



2017-18 Co-operative Wildlife Management Survey Report

Ministry of Environment
Fish and Wildlife Branch
Wildlife Unit

2017-18 Co-operative Wildlife Management Survey Report

Thank you!

Thank you for participating in the 2017-18 Co-operative Wildlife Management Survey (CWMS). Whether you participated using our new CWMS App or a traditional paper booklet, we sincerely appreciate your contributions to wildlife management in Saskatchewan. Below, you will find information on population structure for big game and observations for all species included in the CWMS.

Key Observation Period

Please note that participants using the CWMS App can record observations at any time of year, but are encouraged to actively record observations during these key data collection periods:

White-tailed deer and Mule deer: September 1 to November 30

Moose: September 1 to December 31

Elk: September 1 to February 28

Sharp-tailed grouse: March 1 to July 15

Wild turkey: December 1 to March 1

The traditional paper booklet will remain available for those who prefer to record data using a booklet. To sign up, or for more information on the new CWMS mobile App, please call 1-800-567-4224.

Volunteer Participation

There are currently 630 CWMS participants in Saskatchewan, 580 of which are reporting observations using the CWMS App. In 2017-18, CWMS participants collected over 4,000 observations of wildlife in Saskatchewan during key observation periods (Table 1).

Table 1. Number of observations by species collected during key observation periods in 2017-18.

*Observations were collected through the CWMS App only between October 1, 2017 and July 1, 2018.

Species	Observations		Total
	Booklet	CWMS App	
White-tailed deer	681	1,340	2,021
Mule deer	458	850	1,308
Moose	136	269	405
Elk	14	87	101
Sharp-tailed grouse*	0	313	313
Wild turkey*	0	3	3
Grand Total	1,289	2,862	4,151

White-tailed deer (*Odocoileus virginianus*)

White-tailed deer are the most abundant and widespread big-game species in Saskatchewan. Due to the long-running nature of the CWMS for deer species, historic observations of fawns, does and bucks provide an important understanding of changes in population structure that informs white-tailed deer management across Saskatchewan. The key observation period for white-tailed deer is September 1 to November 30 each year and the following information is derived from observations collected during that timeframe.



There were 6,731 white-tailed deer observed (i.e. 1,204 bucks, 3,087 does and 2,440 fawns) during the 2017 key observation period. In 2017, the provincial fall recruitment was 0.79 (79 fawns: 100 does) which is below the provincial long-term average of 0.89 (89 fawns: 100 does) and indicates that populations are continuing their recovery (Figure 1). Provincial adult buck:doe ratios for 2017 were 0.39 (39 bucks: 100 does), which is in line with the long-term average of 0.40 (40 bucks: 100 does) (Figure 2). Of the 1,204 bucks recorded, 771 were classified as A-, B- or C-class bucks (yearlings), 293 as D-class bucks (adults), 133 as E-class bucks and seven as F-class bucks (adults).

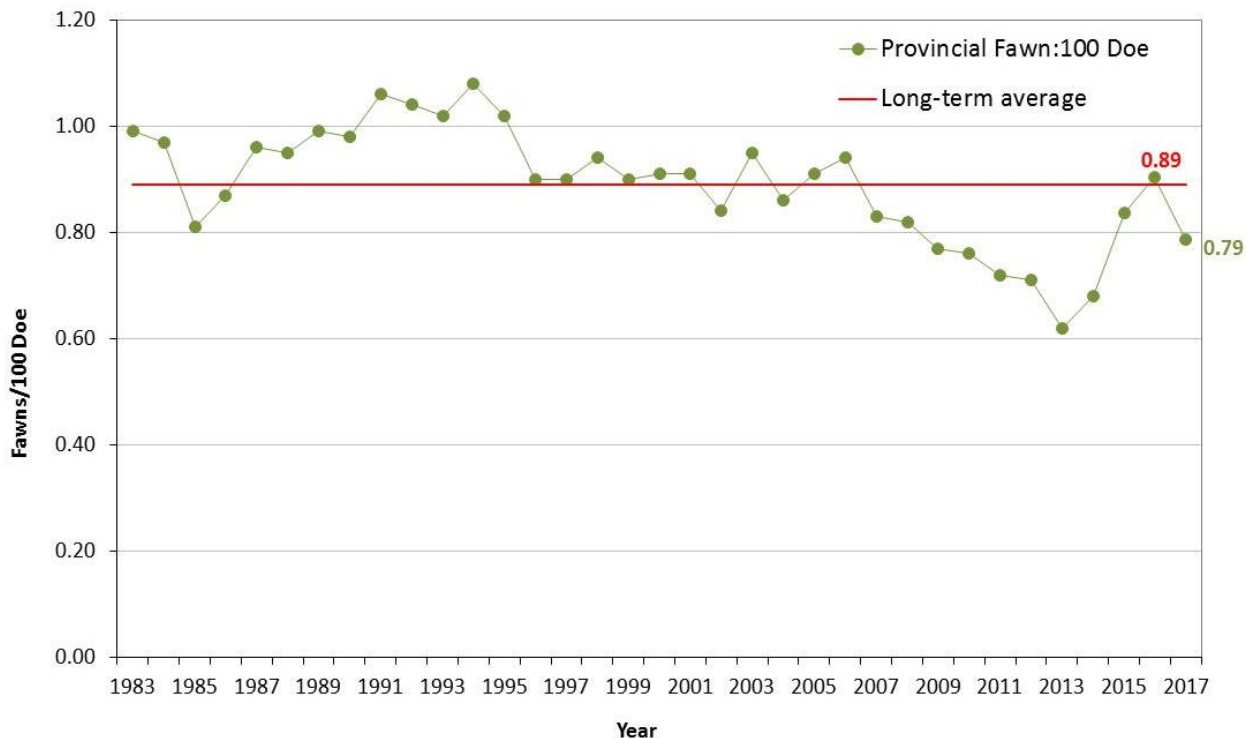


Figure 1. Historical provincial fall recruitment (fawn:doe ratios) for white-tailed deer; note long-term average appears in red (i.e. 89 fawns: 100 does).

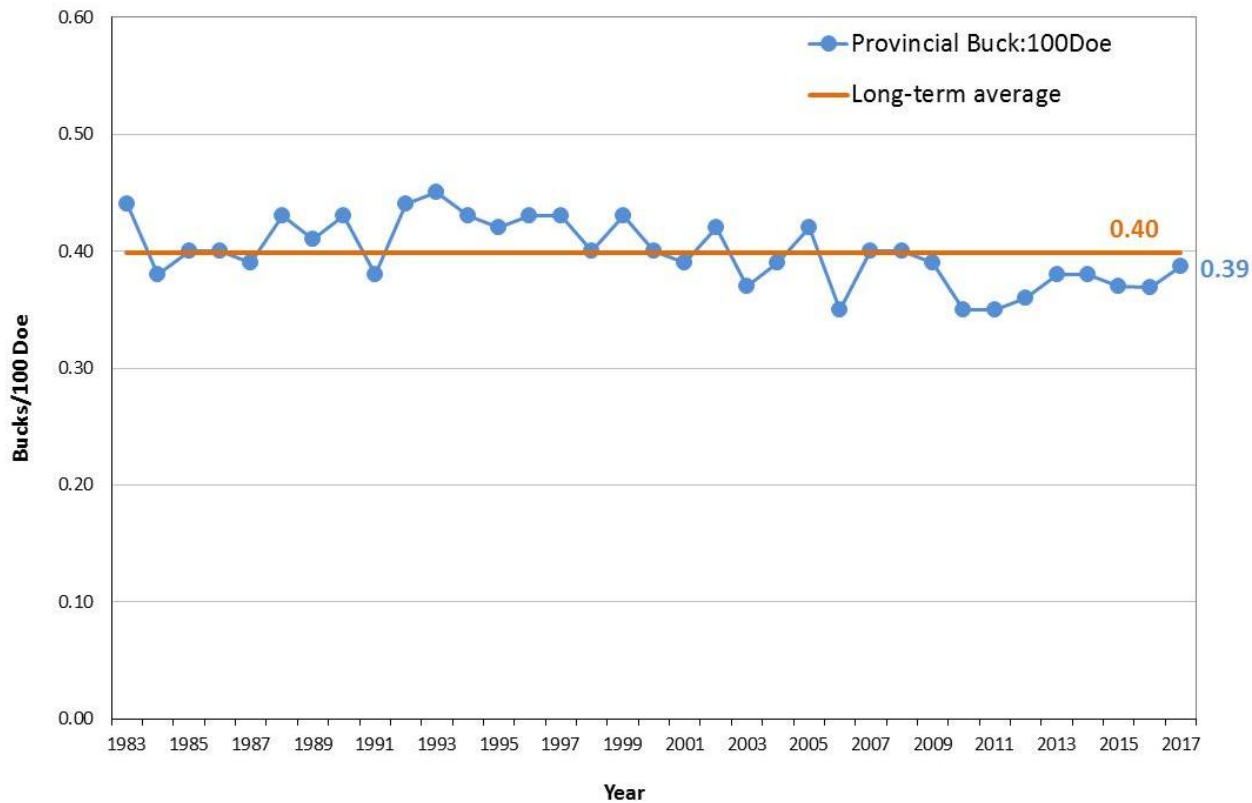


Figure 2. Historical provincial buck:doe ratios for white-tailed deer; note long-term average appears in red (i.e. 40 bucks: 100 does).

Table 2. Number of observations and total number of bucks, does and fawns observed during the 2017 key observation period for white-tailed deer.

Deer Management Unit	WMZ	Number of Observations	Bucks	Does	Fawns
<i>Grassland</i>	1-14	296	233	627	487
<i>Farmland</i>	15-30	597	383	933	745
<i>Parkland</i>	31-47	866	416	1,169	955
<i>Forest Fringe</i>	48-55	221	152	310	220
<i>Forest</i>	56-69	41	20	48	33
Total		2,021	1,204	3,087	2,440

Survey data and field reports suggest that Saskatchewan’s white-tailed deer populations are stable or increasing, and are in the process of recovering from the series of severe winters that occurred 2010-14. Recovery of deer populations will take time because, in addition to impacting the youngest and oldest members of a deer population, a series of severe winters weakens reproductive age classes (i.e. ages two through five) and limits productivity.

Mule deer (*Odocoileus hemionus*)

Mule deer are a highly sought after game species found primarily in open, rolling habitats of Saskatchewan's southwest, although their range extends throughout the province as far north as the forest fringe. Due to the long-running nature of the CWMS for deer species, historic observations of fawns, does and bucks provide an important understanding of changes in population structure that informs mule deer management across Saskatchewan.



Each year, the key observation period for mule deer across the province is September 1 to November 30; the following information is derived from observations collected during that timeframe.

There were 5,494 mule deer observed (i.e. 1,235 bucks, 2,453 does and 1,806 fawns) during the 2017 key observation period. The 2017 fawn:doe ratio was 0.71 (71 fawns: 100 does), which is nearing the long-term average of 0.77 (77 fawns: 100 does) and is an improvement compared to the low fawn:doe ratios from 2010 to 2014 (Figure 3). Provincial buck:doe ratios for 2017-18 were 0.49 (49 bucks: 100 does), which is near the long-term average of 0.52 (52 bucks: 100 does) (Figure 4). Of the 1,235 bucks recorded, 383 were classified as A- or B-class bucks (yearlings), 328 as C-class bucks (adults), 302 as D-class bucks (adults), 232 as E-class bucks and 11 as F-class bucks (adults).

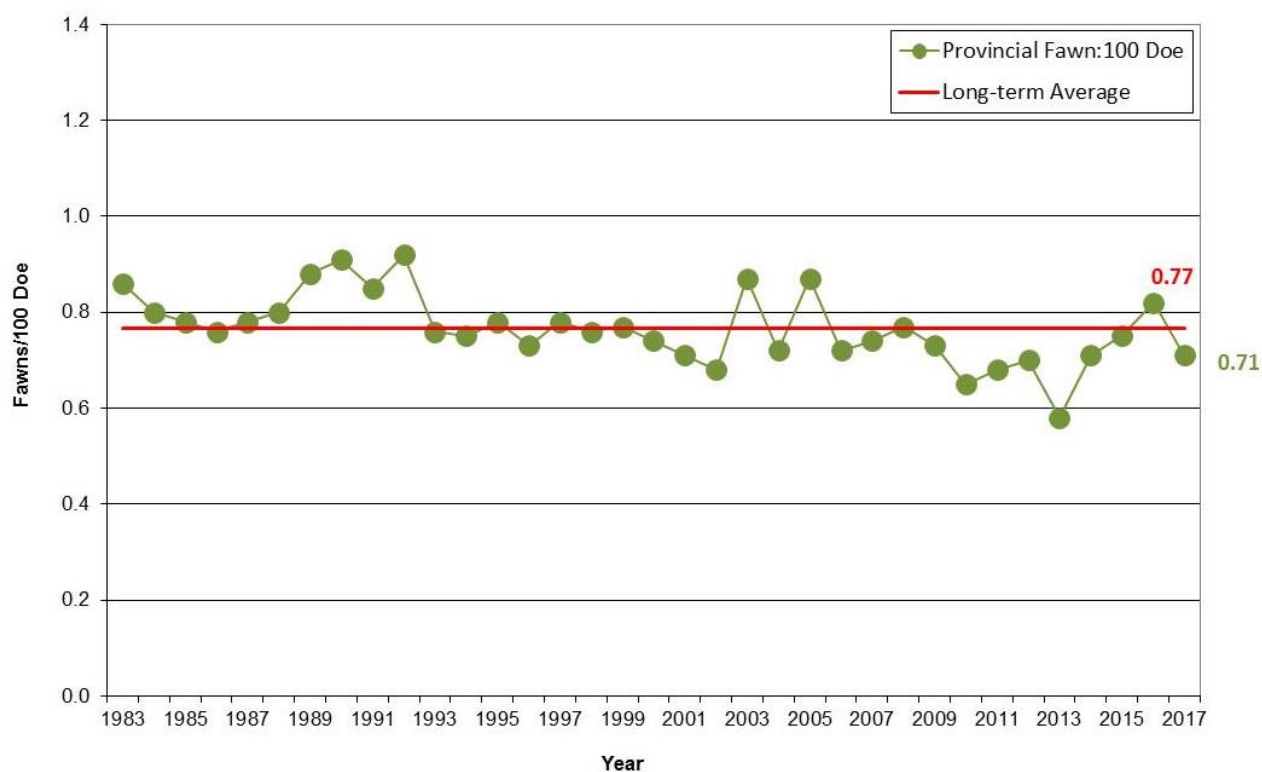


Figure 3. Provincial fall recruitment (fawn:100 doe) for mule deer; note long-term average appears in red (i.e. 77 fawns: 100 does).

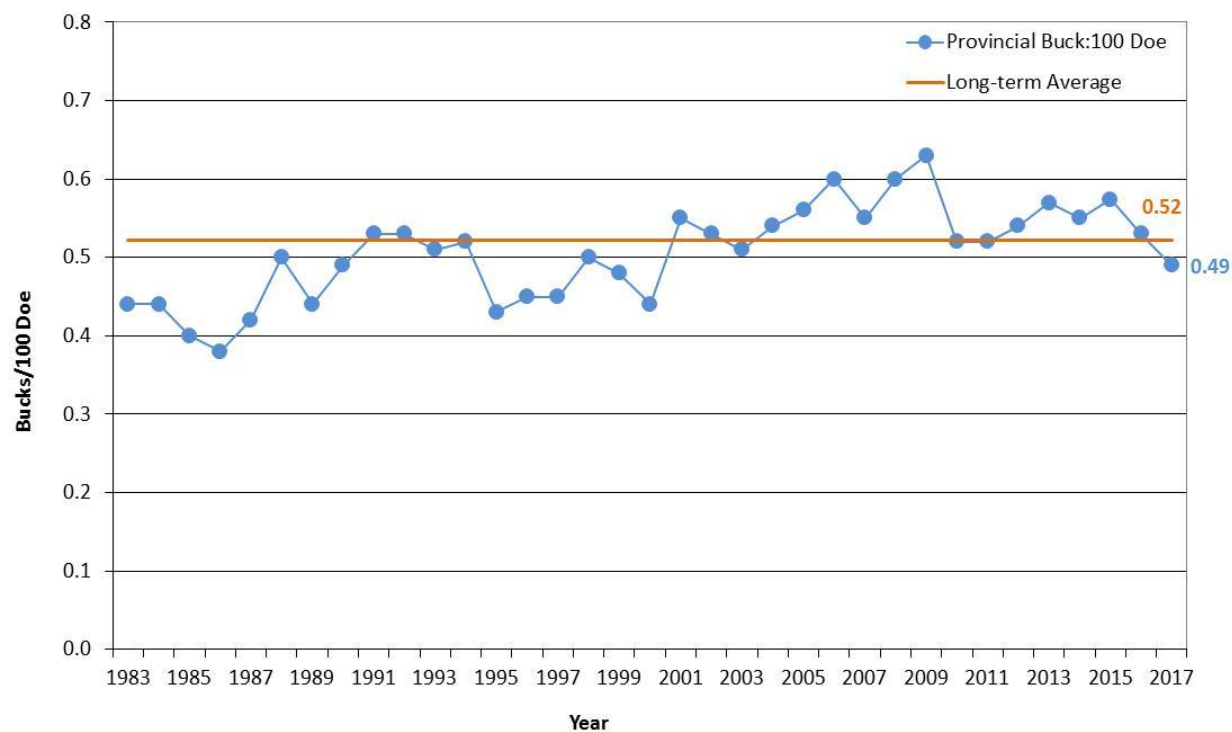


Figure 4. Provincial buck:100 doe ratios for mule deer; long-term average appears in red.

Table 3. Number of observations and total number of mule deer bucks, does and fawns observed during the 2017 key observation period.

Deer Management Unit	WMZ	Number of Observations	Bucks	Does	Fawns
<i>Grassland</i>	1-14	383	528	914	646
<i>Farmland</i>	15-30	566	454	950	756
<i>Parkland</i>	31-47	324	229	525	367
<i>Forest Fringe</i>	48-55	35	24	64	37
Total		1,308	1,235	2,453	1,806

Survey and field report information indicate that Saskatchewan mule deer populations appear to have recovered from a recent series of severe winters, with increasing local populations in select Wildlife Management Zones.

Moose (*Alces alces*)

Moose were added to the new CWMS mobile application in 2017, with the key observation period occurring from September 1 to December 31. Total count, productivity (i.e., calf:cow ratios and twinning rates), bull:cow ratios and location data that are collected through the CWMS have been incorporated into the provincial moose management plan framework.



A total of 112 participants recorded 405 moose observations in 53 wildlife management zones across the province, totaling 881 moose (Table 4). Observations resulted in a final population structure of 79 bulls: 100 cows: 80 calves (total of 264 bulls: 335 cows: 269 calves: 13 unidentified). Of the bulls recorded, 86 were classified as - or B-bulls (juveniles), 130 as C- or D-bulls (sub-adults) and 39 as E- or F-bulls (adults). Out of the 335 cow moose observed, 31 had no calves, 121 had one calf and 60 had twins. The provincial twinning rate, calculated as the proportion of females with calves that also had twins, was 33 per cent. The twinning rate, which generally ranges between 20 and 60 per cent in the province, is known to be a good indicator of moose population condition. Although the twinning rate of 33 per cent is at the lower end of the spectrum generally observed within the province, the total cow:calf ratio of 100 cows: 80 calves (80 per cent fecundity rate) is indicative of a healthy moose population.

Table 4. Number of bulls of each age cohort (juvenile, sub-adult, mature) recorded in each Saskatchewan Moose Management Unit in 2017.

Moose Management Unit	WMZ	Bulls	Cows	Calves	Unidentified
<i>Prairie</i>	1	2	2	2	0
	2W	0	2	2	0
	4	1	3	0	0
	5	0	2	3	0
	9	7	3	2	0
	10	3	2	1	0
	13	5	8	2	0
	14E	4	2	0	0
	15	3	8	7	0
	16	7	6	5	3
	17	12	19	17	1
	18	1	0	1	0
	21	16	24	24	0
	22	3	7	2	0
	23	11	7	6	1
	24	3	3	1	0
	25	2	1	0	0
	26	2	1	1	0
	28	5	4	7	0
	30	6	6	5	0
	32	1	0	0	0

Table 4. continued...

Moose Management Unit	WMZ	Bulls	Cows	Calves	Unidentified
<i>Cypress Hills</i>	6	3	3	1	0
	7	0	1	1	0
<i>Moose Mountain</i>	33	2	1	0	0
	34	5	10	8	0
<i>Eastern Qu'Appelle/ Duck Mountain</i>	35	2	2	3	0
	36	25	36	18	2
	37	11	7	6	0
	38	7	5	7	0
	39	32	60	42	2
<i>Barrier Valley</i>	40	10	11	11	1
	41	7	15	20	0
	42E	2	3	2	0
	42W	10	7	5	0
	43	9	5	8	0
<i>Sonningdale/Manitou</i>	44	6	8	5	0
	45W	10	7	2	0
	46	7	9	12	0
	47	1	4	5	0
<i>Porcupine Hills</i>	48	5	6	10	2
	56	2	0	0	0
	57	1	0	0	0
<i>Pasqua Hills</i>	49	1	2	3	0
	59	4	7	0	0
<i>Thickwood Hills/ Fort a la Corne</i>	50	1	3	0	0
	53	0	1	1	1
	54	0	3	4	0
<i>Candle Lake/Cub Hills</i>	63	1	1	0	0
	65	0	1	0	0
<i>Divide/Bronson Forest</i>	67	2	0	0	0
<i>Regina/Moose Jaw</i>	Regina-Moose Jaw	3	6	7	0
<i>Saskatoon</i>	SWMZ	0	1	0	0
<i>Prince Albert</i>	Prince Albert	1	0	0	0
TOTAL		264	335	269	13

Elk (*Cervus canadensis*)

Elk were added to the new CWMS mobile application in 2017, with the key observation period occurring from August 20 to February 20. Population structure information, such as total count, calf:cow and bull:cow ratios, and herd location data were collected through the CWMS and have been incorporated into the provincial elk management plan framework.



A total of 41 participants recorded 101 elk observations in 32 wildlife management zones across the province, totaling 1,398 elk. To avoid duplicating individual elk, observations recorded with the mobile application found within a five-km radius from another point were screened for herd structure similarities. Where observations with similar herd structure information within this radius occurred, the observation with the lowest count was removed from the final tally. Following observational screening, a total of 95 elk observations were found, totaling 1,351 elk. Observations resulted in a final herd structure of 68 bulls: 100 cows: 58 calves (total of 267 bulls: 392 cows: 227 calves: 472 unidentified). Of the bulls recorded, 94 were classified as A- or B-bulls (juveniles), 111 as C- or D-bulls (sub-adults) and 61 as E- or F-bulls (adults). The herd demographics (sex and age structure) observed indicate a healthy elk population with good representation from all sex and age classes (Tables 5 and 6).

Table 5. Number of bulls of each age cohort (juvenile, sub-adult, mature) recorded in each Saskatchewan Elk Management Unit in 2017.

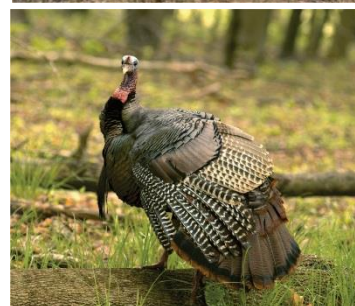
Elk Management Unit	Juvenile	Sub-adult	Mature
<i>Boreal</i>	18	19	1
<i>Parkland</i>	23	12	9
<i>Farmland</i>	36	48	18
<i>Southwest Prairie</i>	17	32	33
Total	94	111	61

Table 6. The number of bulls, cows, calves and unidentified elk recorded in each Wildlife Management Zone and summarized for each Saskatchewan Elk Management Unit in 2017.

Elk Management Units	Bulls	Cows	Calves	Unidentified
<i>Boreal</i>	48	93	61	145
WMZ 48	2	5	3	0
WMZ 49	3	12	4	0
WMZ 50	15	62	46	65
WMZ 52	10	7	4	0
WMZ 55	0	0	0	20
WMZ 64	0	2	0	0
WMZ 66	3	5	4	0
WMZ 67	15	0	0	60
<i>Parkland</i>	35	86	52	282
WMZ 37	10	32	34	138
WMZ 39	17	31	14	99
WMZ 40	0	1	0	0
WMZ 42E	0	0	0	40
WMZ 42W	2	11	3	5
WMZ 43	2	10	0	0
Prince Albert WMZ	4	1	1	0
<i>Farmland</i>	102	143	86	45
WMZ 5	23	29	0	0
WMZ 16	6	0	0	0
WMZ 18	2	0	0	0
WMZ 21	42	82	52	13
WMZ 22	4	0	0	0
WMZ 23	1	5	0	0
WMZ 30	5	12	10	7
WMZ 41	6	4	3	5
Regina-Moose Jaw WMZ	13	11	21	20
<i>Southwest Prairie</i>	82	70	28	0
WMZ 1	4	15	9	0
WMZ 2E	7	0	0	0
WMZ 2W	30	3	0	0
WMZ 8	1	0	0	0
WMZ 9	15	0	0	0
WMZ 11	7	40	15	0
WMZ 13	16	12	4	0
WMZ 24	2	0	0	0
TOTAL	267	392	227	472

Upland game birds

Sharp-tailed grouse (*Tympanuchus phasianellus*) and Wild Turkey (*Meleagris gallopavo*) were a new addition to the CWMS App in 2017 and are not included at this time in the paper booklet. Observations of these species are valuable to wildlife managers at any time of year, but more accurate counts can be obtained during key observation periods. The key observation period for sharp-tailed grouse is March 1 to July 15, when dancing grounds, or leks, are active and/or young can be differentiated from adults. Lek sites are an important, well-established feature on the landscape, with the potential to offer breeding and brood-rearing habitat for sharp-tailed grouse for decades. Sharp-tailed grouse will visit these sites throughout the year, so participants are encouraged to continue reporting observations at any time of the year. For wild turkey, the key observation period is December 1 to March 1, when birds congregate and flock numbers are more easily determined. With that said, wild turkeys are relatively new to Saskatchewan and wildlife managers are interested in their distribution across the province, so observations at all times of year are valuable.



To date, CWMS participants have observed almost 3,000 sharp-tailed grouse and identified 65 lek sites. On these lek sites, more than 700 birds were observed. An additional 18 observations suggested that a lek may be in the vicinity. Only three observations of wild turkey were reported, with two observations of the same single bird.

Table 7. Summary of upland bird observations between October 1, 2017 and July 15, 2018.

Species	Participants Submitting Observations	Number of Observations	Number of Birds Observed	Number of Leks Reported	Number of Birds Observed on Leks
Sharp-tailed grouse	71	314	2,853	65	725
Wild turkey	3	3	9		

Help spread the word!

Results of the CWMS provide important information that guides the management of game species in Saskatchewan. The Ministry of Environment is seeking to enhance participation and you can help by spreading the word about the CWMS with your friends and family. We appreciate it!

For more information on Ministry of Environment wildlife surveys, please visit:

<http://www.saskatchewan.ca/residents/parks-recreation-heritage-and-arts/hunting-trapping-and-angling/wildlife-population-surveys>

If you'd like to discuss game populations or wildlife management with the Ministry of Environment Wildlife Management team, please contact the following species managers:

Species	Manager	
	Phone	Email
Upland game birds	(306) 933-5304	katherine.conkin@gov.sk.ca
White-tailed deer	(306) 786-1425	allison.henderson@gov.sk.ca
Mule deer	(306) 778-8262	todd.whiklo@gov.sk.ca
Elk	(306) 953-2695	tom.perry@gov.sk.ca
Moose	(306) 953-2695	tom.perry@gov.sk.ca