 | 8.7 | 638 | 106 | 396 | 88 | 1,228 | 1.70 | 1.57 | 3.27 |
| 224 | 47 | 595 | 12.6 | 101 | 11 | 45 | 9 | 166 | 2.14 | 1.37 | 3.51 |
| 225 | 618 | 7,142 | 11.6 | 1612 | 300 | 910 | 218 | 3,040 | 2.61 | 2.31 | 4.92 |
| 227 | 472 | 4,709 | 10.0 | 989 | 182 | 528 | 144 | 1,843 | 2.10 | 1.81 | 3.91 |
| 229 | 284 | 1,424 | 5.0 | 286 | 34 | 92 | 21 | 433 | 1.01 | 0.52 | 1.52 |
| 230 | 452 | 1,357 | 3.0 | 192 | 45 | 128 | 19 | 384 | 0.42 | 0.42 | 0.85 |
| 232 | 377 | 1,292 | 3.4 | 239 | 32 | 140 | 40 | 451 | 0.63 | 0.56 | 1.20 |
| 233 | 385 | 898 | 2.3 | 189 | 31 | 91 | 17 | 328 | 0.49 | 0.36 | 0.85 |
| 234 | 636 | 745 | 1.2 | 158 | 11 | 34 | 7 | 210 | 0.25 | 0.08 | 0.33 |
| 235 | 34 | 349 | 10.4 | 52 | 5 | 10 | 1 | 68 | 1.54 | 0.47 | 2.02 |
| 236 | 370 | 2,942 | 8.0 | 632 | 82 | 281 | 58 | 1,053 | 1.71 | 1.14 | 2.85 |
| 237 | 728 | 1,056 | 1.4 | 208 | 6 | 36 | 5 | 255 | 0.29 | 0.06 | 0.35 |
| 238 | 95 | 276 | 2.9 | 69 | 2 | 23 | 3 | 97 | 0.73 | 0.29 | 1.02 |
| 239 | 919 | 7,582 | 8.3 | 1733 | 314 | 979 | 236 | 3,262 | 1.89 | 1.66 | 3.55 |
| 240 | 643 | 7,656 | 11.9 | 1882 | 417 | 1355 | 345 | 3,999 | 2.93 | 3.29 | 6.22 |
| 241 | 996 | 13,938 | 14.0 | 3187 | 751 | 2574 | 652 | 7,164 | 3.20 | 3.99 | 7.19 |
| 242 | 214 | 2,812 | 13.1 | 596 | 138 | 491 | 101 | 1,326 | 2.79 | 3.41 | 6.20 |
| 246 | 840 | 10,624 | 12.6 | 1812 | 320 | 1249 | 251 | 3,632 | 2.16 | 2.17 | 4.32 |
| 247 | 228 | 3,576 | 15.7 | 671 | 152 | 539 | 111 | 1,473 | 2.94 | 3.51 | 6.45 |
| 248 | 214 | 1,980 | 9.2 | 398 | 95 | 261 | 67 | 821 | 1.86 | 1.97 | 3.83 |
| 249 | 502 | 5,637 | 11.2 | 1121 | 256 | 757 | 177 | 2,311 | 2.23 | 2.37 | 4.61 |
| 250 | 713 | 1,363 | 1.9 | 278 | 15 | 67 | 8 | 368 | 0.39 | 0.13 | 0.52 |
| 251 | 55 | 420 | 7.6 | 63 | 20 | 47 | 12 | 142 | 1.15 | 1.44 | 2.58 |
| 252 | 715 | 1,297 | 1.8 | 265 | 17 | 95 | 16 | 393 | 0.37 | 0.18 | 0.55 |
| 253 | 974 | 1,761 | 1.8 | 328 | 12 | 78 | 18 | 436 | 0.34 | 0.11 | 0.45 |
| 254 | 929 | 2,445 | 2.6 | 434 | 66 | 288 | 33 | 821 | 0.47 | 0.42 | 0.88 |
| 255 | 774 | 1,809 | 2.3 | 418 | 65 | 178 | 39 | 700 | 0.54 | 0.36 | 0.90 |
| 256 | 654 | 2,228 | 3.4 | 500 | 73 | 362 | 81 | 1,016 | 0.76 | 0.79 | 1.55 |
| 257 | 412 | 1,868 | 4.5 | 419 | 73 | 355 | 71 | 918 | 1.02 | 1.21 | 2.23 |
| 258 | 343 | 4,202 | 12.3 | 837 | 203 | 682 | 153 | 1,875 | 2.44 | 3.03 | 5.47 |

| 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 |
|-------------|----------------------|------------------|-------------------|--------------------|-------------------|----------------------|---------------------|---------------|-----------------|----------------------|-----------------|
| 259 | 490 | 6,801 | 13.9 | 1018 | 212 | 752 | 140 | 2,122 | 2.08 | 2.25 | 4.33 |
| 260 | 1,249 | 1,713 | 1.4 | 403 | 31 | 165 | 14 | 613 | 0.32 | 0.17 | 0.49 |
| 261 | 795 | 794 | 1.0 | 181 | 17 | 122 | 14 | 334 | 0.23 | 0.19 | 0.42 |
| 262 | 677 | 903 | 1.3 | 177 | 13 | 79 | 12 | 281 | 0.26 | 0.15 | 0.41 |
| 263 | 512 | 1,895 | 3.7 | 452 | 56 | 340 | 43 | 891 | 0.88 | 0.86 | 1.74 |
| 264 | 669 | 3,522 | 5.3 | 760 | 91 | 566 | 96 | 1,513 | 1.14 | 1.13 | 2.26 |
| 265 | 494 | 2,114 | 4.3 | 478 | 108 | 437 | 98 | 1,121 | 0.97 | 1.30 | 2.27 |
| 266 | 617 | 1,918 | 3.1 | 400 | 32 | 119 | 18 | 569 | 0.65 | 0.27 | 0.92 |
| 267 | 472 | 1,253 | 2.7 | 317 | 42 | 253 | 35 | 647 | 0.67 | 0.70 | 1.37 |
| 268 | 228 | 1,326 | 5.8 | 302 | 29 | 255 | 36 | 622 | 1.32 | 1.40 | 2.72 |
| 269 | 650 | 1,268 | 2.0 | 254 | 17 | 80 | 11 | 362 | 0.39 | 0.17 | 0.56 |
| 270 | 748 | 978 | 1.3 | 187 | 7 | 49 | 7 | 250 | 0.25 | 0.08 | 0.33 |
| 271 | 632 | 1,062 | 1.7 | 233 | 14 | 71 | 11 | 329 | 0.37 | 0.15 | 0.52 |
| 272 | 531 | 1,063 | 2.0 | 176 | 12 | 42 | 8 | 238 | 0.33 | 0.12 | 0.45 |
| 273 | 571 | 2,577 | 4.5 | 427 | 48 | 205 | 37 | 717 | 0.75 | 0.51 | 1.25 |
| 274 | 354 | 1,094 | 3.1 | 165 | 15 | 59 | 19 | 258 | 0.47 | 0.26 | 0.73 |
| 275 | 764 | 1,829 | 2.4 | 300 | 14 | 89 | 9 | 412 | 0.39 | 0.15 | 0.54 |
| 276 | 542 | 3,129 | 5.8 | 554 | 73 | 331 | 58 | 1,016 | 1.02 | 0.85 | 1.87 |
| 277 | 812 | 6,624 | 8.2 | 1307 | 175 | 628 | 124 | 2,234 | 1.61 | 1.14 | 2.75 |
| 278 | 402 | 1,751 | 4.4 | 349 | 17 | 76 | 12 | 454 | 0.87 | 0.26 | 1.13 |
| 279 | 344 | 1,124 | 3.3 | 144 | 11 | 53 | 12 | 220 | 0.42 | 0.22 | 0.64 |
| 280 | 675 | 1,286 | 1.9 | 180 | 8 | 34 | 11 | 233 | 0.27 | 0.08 | 0.35 |
| 281 | 575 | 2,459 | 4.3 | 425 | 43 | 206 | 18 | 692 | 0.74 | 0.46 | 1.20 |
| 282 | 778 | 609 | 0.8 | 97 | 1 | 17 | 3 | 118 | 0.12 | 0.03 | 0.15 |
| 283 | 613 | 1,379 | 2.2 | 243 | 12 | 50 | 8 | 313 | 0.40 | 0.11 | 0.51 |
| 284 | 838 | 1,809 | 2.2 | 272 | 19 | 93 | 14 | 398 | 0.32 | 0.15 | 0.48 |
| 285 | 549 | 2,142 | 3.9 | 334 | 39 | 154 | 18 | 545 | 0.61 | 0.38 | 0.99 |
| 286 | 446 | 1,367 | 3.1 | 195 | 20 | 97 | 14 | 326 | 0.44 | 0.29 | 0.73 |
| 287 | 46 | 439 | 9.6 | 54 | 19 | 51 | 9 | 133 | 1.18 | 1.73 | 2.91 |
| 288 | 625 | 1,837 | 2.9 | 279 | 23 | 142 | 18 | 462 | 0.45 | 0.29 | 0.74 |
| 289 | 815 | 1,120 | 1.4 | 146 | 9 | 77 | 12 | 244 | 0.18 | 0.12 | 0.30 |
| 290 | 662 | 2,374 | 3.6 | 380 | 46 | 277 | 36 | 739 | 0.57 | 0.54 | 1.12 |
| 291 | 800 | 3,366 | 4.2 | 596 | 36 | 203 | 21 | 856 | 0.74 | 0.32 | 1.07 |
| 292 | 479 | 2,992 | 6.2 | 455 | 83 | 293 | 44 | 875 | 0.95 | 0.88 | 1.83 |
| 293 | 511 | 2,477 | 4.8 | 490 | 104 | 303 | 72 | 969 | 0.96 | 0.94 | 1.89 |
| 294 | 686 | 1,286 | 1.9 | 253 | 16 | 147 | 20 | 436 | 0.37 | 0.27 | 0.64 |
| 295 | 839 | 2,162 | 2.6 | 391 | 20 | 114 | 16 | 541 | 0.47 | 0.18 | 0.64 |
| 296 | 667 | 1,578 | 2.4 | 241 | 20 | 77 | 5 | 343 | 0.36 | 0.15 | 0.51 |
| 297 | 438 | 940 | 2.1 | 179 | 25 | 75 | 16 | 295 | 0.41 | 0.26 | 0.67 |
| 298 | 618 | 3,587 | 5.8 | 619 | 95 | 433 | 82 | 1,229 | 1.00 | 0.99 | 1.99 |

| 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 |
|--------------------------|----------------------|------------------|-------------------|--------------------|-------------------|----------------------|---------------------|----------------|-----------------|----------------------|-----------------|
| 299 | 386 | 1,501 | 3.9 | 238 | 23 | 88 | 16 | 365 | 0.62 | 0.33 | 0.95 |
| 338 | 454 | 1,956 | 4.3 | 233 | 33 | 159 | 28 | 453 | 0.51 | 0.48 | 1.00 |
| 339 | 394 | 1,701 | 4.3 | 246 | 84 | 210 | 58 | 598 | 0.63 | 0.89 | 1.52 |
| 341 | 612 | 4,774 | 7.8 | 815 | 205 | 676 | 169 | 1,865 | 1.33 | 1.71 | 3.05 |
| 342 | 349 | 3,577 | 10.2 | 567 | 163 | 521 | 129 | 1,380 | 1.62 | 2.33 | 3.95 |
| 343 | 663 | 3,838 | 5.8 | 603 | 159 | 472 | 107 | 1,341 | 0.91 | 1.11 | 2.02 |
| 344 | 190 | 2,380 | 12.6 | 317 | 76 | 225 | 55 | 673 | 1.67 | 1.88 | 3.55 |
| 345 | 323 | 2,682 | 8.3 | 431 | 109 | 341 | 116 | 997 | 1.34 | 1.76 | 3.09 |
| 346 | 318 | 4,040 | 12.7 | 860 | 251 | 831 | 320 | 2,262 | 2.71 | 4.41 | 7.12 |
| 347 | 272 | 1,522 | 5.6 | 280 | 51 | 153 | 50 | 534 | 1.03 | 0.93 | 1.96 |
| 348 | 123 | 1,315 | 10.7 | 199 | 64 | 201 | 52 | 516 | 1.62 | 2.58 | 4.20 |
| 349 | 490 | 5,670 | 11.6 | 1006 | 322 | 1033 | 364 | 2,725 | 2.05 | 3.51 | 5.56 |
| 601 | 1,625 | 2,472 | 1.5 | 600 | 71 | 333 | 53 | 1,057 | 0.37 | 0.28 | 0.65 |
| 603 | 372 | 2,720 | 7.3 | 545 | 136 | 410 | 128 | 1,219 | 1.47 | 1.81 | 3.28 |
| TOTAL¹ | 78,854 | 426,571 | 5.4 | 81,311 | 12,945 | 49,929 | 10,244 | 154,429 | 1.03 | 0.93 | 1.96 |

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

Table 4. Archery Harvest by Sex and Age Class, 2018. Excludes special hunts.

| Permit Area | Adult Male | Fawn Male | Adult Female | Fawn Female | Total Harvest |
|-------------|------------|-----------|--------------|-------------|---------------|
| 101 | 8 | 1 | 10 | 1 | 20 |
| 103 | 12 | 1 | 10 | 0 | 23 |
| 105 | 37 | 6 | 63 | 7 | 113 |
| 108 | 33 | 1 | 25 | 4 | 63 |
| 110 | 25 | 1 | 19 | 2 | 47 |
| 111 | 5 | 0 | 6 | 0 | 11 |
| 114 | 5 | 0 | 1 | 0 | 6 |
| 117 | 1 | 1 | 0 | 0 | 2 |
| 118 | 14 | 0 | 25 | 1 | 40 |
| 119 | 3 | 0 | 1 | 0 | 4 |
| 126 | 11 | 4 | 9 | 0 | 24 |
| 130 | 5 | 1 | 10 | 1 | 17 |
| 131 | 8 | 0 | 3 | 0 | 11 |
| 132 | 10 | 2 | 10 | 1 | 23 |
| 133 | 26 | 3 | 16 | 2 | 47 |
| 152 | 2 | 1 | 7 | 1 | 11 |
| 155 | 62 | 17 | 123 | 13 | 215 |
| 156 | 61 | 4 | 53 | 3 | 121 |
| 157 | 145 | 27 | 183 | 22 | 377 |
| 159 | 63 | 7 | 62 | 8 | 140 |
| 169 | 39 | 3 | 46 | 3 | 91 |
| 171 | 30 | 5 | 25 | 3 | 63 |
| 172 | 72 | 4 | 60 | 5 | 141 |
| 173 | 21 | 1 | 19 | 2 | 43 |
| 176 | 32 | 4 | 40 | 4 | 80 |
| 177 | 22 | 8 | 34 | 3 | 67 |
| 178 | 61 | 3 | 53 | 2 | 119 |
| 179 | 98 | 11 | 91 | 8 | 208 |
| 181 | 39 | 3 | 38 | 5 | 85 |
| 182 | 135 | 27 | 185 | 17 | 364 |
| 183 | 60 | 2 | 57 | 3 | 122 |
| 184 | 194 | 34 | 239 | 19 | 486 |
| 197 | 39 | 1 | 31 | 4 | 75 |
| 199 | 4 | 1 | 2 | 0 | 7 |
| 201 | 6 | 0 | 1 | 0 | 7 |
| 203 | 0 | 0 | 0 | 1 | 1 |
| 208 | 6 | 0 | 4 | 0 | 10 |
| 209 | 33 | 3 | 53 | 6 | 95 |
| 210 | 29 | 7 | 33 | 6 | 75 |
| 213 | 167 | 54 | 376 | 33 | 630 |

| Permit Area | Adult Male | Fawn Male | Adult Female | Fawn Female | Total Harvest |
|-------------|------------|-----------|--------------|-------------|---------------|
| 214 | 124 | 50 | 248 | 26 | 448 |
| 215 | 185 | 60 | 390 | 40 | 675 |
| 218 | 158 | 12 | 79 | 14 | 263 |
| 219 | 128 | 11 | 62 | 12 | 213 |
| 221 | 141 | 26 | 173 | 26 | 366 |
| 222 | 71 | 16 | 90 | 10 | 187 |
| 223 | 203 | 28 | 237 | 24 | 492 |
| 224 | 13 | 0 | 7 | 1 | 21 |
| 225 | 182 | 40 | 266 | 39 | 527 |
| 227 | 279 | 72 | 397 | 44 | 792 |
| 229 | 63 | 8 | 34 | 6 | 111 |
| 230 | 36 | 3 | 14 | 2 | 55 |
| 232 | 42 | 10 | 44 | 4 | 100 |
| 233 | 47 | 8 | 66 | 12 | 133 |
| 234 | 34 | 6 | 11 | 0 | 51 |
| 235 | 18 | 3 | 12 | 1 | 34 |
| 236 | 236 | 36 | 181 | 23 | 476 |
| 237 | 31 | 3 | 19 | 0 | 53 |
| 238 | 2 | 0 | 7 | 0 | 9 |
| 239 | 128 | 23 | 137 | 20 | 308 |
| 240 | 137 | 27 | 281 | 20 | 465 |
| 241 | 226 | 57 | 477 | 56 | 816 |
| 242 | 128 | 31 | 228 | 30 | 417 |
| 246 | 89 | 12 | 79 | 6 | 186 |
| 247 | 71 | 16 | 122 | 14 | 223 |
| 248 | 56 | 10 | 56 | 14 | 136 |
| 249 | 88 | 11 | 54 | 3 | 156 |
| 250 | 54 | 2 | 23 | 2 | 81 |
| 251 | 8 | 0 | 2 | 1 | 11 |
| 252 | 40 | 4 | 24 | 7 | 75 |
| 253 | 62 | 2 | 43 | 0 | 107 |
| 254 | 91 | 8 | 87 | 0 | 186 |
| 255 | 88 | 12 | 85 | 7 | 192 |
| 256 | 33 | 3 | 36 | 2 | 74 |
| 257 | 28 | 7 | 40 | 7 | 82 |
| 258 | 51 | 6 | 62 | 11 | 130 |
| 259 | 38 | 7 | 38 | 10 | 93 |
| 260 | 16 | 2 | 10 | 4 | 32 |
| 261 | 22 | 3 | 18 | 0 | 43 |
| 262 | 38 | 2 | 20 | 3 | 63 |

| Permit Area | Adult Male | Fawn Male | Adult Female | Fawn Female | Total Harvest |
|-------------|------------|-----------|--------------|-------------|---------------|
| 263 | 19 | 2 | 19 | 0 | 40 |
| 264 | 29 | 9 | 74 | 0 | 112 |
| 265 | 36 | 11 | 82 | 9 | 138 |
| 266 | 30 | 0 | 12 | 2 | 44 |
| 267 | 8 | 4 | 19 | 0 | 31 |
| 268 | 13 | 2 | 25 | 2 | 42 |
| 269 | 36 | 3 | 10 | 1 | 50 |
| 270 | 33 | 2 | 12 | 3 | 50 |
| 271 | 26 | 0 | 17 | 1 | 44 |
| 272 | 15 | 1 | 4 | 1 | 21 |
| 273 | 71 | 2 | 26 | 2 | 101 |
| 274 | 35 | 2 | 10 | 1 | 48 |
| 275 | 34 | 2 | 21 | 0 | 57 |
| 276 | 47 | 5 | 81 | 7 | 140 |
| 277 | 216 | 21 | 145 | 9 | 391 |
| 278 | 53 | 4 | 29 | 2 | 88 |
| 279 | 14 | 0 | 6 | 1 | 21 |
| 280 | 18 | 0 | 9 | 2 | 29 |
| 281 | 59 | 2 | 34 | 3 | 98 |
| 282 | 22 | 0 | 8 | 1 | 31 |
| 283 | 47 | 2 | 22 | 1 | 72 |
| 284 | 36 | 1 | 21 | 1 | 59 |
| 285 | 79 | 0 | 40 | 0 | 119 |
| 286 | 23 | 10 | 17 | 3 | 53 |
| 287 | 2 | 9 | 2 | 4 | 17 |
| 288 | 49 | 1 | 46 | 0 | 96 |

| Permit Area | Adult Male | Fawn Male | Adult Female | Fawn Female | Total Harvest |
|--------------------------|--------------|--------------|---------------|--------------|---------------|
| 289 | 24 | 5 | 12 | 10 | 51 |
| 290 | 59 | 12 | 42 | 0 | 113 |
| 291 | 135 | 17 | 80 | 6 | 238 |
| 292 | 94 | 13 | 120 | 8 | 235 |
| 293 | 105 | 0 | 106 | 10 | 221 |
| 294 | 24 | 1 | 15 | 2 | 42 |
| 295 | 45 | 9 | 47 | 3 | 104 |
| 296 | 24 | 1 | 17 | 1 | 43 |
| 297 | 5 | 6 | 6 | 1 | 18 |
| 298 | 14 | 5 | 19 | 2 | 40 |
| 299 | 54 | 3 | 66 | 5 | 128 |
| 338 | 67 | 18 | 42 | 2 | 129 |
| 339 | 59 | 0 | 83 | 14 | 156 |
| 341 | 166 | 21 | 248 | 35 | 470 |
| 342 | 99 | 19 | 131 | 20 | 269 |
| 343 | 252 | 38 | 321 | 40 | 651 |
| 344 | 38 | 3 | 19 | 7 | 67 |
| 345 | 76 | 10 | 91 | 6 | 183 |
| 346 | 167 | 35 | 240 | 43 | 485 |
| 347 | 45 | 9 | 70 | 8 | 132 |
| 348 | 28 | 10 | 34 | 7 | 79 |
| 349 | 197 | 35 | 263 | 49 | 544 |
| 601 | 756 | 182 | 947 | 133 | 2,018 |
| 603 | 88 | 19 | 90 | 18 | 215 |
| TOTAL¹ | 8,779 | 1,451 | 10,182 | 1,177 | 21,589 |

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

Table 5. Muzzleloader Season Deer Harvest by Sex and Age Class, 2018. Excludes special hunts.

| Permit Area | Adult Male | Fawn Male | Adult Female | Fawn Female | Total Harvest |
|-------------|------------|-----------|--------------|-------------|---------------|
| 101 | 13 | 0 | 13 | 2 | 28 |
| 103 | 10 | 0 | 6 | 0 | 16 |
| 105 | 21 | 3 | 22 | 4 | 50 |
| 108 | 13 | 1 | 6 | 0 | 20 |
| 110 | 14 | 2 | 17 | 3 | 36 |
| 111 | 4 | 0 | 3 | 0 | 7 |
| 114 | 0 | 0 | 0 | 0 | 0 |
| 117 | 0 | 0 | 0 | 0 | 0 |
| 118 | 12 | 2 | 13 | 0 | 27 |
| 119 | 3 | 0 | 1 | 0 | 4 |
| 126 | 3 | 0 | 1 | 0 | 4 |
| 130 | 4 | 0 | 7 | 0 | 11 |
| 131 | 5 | 0 | 0 | 0 | 5 |
| 132 | 3 | 0 | 1 | 0 | 4 |
| 133 | 10 | 1 | 7 | 1 | 19 |
| 152 | 1 | 0 | 0 | 0 | 1 |
| 155 | 11 | 3 | 29 | 4 | 47 |
| 156 | 11 | 5 | 18 | 1 | 35 |
| 157 | 21 | 8 | 43 | 4 | 76 |
| 159 | 11 | 1 | 15 | 1 | 28 |
| 169 | 16 | 0 | 6 | 0 | 22 |
| 171 | 14 | 2 | 23 | 0 | 39 |
| 172 | 24 | 3 | 46 | 5 | 78 |
| 173 | 6 | 1 | 6 | 1 | 14 |
| 176 | 7 | 1 | 17 | 2 | 27 |
| 177 | 8 | 2 | 21 | 3 | 34 |
| 178 | 13 | 2 | 29 | 3 | 47 |
| 179 | 18 | 2 | 43 | 3 | 66 |
| 181 | 5 | 1 | 13 | 3 | 22 |
| 182 | 8 | 2 | 21 | 3 | 34 |
| 183 | 8 | 1 | 28 | 3 | 40 |
| 184 | 49 | 11 | 80 | 7 | 147 |
| 197 | 11 | 0 | 6 | 0 | 17 |
| 199 | 0 | 0 | 0 | 0 | 0 |
| 201 | 11 | 0 | 4 | 2 | 17 |
| 203 | 1 | 0 | 2 | 0 | 3 |
| 208 | 14 | 2 | 8 | 0 | 24 |
| 209 | 26 | 4 | 44 | 5 | 79 |
| 210 | 23 | 2 | 35 | 4 | 64 |

| Permit Area | Adult Male | Fawn Male | Adult Female | Fawn Female | Total Harvest |
|-------------|------------|-----------|--------------|-------------|---------------|
| 213 | 99 | 44 | 217 | 38 | 398 |
| 214 | 41 | 16 | 86 | 30 | 173 |
| 215 | 77 | 46 | 164 | 27 | 314 |
| 218 | 75 | 13 | 77 | 7 | 172 |
| 219 | 33 | 13 | 68 | 8 | 122 |
| 221 | 43 | 19 | 88 | 9 | 159 |
| 222 | 27 | 3 | 44 | 7 | 81 |
| 223 | 41 | 11 | 46 | 9 | 107 |
| 224 | 1 | 0 | 2 | 1 | 4 |
| 225 | 40 | 20 | 76 | 12 | 148 |
| 227 | 62 | 18 | 92 | 15 | 187 |
| 229 | 24 | 1 | 16 | 1 | 42 |
| 230 | 24 | 3 | 35 | 4 | 66 |
| 232 | 19 | 8 | 36 | 4 | 67 |
| 233 | 25 | 6 | 42 | 8 | 81 |
| 234 | 34 | 0 | 5 | 0 | 39 |
| 235 | 4 | 2 | 4 | 1 | 11 |
| 236 | 28 | 5 | 53 | 8 | 94 |
| 237 | 36 | 1 | 10 | 0 | 47 |
| 238 | 13 | 0 | 2 | 0 | 15 |
| 239 | 51 | 11 | 60 | 19 | 141 |
| 240 | 52 | 20 | 99 | 15 | 186 |
| 241 | 89 | 42 | 219 | 35 | 385 |
| 242 | 21 | 11 | 41 | 7 | 80 |
| 246 | 35 | 10 | 63 | 5 | 113 |
| 247 | 18 | 3 | 41 | 4 | 66 |
| 248 | 24 | 2 | 47 | 11 | 84 |
| 249 | 23 | 5 | 40 | 8 | 76 |
| 250 | 50 | 2 | 17 | 0 | 69 |
| 251 | 2 | 0 | 2 | 1 | 5 |
| 252 | 23 | 1 | 12 | 1 | 37 |
| 253 | 57 | 5 | 32 | 4 | 98 |
| 254 | 52 | 15 | 68 | 14 | 149 |
| 255 | 44 | 10 | 34 | 7 | 95 |
| 256 | 28 | 2 | 30 | 3 | 63 |
| 257 | 27 | 4 | 42 | 1 | 74 |
| 258 | 33 | 4 | 30 | 2 | 69 |
| 259 | 35 | 6 | 49 | 5 | 95 |
| 260 | 28 | 0 | 14 | 0 | 42 |

| Permit Area | Adult Male | Fawn Male | Adult Female | Fawn Female | Total Harvest |
|-------------|------------|-----------|--------------|-------------|---------------|
| 261 | 30 | 3 | 18 | 0 | 51 |
| 262 | 19 | 3 | 13 | 1 | 36 |
| 263 | 40 | 1 | 45 | 4 | 90 |
| 264 | 61 | 5 | 63 | 5 | 134 |
| 265 | 45 | 9 | 65 | 8 | 127 |
| 266 | 42 | 1 | 5 | 2 | 50 |
| 267 | 27 | 1 | 25 | 1 | 54 |
| 268 | 21 | 4 | 21 | 5 | 51 |
| 269 | 38 | 1 | 15 | 1 | 55 |
| 270 | 34 | 1 | 4 | 2 | 41 |
| 271 | 34 | 3 | 13 | 0 | 50 |
| 272 | 22 | 0 | 4 | 0 | 26 |
| 273 | 34 | 4 | 30 | 3 | 71 |
| 274 | 29 | 3 | 14 | 0 | 46 |
| 275 | 48 | 0 | 10 | 3 | 61 |
| 276 | 71 | 21 | 92 | 12 | 196 |
| 277 | 142 | 16 | 162 | 12 | 332 |
| 278 | 46 | 1 | 24 | 0 | 71 |
| 279 | 32 | 0 | 10 | 1 | 43 |
| 280 | 22 | 1 | 10 | 1 | 34 |
| 281 | 60 | 4 | 52 | 0 | 116 |
| 282 | 5 | 0 | 0 | 0 | 5 |
| 283 | 21 | 2 | 9 | 3 | 35 |
| 284 | 28 | 2 | 8 | 0 | 38 |
| 285 | 26 | 1 | 25 | 4 | 56 |
| 286 | 30 | 0 | 10 | 1 | 41 |
| 287 | 2 | 2 | 5 | 0 | 9 |

| Permit Area | Adult Male | Fawn Male | Adult Female | Fawn Female | Total Harvest |
|--------------------------|--------------|------------|--------------|-------------|---------------|
| 288 | 39 | 0 | 36 | 1 | 76 |
| 289 | 31 | 3 | 11 | 0 | 45 |
| 290 | 43 | 12 | 74 | 12 | 141 |
| 291 | 74 | 5 | 41 | 1 | 121 |
| 292 | 53 | 13 | 60 | 4 | 130 |
| 293 | 57 | 12 | 72 | 8 | 149 |
| 294 | 49 | 5 | 12 | 2 | 68 |
| 295 | 76 | 0 | 23 | 1 | 100 |
| 296 | 44 | 6 | 22 | 0 | 72 |
| 297 | 6 | 0 | 3 | 0 | 9 |
| 298 | 12 | 1 | 13 | 2 | 28 |
| 299 | 25 | 3 | 17 | 2 | 47 |
| 338 | 17 | 4 | 20 | 1 | 42 |
| 339 | 11 | 7 | 46 | 6 | 70 |
| 341 | 42 | 17 | 109 | 14 | 182 |
| 342 | 33 | 11 | 88 | 11 | 143 |
| 343 | 53 | 15 | 72 | 15 | 155 |
| 344 | 14 | 9 | 22 | 6 | 51 |
| 345 | 29 | 7 | 48 | 10 | 94 |
| 346 | 74 | 38 | 139 | 28 | 279 |
| 347 | 16 | 7 | 26 | 2 | 51 |
| 348 | 8 | 1 | 9 | 2 | 20 |
| 349 | 59 | 28 | 143 | 27 | 257 |
| 601 | 24 | 5 | 28 | 4 | 61 |
| 603 | 16 | 2 | 35 | 8 | 61 |
| TOTAL¹ | 3,784 | 744 | 4,658 | 631 | 9,817 |

¹Does not include special hunts (see Table 7)

Table 6. Summary of Special Firearm Hunts, 2018.

Includes regular, youth, and bonus permits.

| Hunt Area | Dates | Permits Issued | Adult Male Harvest | Fawn Male Harvest | Adult Female Harvest | Fawn Female Harvest | Total Harvest |
|--|--------------|----------------|--------------------|-------------------|----------------------|---------------------|---------------|
| 900 - Cascade River State Park | 11/3-11/18 | 100* | 7 | 1 | 6 | 0 | 14 |
| 901 - Rice Lake NWR | 11/10-11/18 | 40* | 7 | 1 | 4 | 1 | 13 |
| 902 - St. Croix State Park | 11/15-11/18 | 350* | 57 | 9 | 53 | 10 | 129 |
| 903 - Lake Louise State Park | 11/10-11/11 | 25*** | 6 | 4 | 16 | 3 | 29 |
| 904 - Gooseberry Falls State Park | 11/3-11/18 | 40* | 4 | 1 | 10 | 0 | 15 |
| 905 - Split Rock Lighthouse State Park | 11/3-11/18 | 40* | 6 | 1 | 3 | 1 | 11 |
| 906 - Tettegouche State Park | 11/3-11/18 | 125* | 4 | 1 | 8 | 0 | 13 |
| 907 - Scenic State Park | 11/3-11/18 | 30* | 2 | 0 | 1 | 0 | 3 |
| 908 - Hayes Lake State Park | 11/3-11/18 | 75*** | 1 | 2 | 6 | 1 | 10 |
| 909 - Lake Bemidji State Park | 11/3-11/16 | 30*** | 0 | 1 | 1 | 1 | 3 |
| 910 - Zippel Bay State Park | 11/3-11/18 | 75*** | 9 | 12 | 20 | 7 | 48 |
| 911 - Judge CR Magney State Park | 11/3-11/18 | 75* | 6 | 2 | 4 | 0 | 12 |
| 912 - Schoolcraft State Park | 11/3-11/18 | NA† | 1 | 0 | 1 | 0 | 2 |
| 913 - Lake Carlos State Park | 11/3-11/6 | 20** | 0 | 2 | 4 | 0 | 6 |
| 914 - William O'Brien State Park | 11/3-11/4 | 50* | 11 | 5 | 8 | 4 | 28 |
| 915 - Lake Bronson State Park | 11/3-11/11 | 30*** | 4 | 4 | 8 | 3 | 19 |
| 916 - Maplewood State Park | 11/3-11/6 | 100* | 43 | 8 | 20 | 5 | 76 |
| 917 - Miesville Ravine Park Reserve | 11/17-11/25 | 40** | 2 | 5 | 19 | 10 | 36 |
| 918 - Beaver Creek Valley State Park | 11/3-11/4 | 25# | 4 | 2 | 2 | 0 | 8 |
| 919 - Glacial Lakes State Park | 11/8-11/11 | 30** | 0 | 3 | 11 | 1 | 15 |
| 920 - Zumbro Falls Woods SNA | 11/3-11/11 | 12** | 1 | 1 | 4 | 2 | 8 |
| 922 - Old Mill State Park | 11/3-11/6 | 10* | 2 | 0 | 0 | 0 | 2 |
| 923 - Zumbro Falls Woods SNA | 11/17-11/25 | 12** | 0 | 6 | 5 | 2 | 13 |
| 925 - Vermillion Highlands Research, Recreation and WMNA | 11/3-11/6 | 20* | 4 | 0 | 0 | 1 | 5 |
| 927 - Elm Creek Park Reserve | 11/10-11/11 | 140* | 29 | 7 | 19 | 5 | 60 |
| 928 - Wild River State Park | 11/10-11/11 | 75* | 20 | 5 | 25 | 6 | 56 |
| 931 - City of Grand Rapids | 11/3 - 11/18 | N/A† | 7 | 5 | 19 | 3 | 34 |
| 933 - Forestville/ Mystery Cave State Park | 11/3-11/4 | 130* | 12 | 1 | 7 | 5 | 25 |
| 934 - Whitewater State Game Refuge | 11/17-11/25 | 75** | 1 | 6 | 10 | 6 | 23 |
| Total¹ | | | 250 | 95 | 294 | 77 | 716 |

*Either sex; **Antlerless-only; ***Earn-A-Buck; #APR, N/A† Unlimited permits

¹Special hunt harvests are often underreported due to hunters reporting harvest using the DPA and not the 900-series number.

Table 7. Summary of Special Muzzleloader Hunts, 2018.

Includes regular, youth, and bonus permits.

| Hunt Area | Dates | Permits Issued | Adult Male Harvest | Fawn Male Harvest | Adult Female Harvest | Fawn Female Harvest | Total Harvest |
|--|-------------|----------------|--------------------|-------------------|----------------------|---------------------|---------------|
| 921 - Minneopa State Park | 12/1-12/3 | 15*** | 0 | 1 | 7 | 0 | 8 |
| 929 - McCarthy Beach State Park | 11/24-12/2 | 25* | 0 | 0 | 2 | 1 | 3 |
| 930 - Nerstrand Big Woods State Park | 12/1-12/2 | 50*** | 2 | 6 | 11 | 2 | 21 |
| 932 - Rice Lake State Park | 12/1-12/2 | 20** | 0 | 7 | 11 | 4 | 22 |
| 935 - Jay Cooke State Park | 12/1-12/5 | 75* | 5 | 4 | 9 | 2 | 20 |
| 936 - Crow Wing State Park | 12/1-12/2 | 25* | 1 | 3 | 2 | 0 | 6 |
| 937 - Lake Vermillion - Soudan Underground Mine State Park | 11/24-12/9 | 25* | 2 | 0 | 6 | 1 | 9 |
| 938 - City of Tower | 11/24-12/9 | 20* | 0 | 3 | 5 | 1 | 9 |
| 939 - Myre-Big Island State Park | 12/1-12/2 | 50** | 1 | 4 | 20 | 4 | 29 |
| 940 - Frontenac State Park | 12/1-12/3 | 60** | 2 | 6 | 17 | 6 | 31 |
| 941 - Lake Maria State Park | 11/26-11/28 | 25*** | 4 | 5 | 16 | 1 | 26 |
| 942 - Sibley State Park | 11/24-11/25 | 60** | 0 | 4 | 17 | 2 | 23 |
| 943 - Miesville Ravine Park Reserve | 12/1-12/9 | 40** | 1 | 1 | 6 | 1 | 9 |
| 944 - Vermillion Highlands Research, Recreation and WMA | 11/24-12/9 | 20* | 3 | 2 | 0 | 0 | 5 |
| 946 - City of Grand Rapids | 11/24-12/9 | N/A† | 0 | 1 | 0 | 0 | 1 |
| 947 - Lake Bemidji State Park | 11/30-12/2 | 30* | 4 | 1 | 2 | 1 | 8 |
| 948 - Savanna Portage State Park | 11/24-12/2 | 30* | 0 | 0 | 1 | 1 | 2 |
| 949 - St. Croix State Park | 11/29-12/2 | 100* | 4 | 4 | 7 | 2 | 17 |
| Muzzleloader Special Hunt Totals¹ | | | 29 | 52 | 139 | 29 | 249 |

*Either sex

**Antlerless-only

***Earn-A-Buck

#APR, N/A† Unlimited permits

¹Special hunt harvests are often underreported due to hunters reporting harvest using the DPA and not the 900-series number.

Table 8. Summary of Special Youth and Camp Ripley Archery Hunts, 2018.

Includes regular, youth, and bonus permits.

| Hunt Area | Dates | Permits Issued | Adult Male Harvest | Fawn Male Harvest | Adult Female Harvest | Fawn Female Harvest | Total Harvest |
|--|---------------|----------------|--------------------|-------------------|----------------------|---------------------|---------------|
| 950 - Camp Ripley Youth Archery | 10/13-10/14 | 175* | 1 | 0 | 5 | 0 | 6 |
| 951 - Afton State Park | 11/3-11/4 | 25* | 9 | 3 | 5 | 1 | 18 |
| 952 - Sibley State Park | 10/27 - 10/28 | 10* | 3 | 0 | 2 | 0 | 5 |
| 953 - Zippel Bay State Park | 10/20-10/21 | 20* | 0 | 1 | 3 | 0 | 4 |
| 954 - Lake Bemidji State Park | 10/19 - 10/21 | 20* | 1 | 0 | 0 | 1 | 2 |
| 955 - Lake Alexander Preserve Archery | 10/13-10/14 | 20* | 0 | 0 | 0 | 0 | 0 |
| 956 - St. Croix State Park | 10/27-10/28 | 90* | 1 | 3 | 5 | 2 | 12 |
| 957 - Rydell National Wildlife Refuge | 10/27-10/28 | 15* | 0 | 0 | 0 | 0 | 0 |
| 958 - Savanna Portage State Park | 10/27-10/28 | 25* | 0 | 0 | 1 | 0 | 1 |
| 959 - Buffalo River State Park | 11/3 - 11/4 | 14*** | 1 | 0 | 1 | 0 | 2 |
| 960 - Tettegouche State Park | 10/27-10/28 | 10* | 0 | 0 | 0 | 0 | 0 |
| 961 - Itasca State Park | 10/13-10/14 | 75* | 2 | 0 | 0 | 0 | 2 |
| 963 - Kilen Woods State Park | 10/27 - 10/28 | 12*** | 2 | 0 | 1 | 0 | 3 |
| 965 - Banning State Park | 10/27-10/28 | 6* | 0 | 1 | 1 | 0 | 2 |
| 966 - Blue Mounds State Park | 11/17-11/18 | 10*** | 0 | 2 | 4 | 0 | 6 |
| 967 - Camden State Park | 10/27-10/28 | 12*** | 2 | 0 | 6 | 2 | 10 |
| 968 - Lake Shetek State Park | 11/17 - 11/18 | 12*** | 4 | 0 | 11 | 0 | 15 |
| Youth Special Hunt Totals | | | 26 | 10 | 45 | 6 | 87 |
| 970 – Camp Ripley First Hunt | 10/18-10/19 | 2,000* | 26 | 6 | 35 | 6 | 73 |
| 971 - Camp Ripley First Hunt | 11/27-10/28 | 2,000* | 74 | 8 | 65 | 14 | 161 |
| Camp Ripley Archery Hunt Totals | | | 100 | 14 | 100 | 20 | 234 |

*Either sex

**Antlerless-only

***Earn-A-Buck

#APR, N/A† Unlimited permits

¹Special hunt harvests are often underreported due to hunters reporting harvest using the DPA and not the 900-series number.

Table 9. Total Deer Harvest by Permit Area, 2018. 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 | 445 | 42 | 268 | 51 | 806 | 496 | 0.90 | 0.73 | 1.63 | 73 |
| 103 | 738 | 28 | 252 | 17 | 1,035 | 1,820 | 0.41 | 0.16 | 0.57 | 115 |
| 105 | 1,058 | 167 | 967 | 147 | 2,339 | 740 | 1.43 | 1.73 | 3.16 | 43 |
| 108 | 955 | 20 | 175 | 18 | 1,168 | 1,651 | 0.58 | 0.13 | 0.71 | 105 |
| 110 | 894 | 89 | 508 | 77 | 1,568 | 529 | 1.69 | 1.28 | 2.97 | 47 |
| 111 | 418 | 29 | 150 | 13 | 610 | 1,438 | 0.29 | 0.13 | 0.42 | 124 |
| 114 | 27 | 1 | 10 | 0 | 38 | 116 | 0.23 | 0.09 | 0.33 | 127 |
| 117 | 16 | 3 | 6 | 0 | 25 | 927 | 0.02 | 0.01 | 0.03 | 130 |
| 118 | 701 | 14 | 137 | 11 | 863 | 1,220 | 0.57 | 0.13 | 0.71 | 104 |
| 119 | 453 | 1 | 11 | 0 | 465 | 770 | 0.59 | 0.02 | 0.60 | 112 |
| 126 | 275 | 12 | 59 | 0 | 346 | 942 | 0.29 | 0.08 | 0.37 | 126 |
| 130 | 268 | 18 | 147 | 15 | 448 | 746 | 0.36 | 0.24 | 0.60 | 113 |
| 131 | 95 | 6 | 42 | 6 | 149 | 899 | 0.11 | 0.06 | 0.17 | 129 |
| 132 | 310 | 12 | 82 | 13 | 417 | 482 | 0.64 | 0.22 | 0.87 | 98 |
| 133 | 416 | 32 | 218 | 23 | 689 | 352 | 1.18 | 0.78 | 1.96 | 69 |
| 152 | 72 | 16 | 33 | 9 | 130 | 61 | 1.18 | 0.95 | 2.13 | 62 |
| 155 | 1,194 | 266 | 1,202 | 221 | 2,883 | 593 | 2.01 | 2.85 | 4.86 | 24 |
| 156 | 1,388 | 157 | 904 | 112 | 2,561 | 825 | 1.68 | 1.42 | 3.10 | 45 |
| 157 | 2,516 | 454 | 1,772 | 306 | 5,048 | 888 | 2.83 | 2.85 | 5.69 | 13 |
| 159 | 1,257 | 167 | 782 | 118 | 2,324 | 571 | 2.20 | 1.87 | 4.07 | 33 |
| 169 | 1,531 | 60 | 436 | 41 | 2,068 | 1,124 | 1.36 | 0.48 | 1.84 | 70 |
| 171 | 916 | 125 | 636 | 92 | 1,769 | 701 | 1.31 | 1.22 | 2.52 | 57 |
| 172 | 1,586 | 302 | 1,302 | 208 | 3,398 | 687 | 2.31 | 2.64 | 4.95 | 22 |
| 173 | 647 | 69 | 384 | 48 | 1,148 | 584 | 1.11 | 0.86 | 1.97 | 68 |
| 176 | 1,060 | 75 | 644 | 58 | 1,837 | 921 | 1.15 | 0.84 | 1.99 | 66 |
| 177 | 772 | 111 | 649 | 74 | 1,606 | 480 | 1.61 | 1.74 | 3.35 | 40 |
| 178 | 1,573 | 124 | 1,137 | 124 | 2,958 | 1,195 | 1.32 | 1.16 | 2.48 | 59 |
| 179 | 1,661 | 267 | 1,225 | 168 | 3,321 | 862 | 1.93 | 1.93 | 3.85 | 35 |
| 181 | 1,046 | 93 | 569 | 68 | 1,776 | 629 | 1.66 | 1.16 | 2.82 | 50 |
| 182 | 589 | 119 | 587 | 90 | 1,385 | 278 | 2.12 | 2.86 | 4.98 | 21 |
| 183 | 1,209 | 151 | 970 | 123 | 2,453 | 663 | 1.82 | 1.88 | 3.70 | 36 |
| 184 | 2,980 | 524 | 2,446 | 438 | 6,388 | 1,229 | 2.43 | 2.77 | 5.20 | 18 |
| 197 | 1087 | 42 | 243 | 29 | 1,401 | 955 | 1.14 | 0.33 | 1.47 | 83 |
| 199 | 113 | 8 | 29 | 1 | 151 | 153 | 0.74 | 0.25 | 0.99 | 94 |
| 201 | 146 | 16 | 84 | 8 | 254 | 161 | 0.91 | 0.67 | 1.58 | 76 |
| 203 | 69 | 5 | 24 | 4 | 102 | 118 | 0.59 | 0.28 | 0.87 | 97 |
| 208 | 276 | 24 | 122 | 11 | 433 | 379 | 0.73 | 0.41 | 1.14 | 89 |

| 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 |
|-------------|--------------------|-------------------|----------------------|---------------------|---------------|----------------------|-----------------|----------------------|-----------------|------|
| 209 | 638 | 97 | 490 | 94 | 1,319 | 640 | 1.00 | 1.06 | 2.06 | 64 |
| 210 | 879 | 146 | 603 | 110 | 1,738 | 615 | 1.43 | 1.40 | 2.83 | 49 |
| 213 | 2,583 | 663 | 2,111 | 503 | 5,860 | 1,057 | 2.44 | 3.10 | 5.54 | 14 |
| 214 | 1,863 | 527 | 1,631 | 435 | 4,456 | 554 | 3.36 | 4.68 | 8.04 | 4 |
| 215 | 1,728 | 490 | 1,475 | 368 | 4,061 | 701 | 2.46 | 3.33 | 5.79 | 12 |
| 218 | 1,267 | 175 | 674 | 153 | 2,269 | 884 | 1.43 | 1.13 | 2.57 | 56 |
| 219 | 753 | 107 | 404 | 99 | 1,363 | 391 | 1.92 | 1.56 | 3.48 | 38 |
| 221 | 1,571 | 362 | 1,137 | 272 | 3,342 | 642 | 2.45 | 2.76 | 5.21 | 17 |
| 222 | 1,080 | 219 | 757 | 168 | 2,224 | 413 | 2.61 | 2.77 | 5.38 | 15 |
| 223 | 882 | 145 | 679 | 121 | 1,827 | 376 | 2.35 | 2.52 | 4.87 | 23 |
| 224 | 115 | 11 | 54 | 11 | 191 | 47 | 2.43 | 1.61 | 4.04 | 34 |
| 225 | 1,854 | 365 | 1,277 | 275 | 3,771 | 618 | 3.00 | 3.10 | 6.10 | 8 |
| 227 | 1,330 | 272 | 1,017 | 203 | 2,822 | 472 | 2.82 | 3.16 | 5.98 | 11 |
| 229 | 377 | 48 | 159 | 29 | 613 | 284 | 1.33 | 0.83 | 2.16 | 61 |
| 230 | 252 | 51 | 177 | 25 | 505 | 452 | 0.56 | 0.56 | 1.12 | 90 |
| 232 | 300 | 50 | 220 | 48 | 618 | 377 | 0.80 | 0.84 | 1.64 | 72 |
| 233 | 261 | 55 | 214 | 44 | 574 | 385 | 0.68 | 0.81 | 1.49 | 81 |
| 234 | 226 | 19 | 59 | 7 | 311 | 636 | 0.36 | 0.13 | 0.49 | 120 |
| 235 | 74 | 10 | 26 | 3 | 113 | 34 | 2.20 | 1.16 | 3.35 | 39 |
| 236 | 907 | 128 | 523 | 93 | 1,651 | 370 | 2.45 | 2.01 | 4.46 | 28 |
| 237 | 275 | 10 | 65 | 5 | 355 | 728 | 0.38 | 0.11 | 0.49 | 121 |
| 238 | 84 | 2 | 32 | 3 | 121 | 95 | 0.88 | 0.39 | 1.27 | 88 |
| 239 | 1,957 | 356 | 1,198 | 280 | 3,791 | 919 | 2.13 | 2.00 | 4.13 | 32 |
| 240 | 2,071 | 464 | 1,735 | 380 | 4,650 | 643 | 3.22 | 4.01 | 7.24 | 6 |
| 241 | 3,502 | 850 | 3,270 | 743 | 8,365 | 996 | 3.52 | 4.88 | 8.40 | 3 |
| 242 | 745 | 180 | 760 | 138 | 1,823 | 214 | 3.48 | 5.04 | 8.52 | 2 |
| 246 | 1,936 | 342 | 1,392 | 262 | 3,932 | 840 | 2.30 | 2.38 | 4.68 | 27 |
| 247 | 760 | 171 | 702 | 129 | 1,762 | 228 | 3.33 | 4.39 | 7.72 | 5 |
| 248 | 580 | 122 | 470 | 112 | 1,284 | 214 | 2.71 | 3.29 | 5.99 | 10 |
| 249 | 1,233 | 275 | 853 | 188 | 2,549 | 502 | 2.46 | 2.62 | 5.08 | 20 |
| 250 | 384 | 19 | 108 | 10 | 521 | 713 | 0.54 | 0.19 | 0.73 | 101 |
| 251 | 73 | 20 | 51 | 14 | 158 | 55 | 1.33 | 1.55 | 2.87 | 48 |
| 252 | 328 | 22 | 131 | 17 | 498 | 715 | 0.46 | 0.24 | 0.70 | 106 |
| 253 | 447 | 19 | 153 | 22 | 641 | 974 | 0.46 | 0.20 | 0.66 | 111 |
| 254 | 578 | 94 | 463 | 58 | 1,193 | 929 | 0.62 | 0.66 | 1.28 | 87 |
| 255 | 559 | 97 | 340 | 68 | 1,064 | 774 | 0.72 | 0.65 | 1.38 | 84 |
| 256 | 561 | 78 | 428 | 86 | 1,153 | 654 | 0.86 | 0.91 | 1.76 | 71 |
| 257 | 474 | 84 | 440 | 79 | 1,077 | 412 | 1.15 | 1.46 | 2.61 | 54 |
| 258 | 921 | 213 | 774 | 166 | 2,074 | 343 | 2.69 | 3.36 | 6.05 | 9 |

| 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 |
|-------------|--------------------|-------------------|----------------------|---------------------|---------------|----------------------|-----------------|----------------------|-----------------|------|
| 259 | 1,091 | 225 | 839 | 155 | 2,310 | 490 | 2.23 | 2.49 | 4.72 | 26 |
| 260 | 447 | 36 | 197 | 17 | 697 | 1,249 | 0.36 | 0.20 | 0.56 | 116 |
| 261 | 233 | 23 | 158 | 18 | 432 | 795 | 0.29 | 0.25 | 0.54 | 118 |
| 262 | 234 | 18 | 112 | 13 | 377 | 677 | 0.35 | 0.21 | 0.56 | 117 |
| 263 | 515 | 63 | 412 | 50 | 1,040 | 512 | 1.01 | 1.03 | 2.03 | 65 |
| 264 | 852 | 105 | 704 | 104 | 1,765 | 669 | 1.27 | 1.36 | 2.64 | 53 |
| 265 | 559 | 128 | 584 | 115 | 1,386 | 494 | 1.13 | 1.67 | 2.81 | 51 |
| 266 | 472 | 33 | 136 | 20 | 661 | 617 | 0.77 | 0.31 | 1.07 | 91 |
| 267 | 352 | 47 | 297 | 38 | 734 | 472 | 0.75 | 0.81 | 1.55 | 79 |
| 268 | 336 | 35 | 301 | 43 | 715 | 228 | 1.47 | 1.66 | 3.13 | 44 |
| 269 | 329 | 21 | 106 | 13 | 469 | 650 | 0.51 | 0.22 | 0.72 | 103 |
| 270 | 254 | 10 | 65 | 12 | 341 | 748 | 0.34 | 0.12 | 0.46 | 122 |
| 271 | 293 | 17 | 101 | 12 | 423 | 632 | 0.46 | 0.21 | 0.67 | 110 |
| 272 | 213 | 13 | 50 | 9 | 285 | 531 | 0.40 | 0.14 | 0.54 | 119 |
| 273 | 532 | 54 | 261 | 42 | 889 | 571 | 0.93 | 0.62 | 1.56 | 78 |
| 274 | 232 | 20 | 98 | 21 | 371 | 354 | 0.65 | 0.39 | 1.05 | 93 |
| 275 | 382 | 16 | 120 | 13 | 531 | 764 | 0.50 | 0.20 | 0.70 | 107 |
| 276 | 672 | 102 | 515 | 78 | 1,367 | 542 | 1.24 | 1.28 | 2.52 | 58 |
| 277 | 1,668 | 216 | 954 | 147 | 2,985 | 812 | 2.05 | 1.62 | 3.68 | 37 |
| 278 | 450 | 22 | 134 | 15 | 621 | 402 | 1.12 | 0.43 | 1.55 | 80 |
| 279 | 190 | 11 | 69 | 14 | 284 | 344 | 0.55 | 0.27 | 0.83 | 100 |
| 280 | 220 | 9 | 58 | 14 | 301 | 675 | 0.33 | 0.12 | 0.45 | 123 |
| 281 | 544 | 51 | 304 | 21 | 920 | 575 | 0.95 | 0.65 | 1.60 | 74 |
| 282 | 124 | 1 | 25 | 4 | 154 | 778 | 0.16 | 0.04 | 0.20 | 128 |
| 283 | 311 | 16 | 81 | 12 | 420 | 613 | 0.51 | 0.18 | 0.68 | 109 |
| 284 | 336 | 22 | 122 | 14 | 494 | 838 | 0.40 | 0.19 | 0.59 | 114 |
| 285 | 439 | 50 | 219 | 23 | 731 | 549 | 0.80 | 0.53 | 1.33 | 86 |
| 286 | 248 | 20 | 124 | 18 | 410 | 446 | 0.56 | 0.36 | 0.92 | 95 |
| 287 | 60 | 21 | 58 | 9 | 148 | 46 | 1.31 | 1.93 | 3.24 | 42 |
| 288 | 369 | 32 | 231 | 25 | 657 | 625 | 0.59 | 0.46 | 1.05 | 92 |
| 289 | 201 | 13 | 100 | 12 | 326 | 815 | 0.25 | 0.15 | 0.40 | 125 |
| 290 | 485 | 73 | 424 | 69 | 1,051 | 662 | 0.73 | 0.86 | 1.59 | 75 |
| 291 | 815 | 56 | 350 | 30 | 1,251 | 800 | 1.02 | 0.54 | 1.56 | 77 |
| 292 | 602 | 113 | 473 | 56 | 1,244 | 479 | 1.26 | 1.34 | 2.60 | 55 |
| 293 | 666 | 138 | 513 | 98 | 1,415 | 511 | 1.30 | 1.46 | 2.77 | 52 |
| 294 | 327 | 22 | 192 | 29 | 570 | 686 | 0.48 | 0.35 | 0.83 | 99 |
| 295 | 516 | 29 | 195 | 20 | 760 | 839 | 0.61 | 0.29 | 0.91 | 96 |
| 296 | 309 | 26 | 116 | 6 | 457 | 667 | 0.46 | 0.22 | 0.69 | 108 |
| 297 | 190 | 26 | 84 | 17 | 317 | 438 | 0.43 | 0.29 | 0.72 | 102 |

| 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 |
|--------------|--------------------|-------------------|----------------------|---------------------|----------------|----------------------|-----------------|----------------------|-----------------|------|
| 298 | 645 | 102 | 465 | 86 | 1,298 | 618 | 1.04 | 1.06 | 2.10 | 63 |
| 299 | 319 | 34 | 195 | 28 | 576 | 386 | 0.83 | 0.67 | 1.49 | 82 |
| 338 | 317 | 40 | 221 | 31 | 609 | 454 | 0.70 | 0.64 | 1.34 | 85 |
| 339 | 319 | 115 | 371 | 92 | 897 | 394 | 0.81 | 1.47 | 2.28 | 60 |
| 341 | 1,033 | 254 | 1,075 | 229 | 2,591 | 612 | 1.69 | 2.54 | 4.23 | 30 |
| 342 | 700 | 200 | 749 | 164 | 1,813 | 349 | 2.01 | 3.19 | 5.19 | 19 |
| 343 | 925 | 218 | 883 | 166 | 2,192 | 663 | 1.40 | 1.91 | 3.31 | 41 |
| 344 | 370 | 94 | 276 | 74 | 814 | 190 | 1.95 | 2.34 | 4.30 | 29 |
| 345 | 558 | 132 | 506 | 150 | 1,346 | 323 | 1.73 | 2.44 | 4.17 | 31 |
| 346 | 1,138 | 374 | 1,294 | 433 | 3,239 | 318 | 3.58 | 6.61 | 10.19 | 1 |
| 347 | 365 | 84 | 297 | 71 | 817 | 272 | 1.34 | 1.66 | 3.00 | 46 |
| 348 | 244 | 84 | 259 | 69 | 656 | 123 | 1.98 | 3.35 | 5.33 | 16 |
| 349 | 1,266 | 386 | 1,442 | 442 | 3,536 | 490 | 2.58 | 4.63 | 7.21 | 7 |
| 601 | 1,426 | 271 | 1,335 | 198 | 3,230 | 1,625 | 0.88 | 1.11 | 1.99 | 67 |
| 603 | 734 | 192 | 671 | 189 | 1,786 | 372 | 1.97 | 2.83 | 4.80 | 25 |
| TOTAL | 94,592 | 15,520 | 66,185 | 12,411 | 188,706 | 78,855 | 1.20 | 1.19 | 2.39 | |

Table 10. . Youth Deer Season Harvest by Permit Area, 2018.

| Permit Area | Adult Male Harvest | Fawn Male Harvest | Adult Female Harvest | Fawn Female Harvest | Total Harvest |
|--------------|--------------------|-------------------|----------------------|---------------------|---------------|
| 101 | 19 | 1 | 21 | 1 | 42 |
| 105 | 87 | 14 | 48 | 6 | 155 |
| 111 | 12 | 2 | 12 | 0 | 26 |
| 114 | 2 | 0 | 0 | 0 | 2 |
| 201 | 4 | 0 | 8 | 0 | 12 |
| 203 | 0 | 0 | 0 | 0 | 0 |
| 208 | 22 | 0 | 10 | 0 | 32 |
| 209 | 53 | 3 | 25 | 4 | 85 |
| 256 | 36 | 6 | 17 | 4 | 63 |
| 257 | 35 | 1 | 11 | 7 | 54 |
| 260 | 33 | 4 | 16 | 0 | 53 |
| 263 | 41 | 1 | 23 | 3 | 68 |
| 264 | 57 | 5 | 40 | 4 | 106 |
| 267 | 39 | 2 | 12 | 1 | 54 |
| 268 | 28 | 2 | 19 | 1 | 50 |
| 338 | 12 | 0 | 2 | 4 | 18 |
| 339 | 8 | 4 | 4 | 0 | 16 |
| 341 | 39 | 11 | 28 | 2 | 80 |
| 342 | 24 | 8 | 24 | 10 | 66 |
| 343 | 34 | 8 | 17 | 4 | 63 |
| 344 | 9 | 8 | 13 | 4 | 34 |
| 345 | 25 | 5 | 23 | 8 | 61 |
| 346 | 38 | 3 | 6 | 2 | 49 |
| 347 | 20 | 0 | 5 | 0 | 25 |
| 348 | 10 | 1 | 5 | 0 | 16 |
| 349 | 43 | 5 | 11 | 5 | 64 |
| 601 | 9 | 0 | 0 | 0 | 9 |
| 603 | 25 | 3 | 9 | 1 | 38 |
| TOTAL | 764 | 97 | 409 | 71 | 1,341 |

Table 11. Early Antlerless Deer Season Harvest by Permit Area, 2018.

| Permit Area | Fawn Male Harvest | Adult Female Harvest | Fawn Female Harvest | Total Harvest |
|--------------|-------------------|----------------------|---------------------|---------------|
| 346 | 39 | 157 | 65 | 261 |
| 348 | 11 | 31 | 14 | 56 |
| 349 | 57 | 186 | 75 | 318 |
| 603 | 17 | 67 | 18 | 102 |
| TOTAL | 124 | 441 | 172 | 737 |

Table 12. 300 Series A and B Seasons Firearms Harvest by Permit Area, 2018.

| Permit Area | Zone | Adult Male | Fawn Male | Adult Female | Fawn Female | Total |
|--------------|------|-------------|-------------|--------------|-------------|--------------|
| 338 | 3A | 201 | 19 | 116 | 18 | 354 |
| | 3B | 20 | 14 | 41 | 10 | 85 |
| 339 | 3A | 208 | 58 | 143 | 40 | 449 |
| | 3B | 31 | 22 | 63 | 18 | 134 |
| 341 | 3A | 618 | 105 | 378 | 100 | 1201 |
| | 3B | 157 | 89 | 270 | 67 | 583 |
| 342 | 3A | 414 | 90 | 296 | 67 | 867 |
| | 3B | 129 | 65 | 201 | 52 | 447 |
| 343 | 3A | 463 | 102 | 299 | 56 | 920 |
| | 3B | 106 | 48 | 155 | 47 | 356 |
| 344 | 3A | 260 | 46 | 126 | 35 | 467 |
| | 3B | 48 | 22 | 86 | 16 | 172 |
| 345 | 3A | 310 | 58 | 191 | 55 | 614 |
| | 3B | 96 | 46 | 127 | 53 | 322 |
| 346 | 3A | 637 | 113 | 368 | 131 | 1249 |
| | 3B | 185 | 98 | 302 | 123 | 708 |
| 347 | 3A | 217 | 19 | 81 | 19 | 336 |
| | 3B | 43 | 31 | 64 | 30 | 168 |
| 348 | 3A | 156 | 34 | 108 | 20 | 318 |
| | 3B | 33 | 18 | 60 | 18 | 129 |
| 349 | 3A | 733 | 114 | 437 | 135 | 1419 |
| | 3B | 230 | 146 | 401 | 149 | 926 |
| 603 | 3A | 377 | 65 | 206 | 71 | 719 |
| | 3B | 143 | 54 | 143 | 40 | 380 |
| Total | | 5815 | 1476 | 4662 | 1370 | 13323 |

Table 13. Free Landowner License Harvest by Permit Area, 2018.

| Permit Area | Fawn Male | Adult Female | Fawn Female | Total |
|-------------|-----------|--------------|-------------|-------|
| 101 | 0 | 7 | 1 | 8 |
| 105 | 3 | 7 | 2 | 12 |
| 108 | 0 | 0 | 1 | 1 |
| 110 | 2 | 16 | 1 | 19 |
| 111 | 0 | 4 | 0 | 4 |
| 117 | 0 | 1 | 0 | 1 |
| 133 | 0 | 1 | 0 | 1 |
| 155 | 0 | 5 | 2 | 7 |
| 156 | 1 | 10 | 0 | 11 |
| 157 | 12 | 16 | 3 | 31 |
| 159 | 2 | 3 | 0 | 5 |
| 169 | 0 | 1 | 0 | 1 |
| 171 | 0 | 2 | 1 | 3 |
| 172 | 1 | 6 | 2 | 9 |
| 176 | 0 | 3 | 0 | 3 |
| 177 | 2 | 6 | 0 | 8 |
| 178 | 0 | 5 | 1 | 6 |
| 179 | 2 | 7 | 2 | 11 |
| 181 | 0 | 1 | 0 | 1 |
| 182 | 0 | 1 | 0 | 1 |
| 183 | 1 | 3 | 1 | 5 |
| 184 | 6 | 23 | 5 | 34 |
| 197 | 0 | 1 | 0 | 1 |
| 199 | 0 | 0 | 0 | 0 |
| 201 | 2 | 1 | 0 | 3 |
| 203 | 0 | 1 | 0 | 1 |
| 208 | 0 | 8 | 1 | 9 |
| 209 | 2 | 13 | 1 | 16 |
| 210 | 6 | 20 | 4 | 30 |
| 213 | 19 | 69 | 18 | 106 |
| 214 | 19 | 77 | 21 | 117 |
| 215 | 7 | 29 | 8 | 44 |
| 218 | 1 | 10 | 1 | 12 |
| 219 | 1 | 2 | 1 | 4 |
| 221 | 11 | 32 | 3 | 46 |
| 222 | 3 | 8 | 3 | 14 |
| 223 | 1 | 1 | 0 | 2 |
| 225 | 1 | 20 | 2 | 23 |
| 227 | 1 | 4 | 0 | 5 |
| 229 | 0 | 1 | 0 | 1 |
| 232 | 0 | 5 | 1 | 6 |
| 233 | 0 | 4 | 0 | 4 |
| 236 | 0 | 3 | 0 | 3 |
| 239 | 11 | 24 | 5 | 40 |
| 240 | 16 | 52 | 11 | 79 |
| 241 | 25 | 92 | 21 | 138 |
| 246 | 5 | 34 | 4 | 43 |
| 247 | 0 | 3 | 1 | 4 |
| 248 | 2 | 4 | 0 | 6 |
| 249 | 13 | 42 | 15 | 70 |
| 254 | 0 | 3 | 1 | 4 |
| 255 | 4 | 6 | 0 | 10 |
| 256 | 4 | 11 | 4 | 19 |
| 257 | 2 | 16 | 4 | 22 |
| 258 | 2 | 5 | 1 | 8 |
| 259 | 0 | 7 | 0 | 7 |
| 260 | 2 | 2 | 1 | 5 |
| 262 | 0 | 2 | 2 | 4 |
| 263 | 0 | 3 | 0 | 3 |
| 264 | 0 | 20 | 3 | 23 |
| 265 | 2 | 13 | 4 | 19 |
| 267 | 2 | 4 | 0 | 6 |
| 268 | 0 | 3 | 0 | 3 |
| 276 | 0 | 1 | 1 | 2 |
| 277 | 4 | 7 | 0 | 11 |
| 281 | 0 | 1 | 0 | 1 |
| 290 | 0 | 3 | 0 | 3 |
| 291 | 0 | 0 | 0 | 0 |
| 292 | 2 | 10 | 1 | 13 |
| 293 | 3 | 4 | 2 | 9 |
| 294 | 0 | 1 | 0 | 1 |
| 297 | 0 | 3 | 1 | 4 |
| 298 | 0 | 5 | 2 | 7 |
| 338 | 0 | 3 | 0 | 3 |
| 339 | 1 | 6 | 1 | 8 |
| 341 | 9 | 18 | 10 | 37 |
| 342 | 5 | 21 | 6 | 32 |
| 343 | 2 | 11 | 1 | 14 |

Table 13, Landowner Permit Harvest Continued.

| Permit Area | Fawn Male | Adult Female | Fawn Female | Total |
|--------------|------------|--------------|-------------|--------------|
| 344 | 3 | 12 | 0 | 15 |
| 345 | 5 | 11 | 7 | 23 |
| 346 | 6 | 27 | 15 | 48 |
| 347 | 1 | 5 | 0 | 6 |
| 348 | 2 | 0 | 2 | 4 |
| 349 | 8 | 32 | 11 | 51 |
| 603 | 1 | 2 | 1 | 4 |
| Total | 248 | 966 | 224 | 1,438 |

Table 14. 2018 Firearm Lottery Distribution Report.

| Permit Area Number | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--------------------|------------------|--------------|----------|--------------|---------|-------------------|
| | | Total | Rejected | | | |
| 103 | 1 | 537 | 1 | 232 | 305 | 986 |
| | 2 | 314 | 1 | 0 | 314 | |
| | 3 | 266 | 2 | 0 | 266 | |
| | 4 | 93 | 1 | 0 | 93 | |
| | 5 | 5 | 0 | 0 | 5 | |
| | 6 | 3 | 0 | 0 | 3 | |
| | Total | 1218 | 5 | 232 | 986 | |
| 108 | 1 | 269 | 4 | 269 | 0 | 99 |
| | 2 | 230 | 0 | 230 | 0 | |
| | 3 | 247 | 2 | 247 | 0 | |
| | 4 | 167 | 1 | 167 | 0 | |
| | 5 | 133 | 1 | 133 | 0 | |
| | 6 | 129 | 0 | 30 | 99 | |
| | 8 | 0 | 1 | 0 | 0 | |
| | Total | 1175 | 9 | 1076 | 99 | |
| 118 | 1 | 304 | 1 | 304 | 0 | 394 |
| | 2 | 214 | 0 | 169 | 45 | |
| | 3 | 148 | 0 | 0 | 148 | |
| | 4 | 145 | 0 | 0 | 145 | |
| | 5 | 56 | 0 | 0 | 56 | |
| | Total | 867 | 1 | 473 | 394 | |
| 126 | 1 | 378 | 0 | 281 | 97 | 195 |
| | 2 | 94 | 0 | 0 | 94 | |
| | 3 | 3 | 0 | 0 | 3 | |
| | 4 | 1 | 0 | 0 | 1 | |
| | Total | 476 | 0 | 281 | 195 | |
| 132 | 1 | 399 | 0 | 399 | 0 | 397 |
| | 2 | 381 | 2 | 9 | 372 | |
| | 3 | 25 | 0 | 0 | 25 | |
| | Total | 805 | 2 | 408 | 397 | |

Table 14., continued

| Permit Area Number | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--------------------|------------------|--------------|----------|--------------|---------|-------------------|
| | | Total | Rejected | | | |
| 173 | 1 | 978 | 0 | 496 | 509 | 1477 |
| | 2 | 525 | 1 | 0 | 525 | |
| | 3 | 400 | 3 | 0 | 400 | |
| | 4 | 42 | 1 | 0 | 42 | |
| | 5 | 1 | 0 | 0 | 1 | |
| | Total | 1946 | 5 | 496 | 1477 | |
| 197 | 1 | 707 | 3 | 707 | 0 | 741 |
| | 2 | 617 | 1 | 617 | 0 | |
| | 3 | 392 | 1 | 55 | 337 | |
| | 4 | 373 | 0 | 0 | 373 | |
| | 5 | 31 | 2 | 0 | 31 | |
| | Total | 2120 | 7 | 1379 | 741 | |
| 199 | 1 | 106 | 0 | 1 | 105 | 148 |
| | 2 | 40 | 0 | 0 | 40 | |
| | 3 | 2 | 0 | 0 | 2 | |
| | 4 | 1 | 0 | 0 | 1 | |
| | Total | 149 | 0 | 1 | 148 | |
| 224 | 1 | 229 | 0 | 0 | 229 | 299 |
| | 2 | 18 | 0 | 0 | 18 | |
| | Total | 247 | 0 | 0 | 247 | |
| 234 | 1 | 128 | 0 | 128 | 0 | 92 |
| | 2 | 88 | 0 | 13 | 75 | |
| | 3 | 17 | 0 | 0 | 17 | |
| | Total | 233 | 0 | 141 | 92 | |
| 235 | 1 | 64 | 0 | 28 | 36 | 63 |
| | 2 | 26 | 0 | 0 | 26 | |
| | 3 | 1 | 0 | 0 | 1 | |
| | Total | 91 | 0 | 28 | 63 | |
| 237 | 1 | 91 | 0 | 91 | 0 | 47 |
| | 2 | 94 | 0 | 94 | 0 | |
| | 3 | 95 | 0 | 66 | 29 | |
| | 4 | 18 | 2 | 0 | 18 | |
| | Total | 298 | 2 | 251 | 47 | |
| 238 | 1 | 49 | 0 | 48 | 1 | 46 |
| | 2 | 37 | 0 | 0 | 37 | |
| | 3 | 7 | 0 | 0 | 7 | |
| | 4 | 1 | 0 | 0 | 1 | |
| | Total | 94 | 0 | 48 | 46 | |
| 250 | 1 | 287 | 0 | 287 | 0 | 268 |
| | 2 | 231 | 0 | 1 | 230 | |
| | 3 | 38 | 0 | 0 | 38 | |
| | Total | 556 | 0 | 288 | 268 | |
| 252 | 1 | 326 | 1 | 128 | 198 | 369 |
| | 2 | 158 | 0 | 0 | 158 | |
| | 3 | 13 | 0 | 0 | 13 | |
| | Total | 497 | 1 | 128 | 369 | |
| 253 | 1 | 325 | 2 | 325 | 0 | 340 |
| | 2 | 276 | 1 | 45 | 231 | |
| | 3 | 109 | 0 | 0 | 109 | |
| | Total | 710 | 3 | 370 | 340 | |
| 266 | 1 | 414 | 0 | 163 | 251 | 473 |
| | 2 | 201 | 0 | 0 | 201 | |
| | 3 | 21 | 0 | 0 | 21 | |
| | 4 | 0 | 1 | 0 | 0 | |
| | Total | 636 | 1 | 163 | 473 | |

Table 14., continued.

| Permit Area Number | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--------------------|------------------|--------------|----------|--------------|---------|-------------------|
| | | Total | Rejected | | | |
| 269 | 1 | 202 | 1 | 188 | 14 | 317 |
| | 2 | 151 | 0 | 0 | 151 | |
| | 3 | 149 | 0 | 0 | 149 | |
| | 4 | 2 | 0 | 0 | 2 | |
| | 9 | 1 | 0 | 0 | 1 | |
| | Total | 505 | 1 | 188 | 317 | |
| 270 | 1 | 78 | 0 | 78 | 0 | 141 |
| | 2 | 77 | 0 | 77 | 0 | |
| | 3 | 87 | 0 | 34 | 53 | |
| | 4 | 58 | 0 | 0 | 58 | |
| | 5 | 30 | 0 | 0 | 30 | |
| | Total | 330 | 0 | 189 | 141 | |
| 271 | 1 | 310 | 3 | 106 | 204 | 327 |
| | 2 | 121 | 2 | 0 | 121 | |
| | 3 | 1 | 0 | 0 | 1 | |
| | 4 | 1 | 1 | 0 | 1 | |
| | Total | 433 | 6 | 106 | 327 | |
| 272 | 1 | 203 | 0 | 203 | 0 | 196 |
| | 2 | 113 | 1 | 25 | 88 | |
| | 3 | 101 | 1 | 0 | 101 | |
| | 4 | 5 | 0 | 0 | 5 | |
| | 5 | 0 | 1 | 0 | 0 | |
| | 9 | 2 | 0 | 0 | 2 | |
| | Total | 424 | 3 | 228 | 196 | |
| 274 | 1 | 250 | 0 | 250 | 0 | 220 |
| | 2 | 239 | 2 | 47 | 192 | |
| | 3 | 27 | 1 | 0 | 27 | |
| | 4 | 1 | 0 | 0 | 1 | |
| | Total | 517 | 3 | 297 | 220 | |
| 275 | 1 | 291 | 0 | 291 | 0 | 237 |
| | 2 | 226 | 2 | 189 | 37 | |
| | 3 | 199 | 0 | 0 | 199 | |
| | 4 | 1 | 1 | 0 | 1 | |
| | 5 | 0 | 1 | 0 | 0 | |
| | Total | 717 | 4 | 480 | 237 | |
| 278 | 1 | 278 | 0 | 278 | 0 | 355 |
| | 2 | 235 | 0 | 221 | 14 | |
| | 3 | 205 | 0 | 0 | 205 | |
| | 4 | 134 | 1 | 0 | 134 | |
| | 5 | 2 | 0 | 0 | 2 | |
| | 8 | 0 | 1 | 0 | 0 | |
| | Total | 854 | 2 | 499 | 355 | |
| 279 | 1 | 476 | 1 | 304 | 172 | 261 |
| | 2 | 77 | 1 | 0 | 77 | |
| | 3 | 10 | 1 | 0 | 10 | |
| | 4 | 2 | 0 | 0 | 2 | |
| | Total | 565 | 3 | 304 | 261 | |
| 280 | 1 | 143 | 0 | 143 | 0 | 92 |
| | 2 | 166 | 1 | 166 | 0 | |
| | 3 | 120 | 0 | 33 | 87 | |
| | 4 | 5 | 0 | 0 | 5 | |
| | 6 | 0 | 1 | 0 | 0 | |
| | Total | 434 | 2 | 342 | 92 | |

Table 14., continued.

| Permit Area Number | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--------------------|------------------|--------------|----------|--------------|---------|-------------------|
| | | Total | Rejected | | | |
| 282 | 1 | 43 | 0 | 43 | 0 | 24 |
| | 2 | 46 | 0 | 46 | 0 | |
| | 3 | 43 | 0 | 41 | 2 | |
| | 4 | 22 | 0 | 0 | 22 | |
| | Total | 154 | 0 | 130 | 24 | |
| 283 | 1 | 201 | 0 | 201 | 0 | 186 |
| | 2 | 188 | 1 | 130 | 58 | |
| | 3 | 128 | 0 | 0 | 128 | |
| | 5 | 0 | 1 | 0 | 0 | |
| | Total | 517 | 2 | 331 | 186 | |
| 284 | 1 | 248 | 2 | 248 | 0 | 190 |
| | 2 | 278 | 2 | 278 | 0 | |
| | 3 | 238 | 0 | 52 | 186 | |
| | 4 | 4 | 1 | 0 | 4 | |
| | Total | 768 | 5 | 578 | 190 | |
| 285 | 1 | 375 | 1 | 191 | 184 | 840 |
| | 2 | 314 | 0 | 0 | 314 | |
| | 3 | 296 | 3 | 0 | 296 | |
| | 4 | 45 | 0 | 0 | 46 | |
| | 6 | 0 | 1 | 0 | 0 | |
| | Total | 1030 | 5 | 191 | 840 | |
| 286 | 1 | 259 | 1 | 259 | 0 | 267 |
| | 2 | 174 | 2 | 9 | 165 | |
| | 3 | 102 | 0 | 0 | 102 | |
| | Total | 535 | 3 | 268 | 267 | |
| 288 | 1 | 426 | 0 | 277 | 149 | 461 |
| | 2 | 297 | 0 | 0 | 297 | |
| | 3 | 15 | 0 | 0 | 15 | |
| | Total | 738 | 0 | 277 | 461 | |
| 289 | 1 | 356 | 0 | 15 | 341 | 407 |
| | 2 | 57 | 0 | 0 | 57 | |
| | 3 | 9 | 0 | 0 | 9 | |
| | Total | 422 | 0 | 15 | 407 | |
| 291 | 1 | 716 | 1 | 716 | 0 | 729 |
| | 2 | 641 | 2 | 131 | 510 | |
| | 3 | 214 | 1 | 0 | 214 | |
| | 4 | 5 | 0 | 0 | 5 | |
| | 5 | 0 | 1 | 0 | 0 | |
| | Total | 1576 | 5 | 847 | 729 | |
| 294 | 1 | 409 | 0 | 83 | 326 | 454 |
| | 2 | 117 | 1 | 0 | 117 | |
| | 3 | 9 | 0 | 0 | 9 | |
| | 4 | 2 | 0 | 0 | 2 | |
| | 5 | 0 | 1 | 0 | 0 | |
| | Total | 537 | 2 | 83 | 454 | |
| 295 | 1 | 299 | 0 | 299 | 0 | 266 |
| | 2 | 295 | 2 | 223 | 72 | |
| | 3 | 191 | 3 | 0 | 191 | |
| | 4 | 3 | 0 | 0 | 3 | |
| | 5 | 0 | 1 | 0 | 0 | |
| | Total | 788 | 6 | 522 | 266 | |

Table 14., continued.

| Permit Area Number | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--------------------|------------------|---------------|------------|---------------|---------------|-------------------|
| | | Total | Rejected | | | |
| 296 | 1 | 289 | 0 | 289 | 0 | 267 |
| | 2 | 259 | 0 | 125 | 134 | |
| | 3 | 133 | 0 | 0 | 133 | |
| | Total | 681 | 0 | 414 | 267 | |
| 299 | 1 | 390 | 1 | 360 | 30 | 362 |
| | 2 | 320 | 0 | 0 | 320 | |
| | 3 | 12 | 2 | 0 | 12 | |
| | 4 | 0 | 1 | 0 | 0 | |
| | 5 | 0 | 1 | 0 | 0 | |
| | Total | 722 | 5 | 360 | 362 | |
| Total | | 29,302 | 112 | 15,359 | 13,971 | 14,023 |

Table 15. 2018 Muzzleloader Lottery Distribution Report.

| Permit Area Number | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--------------------|------------------|--------------|----------|--------------|---------|-------------------|
| | | Total | Rejected | | | |
| 103 | 1 | 8 | 0 | 3 | 5 | 14 |
| | 2 | 4 | 0 | 0 | 4 | |
| | 3 | 5 | 0 | 0 | 5 | |
| | Total | 17 | 0 | 3 | 14 | |
| 108 | 1 | 5 | 0 | 5 | 0 | 1 |
| | 2 | 6 | 0 | 6 | 0 | |
| | 3 | 2 | 0 | 2 | 0 | |
| | 4 | 3 | 0 | 3 | 0 | |
| | 5 | 1 | 0 | 0 | 1 | |
| | Total | 17 | 0 | 16 | 1 | |
| 118 | 1 | 9 | 0 | 8 | 1 | 6 |
| | 2 | 4 | 0 | 0 | 4 | |
| | 3 | 1 | 0 | 0 | 1 | |
| | Total | 14 | 0 | 8 | 6 | |
| 126 | 1 | 10 | 0 | 6 | 4 | 5 |
| | 2 | 1 | 0 | 0 | 1 | |
| | Total | 11 | 0 | 6 | 5 | |
| 132 | 1 | 4 | 0 | 3 | 1 | 3 |
| | 2 | 1 | 0 | 0 | 1 | |
| | 3 | 1 | 0 | 0 | 1 | |
| | Total | 6 | 0 | 3 | 3 | |
| 169 | 1 | 23 | 0 | 23 | 0 | 10 |
| | 2 | 17 | 0 | 8 | 9 | |
| | 3 | 1 | 0 | 0 | 1 | |
| | Total | 41 | 0 | 31 | 10 | |
| 173 | 1 | 21 | 0 | 7 | 14 | 23 |
| | 2 | 6 | 0 | 0 | 6 | |
| | 3 | 3 | 0 | 0 | 3 | |
| | Total | 30 | 0 | 7 | 23 | |
| 197 | 1 | 13 | 0 | 13 | 0 | 9 |
| | 2 | 8 | 0 | 4 | 4 | |
| | 3 | 4 | 0 | 0 | 4 | |
| | 4 | 1 | 0 | 0 | 1 | |
| | Total | 26 | 0 | 17 | 9 | |
| 199 | 1 | 2 | 0 | 0 | 2 | 2 |
| | Total | 2 | 0 | 0 | 2 | |

Table 15., continued.

| Permit Area Number | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--------------------|------------------|--------------|----------|--------------|---------|-------------------|
| | | Total | Rejected | | | |
| 224 | 1 | 1 | 0 | 0 | 1 | 1 |
| | Total | 1 | 0 | 0 | 1 | |
| 234 | 1 | 13 | 0 | 10 | 3 | 8 |
| | 2 | 5 | 0 | 0 | 5 | |
| | Total | 18 | 0 | 10 | 8 | |
| 235 | 1 | 12 | 0 | 2 | 10 | 12 |
| | 2 | 2 | 0 | 0 | 2 | |
| | Total | 14 | 0 | 2 | 12 | |
| 237 | 1 | 8 | 0 | 8 | 0 | 3 |
| | 2 | 6 | 0 | 6 | 0 | |
| | 3 | 5 | 0 | 2 | 3 | |
| | Total | 19 | 0 | 16 | 3 | |
| 238 | 1 | 5 | 0 | 3 | 2 | 4 |
| | 2 | 2 | 0 | 0 | 2 | |
| | Total | 7 | 0 | 3 | 4 | |
| 250 | 1 | 33 | 0 | 28 | 5 | 32 |
| | 2 | 27 | 0 | 0 | 27 | |
| | Total | 60 | 0 | 28 | 32 | |
| 252 | 1 | 28 | 0 | 7 | 21 | 31 |
| | 2 | 10 | 0 | 0 | 10 | |
| | Total | 38 | 0 | 7 | 31 | |
| 253 | 1 | 65 | 0 | 46 | 19 | 60 |
| | 2 | 36 | 0 | 0 | 36 | |
| | 3 | 5 | 0 | 0 | 5 | |
| | Total | 106 | 0 | 46 | 60 | |
| 266 | 1 | 24 | 0 | 7 | 17 | 27 |
| | 2 | 9 | 0 | 0 | 9 | |
| | 3 | 1 | 0 | 0 | 1 | |
| | Total | 34 | 0 | 7 | 27 | |
| 269 | 1 | 25 | 0 | 14 | 11 | 33 |
| | 2 | 12 | 0 | 0 | 12 | |
| | 3 | 10 | 0 | 0 | 10 | |
| | Total | 47 | 0 | 14 | 33 | |

Table 15., continued.

| Permit Area Number | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--------------------|------------------|--------------|----------|--------------|---------|-------------------|
| | | Total | Rejected | | | |
| 270 | 1 | 8 | 0 | 8 | 0 | 9 |
| | 2 | 4 | 0 | 3 | 1 | |
| | 3 | 6 | 0 | 0 | 6 | |
| | 4 | 1 | 0 | 0 | 1 | |
| | 5 | 1 | 0 | 0 | 1 | |
| | Total | 20 | 0 | 11 | 9 | |
| 271 | 1 | 24 | 0 | 5 | 19 | 23 |
| | 2 | 4 | 0 | 0 | 4 | |
| | Total | 28 | 0 | 5 | 23 | |
| 272 | 1 | 4 | 0 | 4 | 0 | 4 |
| | 2 | 4 | 0 | 1 | 3 | |
| | 9 | 1 | 0 | 0 | 1 | |
| | Total | 9 | 0 | 5 | 4 | |
| 274 | 1 | 39 | 1 | 32 | 7 | 30 |
| | 2 | 23 | 0 | 0 | 23 | |
| | Total | 62 | 1 | 32 | 30 | |
| 275 | 1 | 14 | 0 | 14 | 0 | 13 |
| | 2 | 14 | 0 | 10 | 4 | |
| | 3 | 8 | 0 | 0 | 8 | |
| | 9 | 1 | 0 | 0 | 1 | |
| | Total | 37 | 0 | 24 | 13 | |
| 278 | 1 | 36 | 0 | 36 | 0 | 45 |
| | 2 | 35 | 0 | 16 | 19 | |
| | 3 | 21 | 0 | 0 | 21 | |
| | 4 | 5 | 0 | 0 | 5 | |
| | Total | 97 | 0 | 52 | 45 | |
| 279 | 1 | 67 | 0 | 34 | 33 | 39 |
| | 2 | 6 | 0 | 0 | 6 | |
| | Total | 73 | 0 | 34 | 39 | |
| 280 | 1 | 13 | 1 | 13 | 0 | 8 |
| | 2 | 13 | 0 | 12 | 1 | |
| | 3 | 7 | 0 | 0 | 7 | |
| | Total | 33 | 1 | 25 | 8 | |

Table 15., continued.

| Permit Area Number | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--------------------|------------------|--------------|----------|--------------|---------|-------------------|
| | | Total | Rejected | | | |
| 282 | 1 | 3 | 0 | 3 | 0 | 1 |
| | 2 | 1 | 0 | 1 | 0 | |
| | 3 | 1 | 0 | 1 | 0 | |
| | 5 | 1 | 0 | 0 | 1 | |
| | Total | 6 | 0 | 5 | 1 | |
| 283 | 1 | 20 | 0 | 20 | 0 | 14 |
| | 2 | 10 | 0 | 1 | 9 | |
| | 3 | 5 | 0 | 0 | 5 | |
| | Total | 35 | 0 | 21 | 14 | |
| 284 | 1 | 21 | 0 | 21 | 0 | 10 |
| | 2 | 15 | 0 | 8 | 7 | |
| | 3 | 3 | 0 | 0 | 3 | |
| | Total | 39 | 0 | 29 | 10 | |
| 285 | 1 | 32 | 0 | 9 | 23 | 60 |
| | 2 | 25 | 0 | 0 | 25 | |
| | 3 | 12 | 0 | 0 | 12 | |
| | Total | 69 | 0 | 9 | 60 | |
| 286 | 1 | 34 | 0 | 26 | 8 | 33 |
| | 2 | 21 | 0 | 0 | 21 | |
| | 3 | 4 | 0 | 0 | 4 | |
| | Total | 59 | 0 | 26 | 33 | |
| 288 | 1 | 36 | 0 | 18 | 18 | 39 |
| | 2 | 21 | 0 | 0 | 21 | |
| | Total | 57 | 0 | 18 | 39 | |
| 289 | 1 | 39 | 0 | 0 | 39 | 40 |
| | 2 | 1 | 0 | 0 | 1 | |
| | Total | 40 | 0 | 0 | 40 | |
| 291 | 1 | 75 | 0 | 68 | 7 | 71 |
| | 2 | 60 | 0 | 0 | 60 | |
| | 3 | 3 | 0 | 0 | 3 | |
| | 9 | 1 | 0 | 0 | 1 | |
| | Total | 139 | 0 | 68 | 71 | |
| 294 | 1 | 42 | 0 | 3 | 39 | 46 |
| | 2 | 7 | 0 | 0 | 7 | |
| | Total | 49 | 0 | 3 | 46 | |

Table 15. continued.

| Permit Area Number | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--------------------|------------------|--------------|----------|--------------|------------|-------------------|
| | | Total | Rejected | | | |
| 295 | 1 | 40 | 0 | 40 | 0 | 34 |
| | 2 | 35 | 0 | 15 | 20 | |
| | 3 | 14 | 0 | 0 | 14 | |
| | Total | 89 | 0 | 55 | 34 | |
| 296 | 1 | 41 | 0 | 41 | 0 | 33 |
| | 2 | 25 | 0 | 0 | 25 | |
| | 3 | 8 | 0 | 0 | 8 | |
| | Total | 74 | 0 | 41 | 33 | |
| 299 | 1 | 37 | 0 | 31 | 6 | 38 |
| | 2 | 32 | 0 | 0 | 32 | |
| | Total | 69 | 0 | 31 | 38 | |
| Total | | 1592 | 2 | 718 | 874 | 874 |

Table 16. 2018 Special Firearms Hunt Lottery Distribution Report.

| Special Hunt | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--------------------------------|------------------|--------------|----------|--------------|---------|-------------------|
| | | Total | Rejected | | | |
| 900 - Cascade River SP | 1 | 23 | 0 | 0 | 23 | 100 |
| | 2 | 1 | 0 | 0 | 1 | |
| | Total | 24 | 0 | 0 | 24 | |
| 901 - Rice Lake NWR | 1 | 55 | 0 | 22 | 33 | 40 |
| | 2 | 7 | 0 | 0 | 7 | |
| | 4 | 1 | 0 | 0 | 1 | |
| | Total | 63 | 0 | 21 | 41 | |
| 902 - St. Croix SP | 1 | 389 | 0 | 152 | 237 | 350 |
| | 2 | 105 | 0 | 0 | 105 | |
| | 3 | 3 | 0 | 0 | 3 | |
| | 4 | 4 | 0 | 0 | 4 | |
| | 9 | 1 | 0 | 0 | 1 | |
| | Total | 502 | 0 | 152 | 350 | |
| 903 - Lake Louise SP | 1 | 47 | 0 | 47 | 0 | 25 |
| | 2 | 15 | 0 | 3 | 12 | |
| | 3 | 15 | 0 | 0 | 15 | |
| | Total | 77 | 0 | 50 | 27 | |
| 904 - Gooseberry Falls SP | 1 | 31 | 0 | 7 | 24 | 40 |
| | 2 | 16 | 0 | 0 | 16 | |
| | Total | 47 | 0 | 7 | 40 | |
| 905 - Split Rock Lighthouse SP | 1 | 34 | 0 | 0 | 34 | 40 |
| | 2 | 6 | 0 | 0 | 6 | |
| | Total | 6 | 0 | 0 | 40 | |
| 906 - Tettegouche SP | 1 | 93 | 0 | 0 | 93 | 125 |
| | 2 | 9 | 0 | 0 | 9 | |
| | Total | 102 | 0 | 0 | 102 | |
| 907 - Scenic SP | 1 | 32 | 0 | 6 | 26 | 30 |
| | 2 | 4 | 0 | 0 | 4 | |
| | Total | 36 | 0 | 6 | 30 | |
| 908 - Hayes Lake SP | 1 | 42 | 0 | 0 | 42 | 75 |
| | 3 | 1 | 0 | 0 | 1 | |
| | Total | 43 | 0 | 0 | 43 | |
| 909 - Lake Bemidji SP | 1 | 31 | 0 | 8 | 23 | 30 |
| | 2 | 7 | 0 | 0 | 7 | |
| | Total | 38 | 0 | 8 | 30 | |
| 910 - Zippel Bay SP | 1 | 64 | 0 | 0 | 64 | 75 |
| | 2 | 7 | 0 | 0 | 7 | |
| | 3 | 1 | 0 | 0 | 1 | |
| | Total | 72 | 0 | 0 | 72 | |
| 911 - Judge CR Magney SP | 1 | 14 | 0 | 0 | 14 | 75 |
| | Total | 14 | 0 | 0 | 14 | |
| 913 - Lake Carlos SP | 1 | 26 | 0 | 15 | 11 | 20 |
| | 2 | 6 | 0 | 0 | 6 | |
| | 3 | 3 | 0 | 0 | 3 | |
| | Total | 35 | | 15 | 20 | |

| Special Hunt | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|-------------------------------------|------------------|--------------|----------|--------------|---------|-------------------|
| | | Total | Rejected | | | |
| 914 - William O'Brien SP | 1 | 41 | 0 | 41 | 0 | 50 |
| | 2 | 54 | 0 | 23 | 31 | |
| | 3 | 18 | 0 | 0 | 18 | |
| | 5 | 1 | 0 | 0 | 1 | |
| | 9 | 1 | 0 | 0 | 1 | |
| | Total | 115 | 0 | 64 | 51 | |
| 915 - Lake Bronson SP | 1 | 24 | 0 | 24 | 0 | 30 |
| | 2 | 24 | 0 | 0 | 24 | |
| | 3 | 4 | 0 | 0 | 4 | |
| | 9 | 2 | 0 | 0 | 2 | |
| | Total | 54 | 0 | 24 | 30 | |
| 916 - Maplewood SP | 1 | 136 | 0 | 136 | 0 | 100 |
| | 2 | 130 | 0 | 130 | 0 | |
| | 3 | 120 | 0 | 35 | 85 | |
| | 4 | 10 | 0 | 0 | 10 | |
| | 9 | 5 | 0 | 0 | 5 | |
| | Total | 401 | 0 | 301 | 100 | |
| 917 – Miesville Ravine Park Reserve | 1 | 62 | 0 | 38 | 24 | 40 |
| | 2 | 13 | 0 | 0 | 13 | |
| | 3 | 3 | 0 | 0 | 3 | |
| | Total | 78 | 0 | 38 | 40 | |
| 918 – Beaver Creek Valley SP | 1 | 45 | 0 | 45 | 24 | 40 |
| | 2 | 16 | 0 | 2 | 13 | |
| | 3 | 11 | 0 | 0 | 3 | |
| | Total | 72 | 0 | 47 | 40 | |
| 919 - Glacial Lakes SP | 1 | 39 | 0 | 19 | 20 | 30 |
| | 2 | 11 | 0 | 0 | 11 | |
| | Total | 50 | 0 | 19 | 31 | |
| 920 - Zumbro Falls Woods SNA | 1 | 8 | 0 | 2 | 6 | 12 |
| | 2 | 6 | 0 | 0 | 6 | |
| | Total | 14 | 0 | 2 | 12 | |
| 922 - Old Mill SP | 1 | 14 | 0 | 14 | 0 | 10 |
| | 2 | 10 | 0 | 5 | 5 | |
| | 3 | 5 | 0 | 0 | 5 | |
| | Total | 29 | 0 | 19 | 10 | |
| 923 - Zumbro Falls Woods SNA | 1 | 14 | 0 | 2 | 12 | 12 |
| | Total | 14 | 0 | 2 | 12 | |
| 925A - Vermillion Highlands WMA | 1 | 33 | 0 | 33 | 0 | 18 |
| | 2 | 25 | 0 | 25 | 0 | |
| | 3 | 17 | 0 | 3 | 14 | |
| | 4 | 4 | 0 | 0 | 4 | |
| | Total | 79 | 0 | 61 | 18 | |
| 925B - Vermillion Highlands WMA | 1 | 2 | 0 | 2 | 0 | 2 |
| | 2 | 6 | 0 | 6 | 0 | |
| | 3 | 3 | 0 | 0 | 3 | |
| | Total | 11 | 0 | 8 | 3 | |

| Special Hunt | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|-------------------------------------|------------------|--------------|----------|--------------|--------------|-------------------|
| | | Total | Rejected | | | |
| 927 – Elm Creek Park Reserve | 1 | 185 | 0 | 185 | 0 | 133 |
| | 2 | 145 | 0 | 106 | 39 | |
| | 3 | 87 | 0 | 0 | 87 | |
| | 4 | 6 | 0 | 0 | 6 | |
| | 9 | 1 | 0 | 0 | 1 | |
| | Total | 424 | 0 | 291 | 133 | |
| 927 – Elm Creek Park Reserve | 1 | 15 | 0 | 11 | 4 | 10 |
| | 2 | 5 | 0 | 0 | 5 | |
| | 3 | 1 | 0 | 0 | 1 | |
| | Total | 21 | 0 | 11 | 10 | |
| 928 – Wild River SP | 1 | 159 | 0 | 159 | 0 | 75 |
| | 2 | 83 | 0 | 46 | 37 | |
| | 3 | 38 | 0 | 0 | 38 | |
| | Total | 280 | 0 | 205 | 75 | |
| 931 - City of Grand Rapids | 1 | 42 | 0 | 0 | 42 | 46 |
| | 2 | 2 | 0 | 0 | 2 | |
| | 3 | 2 | 0 | 0 | 2 | |
| | Total | 46 | 0 | 0 | 46 | |
| 933 - Forestville - Mystery Cave SP | 1 | 71 | 0 | 0 | 71 | 130 |
| | 2 | 5 | 0 | 0 | 5 | |
| | Total | 76 | 0 | 0 | 76 | |
| 934 - Whitewater State Game Refuge | 1 | 81 | 0 | 32 | 49 | 75 |
| | 2 | 25 | 0 | 0 | 25 | |
| | 3 | 1 | 0 | 0 | 1 | |
| | Total | 107 | 0 | 32 | 75 | |
| TOTAL | | 2,876 | 0 | 1,360 | 1,565 | 1,8138 |

¹Permits allocated can exceed permits available by a maximum of 3 if the last winning pick is a group of up to 4 hunters.

Table 17. 2018 Special Muzzleloader Hunt Lottery Distribution Report.

| Special Hunt | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--|------------------|--------------|----------|--------------|---------|-------------------|
| | | Total | Rejected | | | |
| 921 - Minneopa SP | 1 | 33 | 0 | 33 | 0 | 15 |
| | 2 | 17 | 0 | 10 | 7 | |
| | 3 | 8 | 0 | 0 | 8 | |
| | Total | 58 | 0 | 43 | 15 | |
| 929 – McCarthy Beach SP | 1 | 10 | 0 | 0 | 10 | 25 |
| | 2 | 1 | 0 | 0 | 4 | |
| | Total | 14 | 0 | 0 | 14 | |
| 930 – Nerstrand Big Woods SP | 1 | 53 | 0 | 53 | 0 | 50 |
| | 2 | 27 | 0 | 5 | 22 | |
| | 3 | 29 | 0 | 0 | 29 | |
| | 4 | 2 | 0 | 0 | 2 | |
| | Total | 111 | 0 | 58 | 53 | |
| 932 – Rice Lake SP | 1 | 26 | 0 | 21 | 5 | 20 |
| | 2 | 12 | 0 | 0 | 12 | |
| | 3 | 4 | 0 | 0 | 4 | |
| | Total | 42 | 0 | 21 | 21 | |
| 935 - Jay Cooke SP | 1 | 86 | 0 | 63 | 23 | 75 |
| | 2 | 53 | 0 | 0 | 53 | |
| | Total | 139 | 0 | 63 | 76 | |
| 936 - Crow Wing SP | 1 | 19 | 0 | 19 | 0 | 25 |
| | 2 | 32 | 0 | 9 | 23 | |
| | 4 | 3 | 0 | 0 | 3 | |
| | 9 | 1 | 0 | 0 | 1 | |
| | Total | 55 | 0 | 0 | 27 | |
| 937 - Lake Vermillion-Soudan Underground Mine SP | 1 | 27 | 0 | 4 | 23 | 25 |
| | 2 | 2 | 0 | 0 | 2 | |
| | Total | 29 | 0 | 4 | 25 | |
| 938 - City of Tower | 1 | 13 | 0 | 0 | 13 | 20 |
| | 2 | 2 | 0 | 0 | 2 | |
| | Total | 15 | 0 | 0 | 15 | |
| 939 - Myre-Big Island SP | 1 | 65 | 0 | 52 | 13 | 50 |
| | 2 | 33 | 0 | 0 | 33 | |
| | 3 | 7 | 0 | 0 | 7 | |
| | Total | 105 | 0 | 52 | 53 | |
| 940 - Frontenac SP | 1 | 62 | 0 | 47 | 15 | 60 |
| | 2 | 41 | 0 | 0 | 41 | |
| | 3 | 5 | 0 | 0 | 5 | |
| | 9 | 1 | 0 | 0 | 1 | |
| | Total | 109 | 0 | 47 | 62 | |

| Special Hunt | Preference Level | Applications | | Unsuccessful | Winners | Permits Available |
|--|------------------|--------------|----------|--------------|------------|-------------------|
| | | Total | Rejected | | | |
| 941 – Lake Maria SP | 1 | 53 | 0 | 53 | 0 | 25 |
| | 2 | 33 | 0 | 18 | 15 | |
| | 3 | 9 | 0 | 0 | 9 | |
| | 9 | 1 | 0 | 0 | 1 | |
| | Total | 96 | 0 | 71 | 25 | |
| 942 - Sibley SP | 1 | 60 | 0 | 53 | 7 | 60 |
| | 2 | 52 | 0 | 0 | 52 | |
| | 3 | 2 | 0 | 0 | 2 | |
| | Total | 114 | 0 | 53 | 61 | |
| 943 – Miesville Ravine Park Reserve | 1 | 24 | 0 | 0 | 24 | 40 |
| | 2 | 54 | 0 | 0 | 8 | |
| | 3 | 1 | 0 | 0 | 1 | |
| | Total | 79 | 0 | 0 | 33 | |
| 944 - Vermillion Highlands Research, Recreation, and WMA | 1 | 24 | 0 | 17 | 7 | 20 |
| | 2 | 14 | 0 | 0 | 14 | |
| | Total | 38 | 0 | 17 | 21 | |
| 946 - City of Grand Rapids | 1 | 10 | 0 | 0 | 10 | 12 |
| | 2 | 1 | 0 | 0 | 1 | |
| | 3 | 1 | 0 | 0 | 1 | |
| | Total | 12 | 0 | 0 | 12 | |
| 947 - Lake Bemidji SP | 1 | 18 | 0 | 0 | 18 | 30 |
| | Total | 18 | 0 | 0 | 18 | |
| 948 - Savanna Portage SP | 1 | 12 | 0 | 0 | 12 | 30 |
| | 2 | 2 | 0 | 0 | 2 | |
| | 3 | 1 | 0 | 0 | 1 | |
| | Total | 15 | 0 | 0 | 15 | |
| 949 - St. Croix SP | 1 | 97 | 0 | 2 | 95 | 100 |
| | 2 | 5 | 0 | 0 | 5 | |
| | 9 | 1 | 0 | 0 | 1 | |
| | Total | 103 | 0 | 2 | 101 | |
| TOTAL | | 1,049 | 0 | 429 | 546 | 682 |

¹Permits allocated can exceed permits available by a maximum of 3 if the last winning pick is a group of up to 4 hunters.



2018 MINNESOTA ELK HARVEST REPORT

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INTRODUCTION

A limited number of licenses are offered to Minnesota residents to hunt elk. In 2018, 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 2018, there were three regular season hunts held in Zone 20: 1) Season A - September 8 through September 16, 2) Season B – September 22 through September 30, and 3) Season C - October 6 through October 14. There was one regular season hunt in Zone 30: 1) Season A - September 8 through September 16. The hunts were structured to fall within the breeding season when bull elk are most vulnerable and elk can be located by vocalizations. There were no later season hunts this year and all the seasons were 9 days in length, each included two weekends, with 5 days in between with no hunting. Hunter success rates were generally higher this year with the new season structure. These dates were also chosen to not conflict with the Youth Firearm Deer Season on October 18 through October 21 and the Regular Firearm Deer Season November 3 through November 11.

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, and the whole liver. Hunters must register their animal in person within 24 hours at the local DNR office and provide biological samples. 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

RESULTS

A total of 22 licenses were available and 2,502 individuals or parties (up to two hunters) applied for the opportunity to hunt elk for both zones and all seasons (Table 1). Applicants were given the opportunity

to select both zone and season in which to hunt. First, random drawings were held for landowner names in Zone 20 (20% = 4 tags offered). Once landowner names were drawn and selected, the second round was for names of applicants that had applied for 10 years or more (20% of remaining tags = 3 tags offered). All remaining landowner names were then placed into the general drawing with all the other applicant names for the remaining elk tags available in the zone and season they had selected on their application. Lastly, after all names were picked, there was a random drawing from the names to determine the Either-Sex tags and Antlerless tags. Zone 30 only had two Bull-Only tags available, so no landowner tags were offered.

In 2018, a total of 17 elk were harvested in zones 20 and 30 (Table 2). This gives us a total hunter success rate of 75% for Zone 20 and 100% for Zone 30. Long-term elk harvest for all zones is depicted in Tables 3 and 4.

Table 1. License allocation and application numbers of the 2018 Minnesota elk seasons

| Kittson County Season A | | | | | |
|--------------------------------|------------|------------|-----------|----------|------------------|
| Zone | Either-Sex | Antlerless | Bull-only | Total | Total Applicants |
| Zone 20 – Kittson Central | 2 | 5 | 0 | 7 | 787 |
| Zone 30 – Kittson Northeast | 0 | 0 | 2 | 2 | 716 |
| Total | 2 | 5 | 2 | 9 | 1,503 |
| Kittson County Season B | | | | | |
| Zone | Either-Sex | Antlerless | Bull-only | Total | Total Applicants |
| Zone 20 – Kittson Central | 1 | 6 | 0 | 7 | 598 |
| Total | 1 | 6 | 0 | 7 | 598 |
| Kittson County Season C | | | | | |
| Zone | Either-Sex | Antlerless | Bull-only | Total | Total Applicants |
| Zone 20 – Kittson Central | 1 | 5 | 0 | 6 | 401 |
| Total | 1 | 5 | 0 | 6 | 401 |

Table 2. Distribution of the 2018 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 8-16) | 2 | 5 | 2 | 5 | 7 |
| Season B (Sept 22-30) | 1 | 6 | 1 | 5 | 6 |
| Season C (Oct 6 – 14) | 1 | 5 | 0 | 2 | 2 |
| Total | 4 | 16 | 3 | 12 | 15 |
| Kittson County Northeast Hunt Zone (30) | | | | | |
| Season | Bulls-only Licenses | Antlerless Licenses | Bulls taken | Antlerless taken | Total elk taken |
| Season A (Sept 8 – 16) | 2 | 0 | 2 | 0 | 2 |
| Total | 2 | 0 | 2 | 0 | 2 |

Table 3. Grygla elk harvests, 1987-2018

| Grygla Elk Harvests | | | | |
|---------------------|-----------------------|-----------|--------------------|-----------|
| Year | Bulls (or Either-Sex) | | Antlerless | |
| | Permits | Harvest | Permits | Harvest |
| 1987 | 2 | 1 | 2 | 1 |
| 1996 | 2 | 2 | 7 (1 alternate) | 6 |
| 1997 | 5 (2 alternate) | 1 | 5 (2 alternate) | 2 |
| 1998 | 4 (2 alternate) | 2 | 0 | 0 |
| 2004 | 1 | 1 | 4 | 2 |
| 2005 | 1 | 0 | 4 | 0 |
| 2006 | 2 | 2 | 6 | 2 |
| 2007 | 0 | 0 | 6 | 6 |
| 2008 | 2 | 2 | 10 | 6 |
| 2009 | 2 | 3* | 12 | 11 |
| 2010 | 2 | 1 | 5 | 3 |
| 2011 | 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 |
| 2018 | 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) | | | | |
|--|-----------------------|----------------|----------------|-----------------|
| Year | Bulls (or Either-Sex) | | Antlerless | |
| | 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 |
| 2018 | 6 | 5 | 16 | 12 ^e |
| Total | 69 | 54 | 71 | 44 |

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

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

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

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

^e One antlerless cow was taken with an Either-Sex tag.

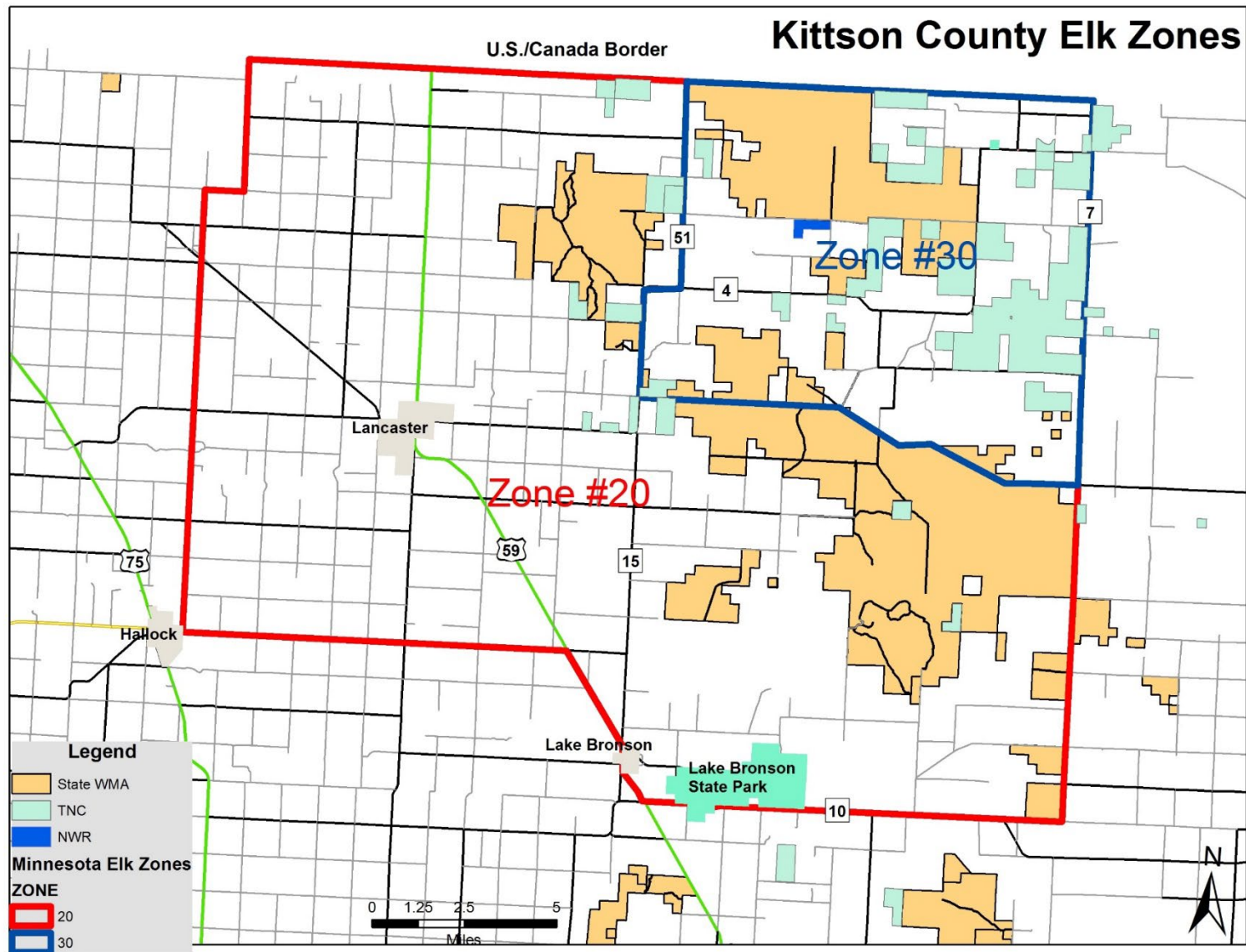


Figure 1. Kittson County Elk Hunt zones.

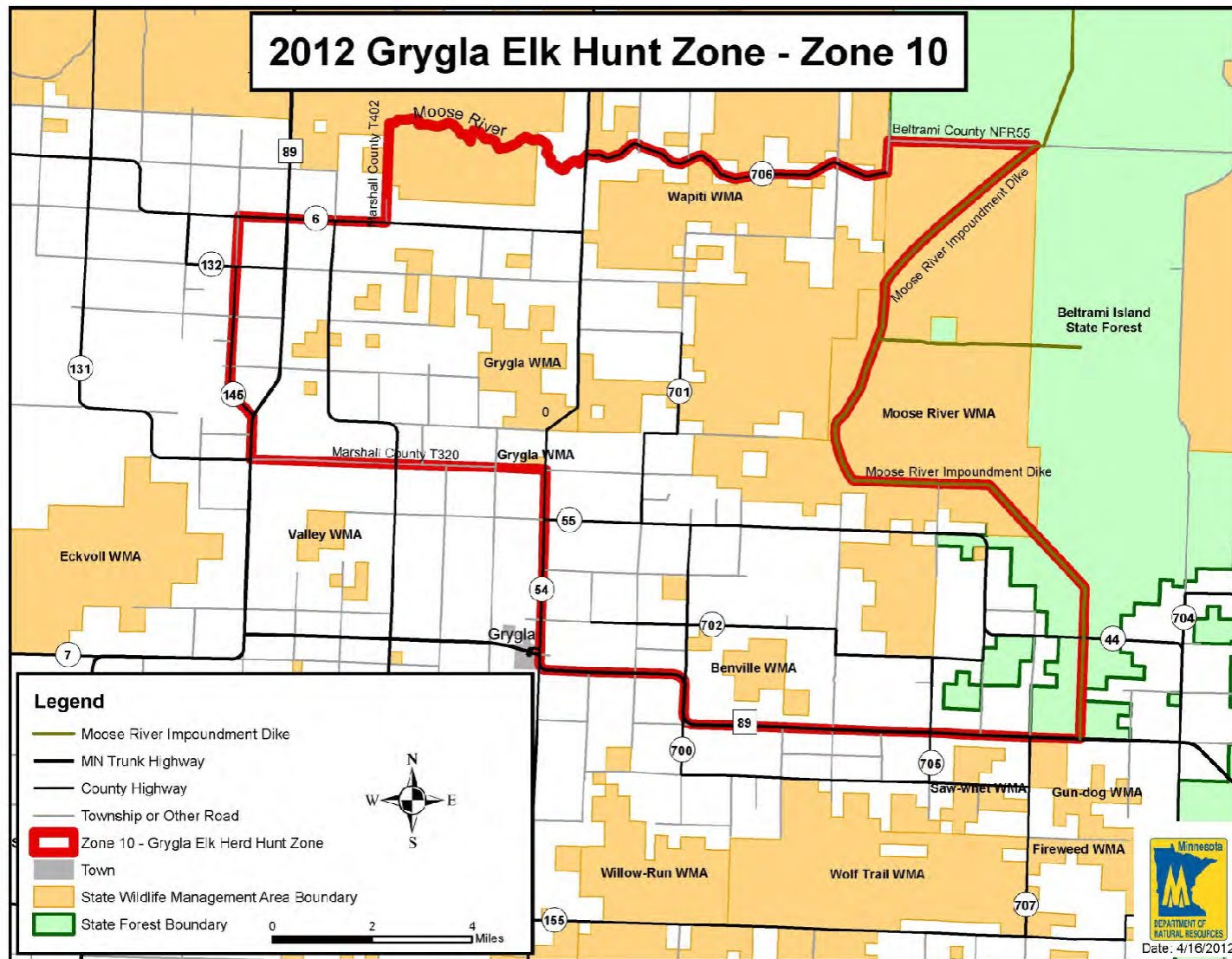


Figure 2. Grygla Elk Hunt zone.



MINNESOTA SANDHILL CRANE HARVEST REPORT, 2018

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. In 2017 the season was shifted to open the third Saturday in September and close the fourth Sunday in October with no changes to the daily and possession limits. This remained the same for the 2018 season. 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 – 2018.

| 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 |
| 2018 | 15 Sept – 21 Oct | 1 | 3 |

Table 2. Sandhill crane permit sales, estimated number of active hunters and harvest for NW Minnesota, 2010-2018. (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 |
| 2018 | 1,091 | 383 | 129 |

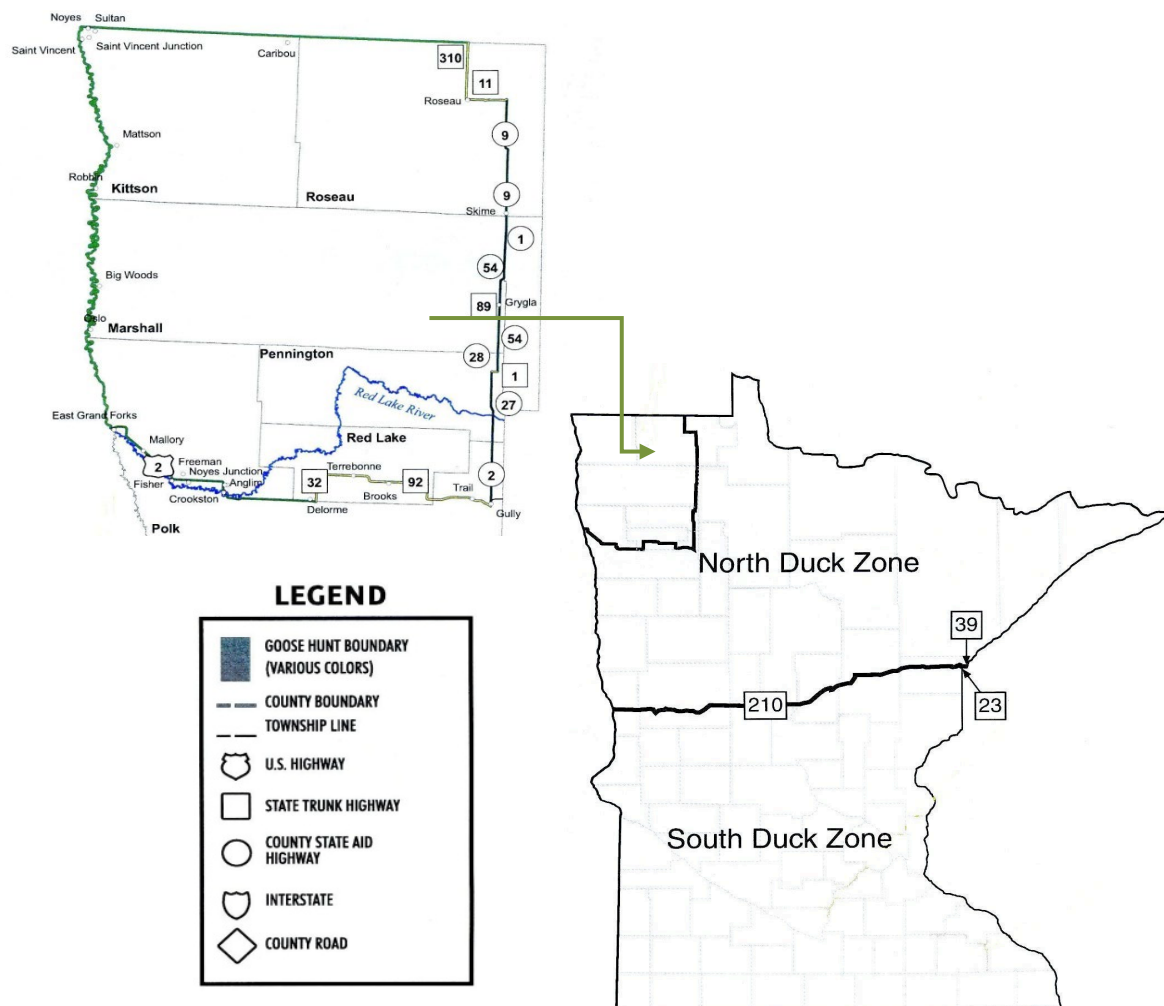


Figure 1. Sandhill crane hunting zone in Minnesota, 2010-2018.

