



## 2018-19 Co-operative Wildlife Management Survey Report

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## Thank you!

Thank you for participating in the 2018-19 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 white-tailed deer, mule deer, moose, elk, sharp-tailed grouse and wild turkey. Woodland caribou were added to the CWMS app in August 2018 and information from woodland caribou observations will be included in the 2019-2020 report.

## 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

**Woodland caribou:** year round

**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

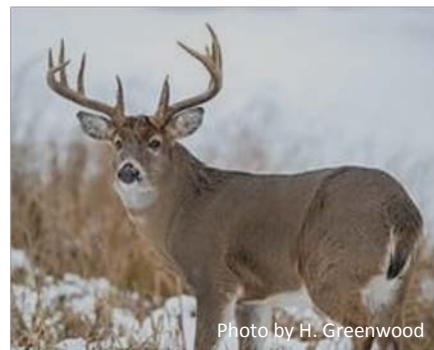
In the 2018-19 reporting cycle, there were 690 CWMS participants in Saskatchewan, 30 of whom reported observations using the traditional paper booklet and 116 who reported observations using the CWMS app. CWMS participants collected nearly 3,000 observations of wildlife across Saskatchewan (Table 1).

**Table 1.** Number of observations by species collected in the 2018-19 reporting cycle (September 1, 2018 to July 15, 2019).

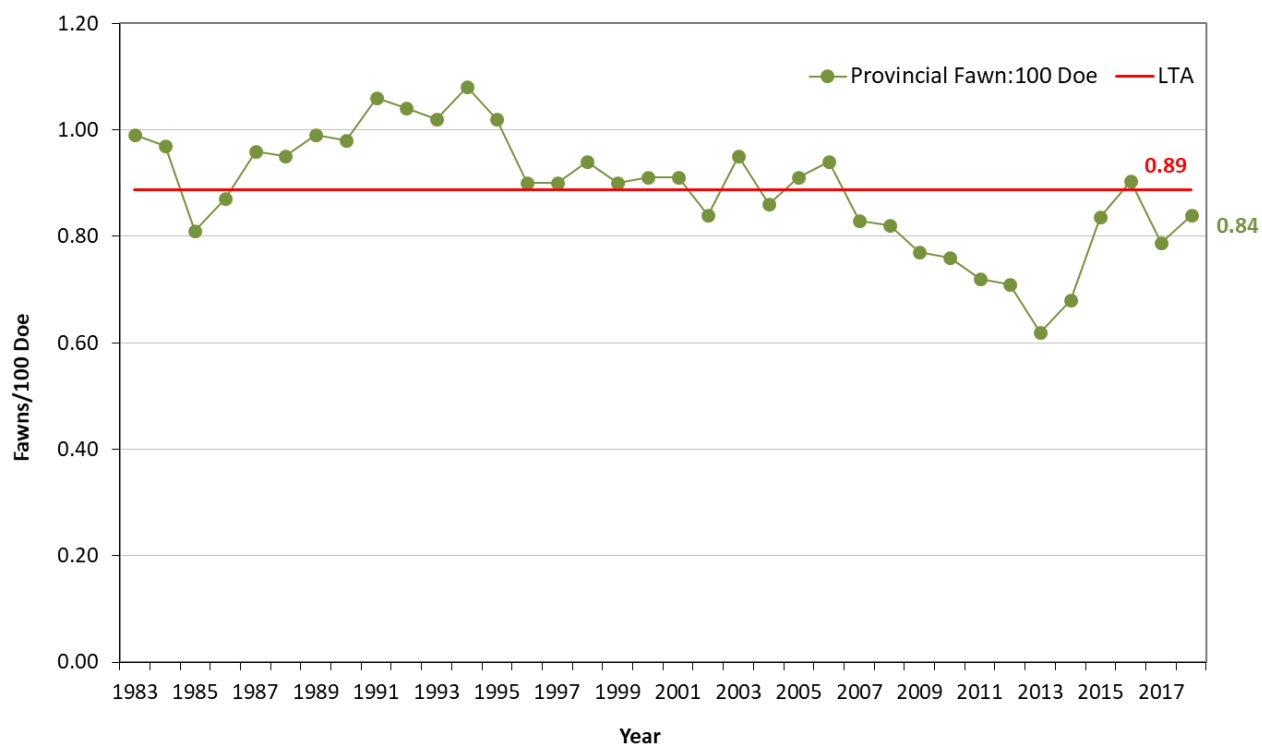
Species	Observations		Total
	Booklet	CWMS App	
White-tailed deer	551	840	1,391
Mule deer	229	541	770
Moose	60	331	391
Elk	6	70	76
Sharp-tailed grouse	0	144	144
Wild turkey	0	1	1
<b>Grand Total</b>	<b>846</b>	<b>1,927</b>	<b>2,773</b>

### White-tailed deer (*Odocoileus virginianus*)

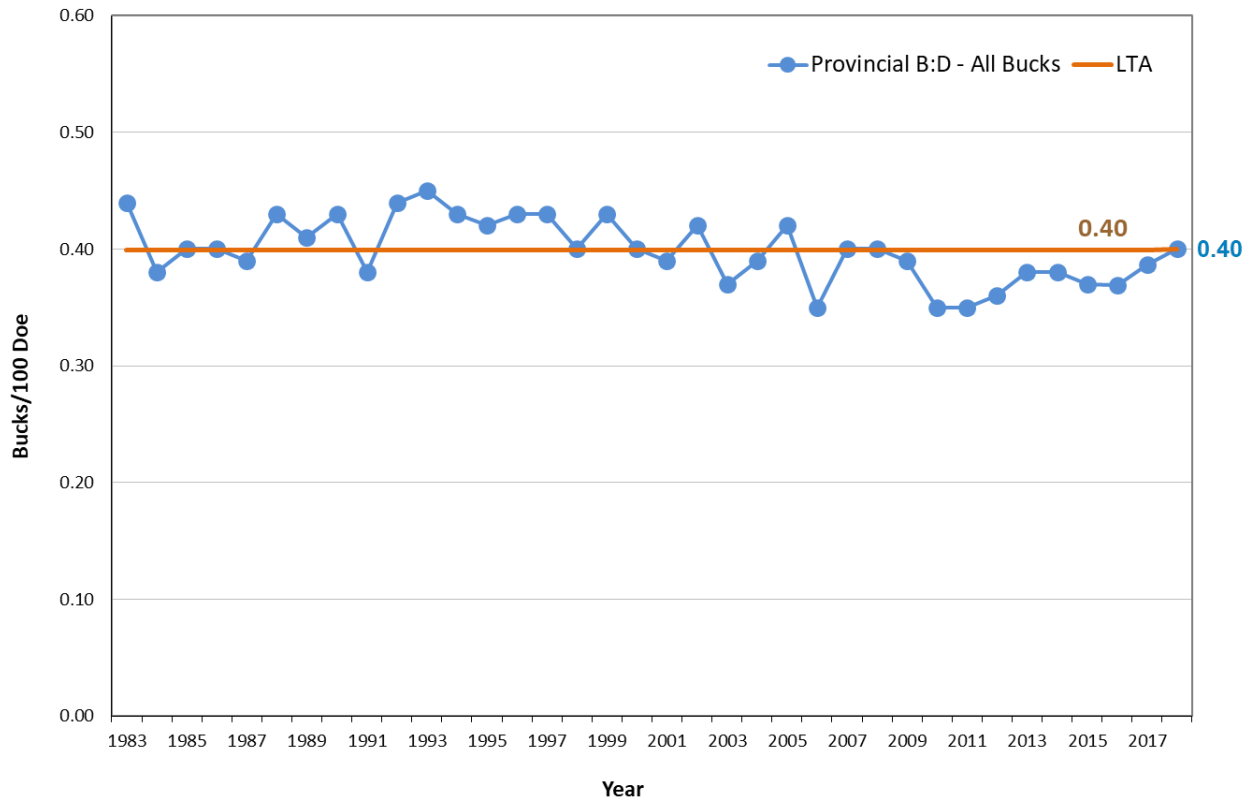
White-tailed deer are the most abundant and widespread big-game species in Saskatchewan. Due to the long-running nature of the CWMS for deer species, historic observations of fawns, does and bucks provide an important understanding of changes in population structure that informs white-tailed deer management 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 4,730 white-tailed deer observed (i.e. 822 bucks, 2,125 does and 1,783 fawns) during the 2018 key observation period (Table 2). In 2018, the provincial fall recruitment was 0.84 (84 fawns: 100 does), which is only slightly below the provincial long-term average of 0.89 (89 fawns: 100 does) and indicates that populations are nearing recovery from a series of severe winters between 2010-2014 (Figure 1). Provincial adult buck:doe ratios for 2018 were 0.40 (40 bucks: 100 does), which is in line with the long-term average (Figure 2). Of the 822 bucks recorded, 475 were classified as A-, B- or C-class bucks (yearlings), 224 as D-class bucks (adults), 96 as E-class bucks and five 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 2018 key observation period for white-tailed deer.

Deer Management Unit	WMZ	Number of Observations	Bucks	Does	Fawns
<i>Grassland</i>	1-14	193	166	517	418
<i>Farmland</i>	15-30	334	200	494	392
<i>Parkland</i>	31-47	695	363	834	763
<i>Forest Fringe</i>	48-55	140	80	238	173
<i>Forest</i>	56-69	29	12	42	37
<b>Total</b>		<b>1,391</b>	<b>822</b>	<b>2,125</b>	<b>1,783</b>

Survey data and field reports suggest that Saskatchewan’s white-tailed deer populations are stable or increasing, and are nearing recovery from a series of severe winters that occurred between 2010-14. Recovery of deer populations across the province has taken 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.

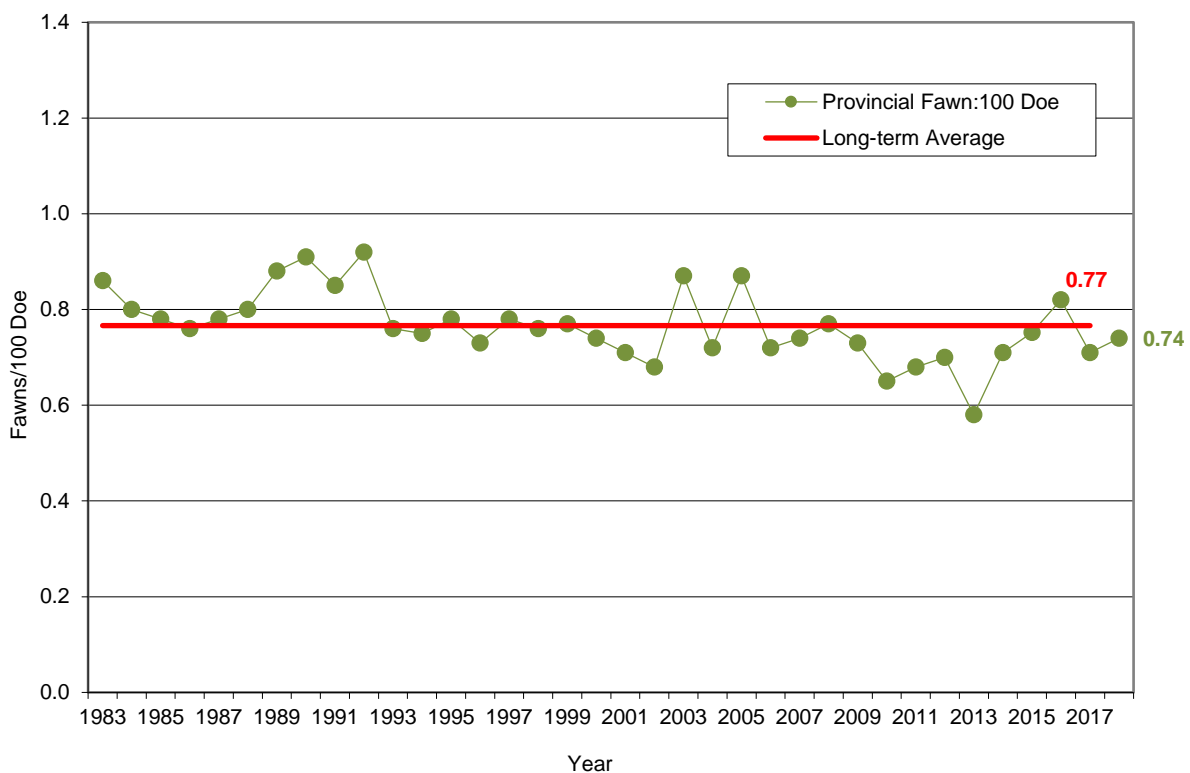
### Mule deer (*Odocoileus hemionus*)

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 fall observations of fawns, does and bucks provide an important understanding of changes in population structure that informs mule deer management across Saskatchewan.

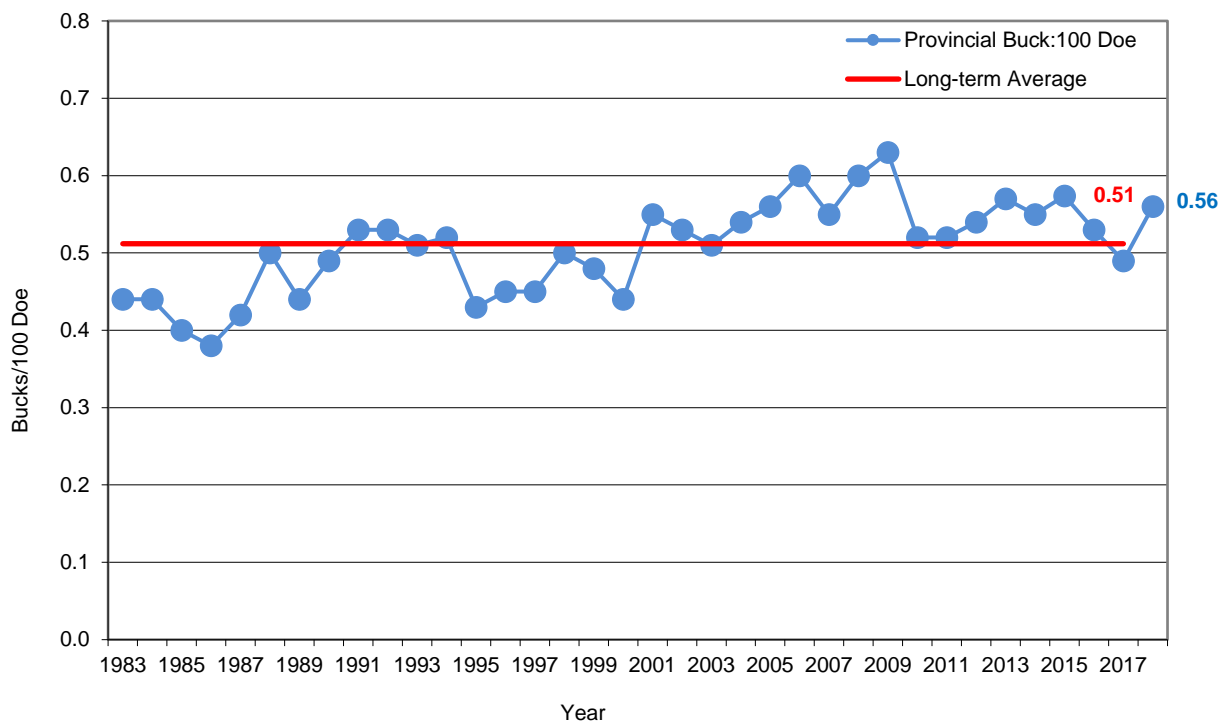


Each year, the key observation period for mule deer across the province is September 1 to November 30; the following information is derived from observations collected during that timeframe.

There were 3,568 mule deer observed (i.e. 875 bucks, 1,549 does and 1,144 fawns) during the 2018 key observation period. The estimated 2018 provincial fawn:doe ratio was 0.74 (74 fawns: 100 does), which is nearing the long-term average of 0.77 (77 fawns: 100 does) (Figure 3). The provincial buck:doe ratio for 2018-19 was estimated at 0.56 (56 bucks: 100 does), which is near the long-term average of 0.51 (51 bucks: 100 does) (Figure 4). Of the 875 bucks recorded, 319 were classified as A- or B-class bucks (yearlings), 193 as C-class bucks (adults), 176 as D-class bucks (adults), 132 as E-class bucks and 23 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 for 2018; long-term average appears in red.

**Table 3.** Number of observations and total number of mule deer bucks, does and fawns observed during the 2018 key observation period.

Deer Management Unit	WMZ	Number of Observations	Bucks	Does	Fawns
<i>Grassland</i>	1-14	162	325	495	414
<i>Farmland</i>	15-30	356	388	684	474
<i>Parkland</i>	31-47	221	142	338	239
<i>Forest Fringe</i>	48-55	31	20	32	17
<b>Total</b>		<b>770</b>	<b>875</b>	<b>1,549</b>	<b>1,144</b>

Survey and field report information indicate that Saskatchewan mule deer populations appear to have recovered from a recent series of severe winters.



### **Moose (*Alces alces*)**

Moose were added to the 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.



In 2018, a total of 102 participants recorded 785 moose in 54 wildlife management zones across the province (Table 4). Observations resulted in a final population structure of 70 bulls: 100 cows: 84 calves (total of 217 bulls: 309 cows: 259 calves). Of the bulls recorded, 23 were classified as A and 36 as B-bulls (juveniles), 70 as C and 51 as D-bulls (sub-adults) and 25 as E- or F-bulls (adults).

**Table 4.** Number of moose observed in each Moose Management Unit in 2018

Moose Management Unit	WMZ	Bulls	Cows	Calves	Unidentified
Prairie	4	1	2	3	0
	5	1	1	1	0
	9	7	3	1	0
	10	2	0	0	0
	11	0	1	0	4
	12	2	3	3	0
	13	0	2	0	0
	14E	1	3	0	0
	15	5	4	4	2
	16	2	2	2	1
	17	6	17	17	3
	18	4	1	1	0
	19	2	0	0	0
	21	6	4	6	1
	22	3	5	0	2
	23	6	9	4	2
	25	1	2	1	0
	26	0	3	1	0
	27	2	2	1	0
	28	0	1	2	3
	29	4	0	0	0
	30	8	4	4	2
	32	1	3	2	0

**Table 4. continued...**

<b>Moose Management Unit</b>	<b>WMZ</b>	<b>Bulls</b>	<b>Cows</b>	<b>Calves</b>	<b>Unidentified</b>
<i>Cypress Hills</i>	6	2	3	0	0
	7	0	1	1	0
<i>Moose Mountain</i>	33	2	0	0	2
	34	8	16	17	1
<i>Eastern Qu'Appelle/ Duck Mountain</i>	35	4	8	6	4
	36	32	27	15	4
	37	1	8	4	0
	38	3	2	3	0
	39	35	47	28	7
<i>Barrier Valley</i>	40	6	16	11	6
	41	15	13	10	0
	42E	3	0	0	1
	42W	8	11	13	0
	43	2	3	1	0
<i>Sonningdale/Manitou</i>	44	4	4	0	0
	45E	1	2	0	0
	45W	9	10	12	5
	46	6	6	8	0
	47	2	7	5	1
<i>Porcupine Hills</i>	48	4	5	3	0
	57	1	0	0	0
<i>Pasquia Hills</i>	59	4	3	0	0
<i>Thickwood Hills/ Fort a la Corne</i>	50	2	2	1	0
	54	2	3	3	0
<i>Cumberland Delta</i>	62	0	2	1	0
<i>Candle Lake/Cub Hills</i>	63	0	2	3	0
	65	0	1	0	0
<i>Divide/Bronson Forest</i>	55	1	1	1	0
	67	3	3	2	1
<i>Churchill</i>	73	0	1	0	0
<i>Regina/Moose Jaw</i>	Regina-Moose Jaw	3	3	3	0
<i>Saskatoon</i>	SWMZ	0	1	0	0
<b>TOTAL</b>		<b>227</b>	<b>283</b>	<b>204</b>	<b>52</b>



### Elk (*Cervus canadensis*)

Elk were added to the CWMS mobile application in 2017, with the key observation period occurring from August 20 to February 28. Population structure information, such as total count, calf:cow and bull:cow ratios, and herd location data were collected through the CWMS Mobile application and paper booklets and have been incorporated into the provincial elk management plan framework.



A total of 32 mobile application participants recorded 68 elk observations in 22 wildlife management zones across the province, totaling 588 elk. Observations resulted in a final herd structure of 48 bulls: 100 cows: 38 calves (total of 82 bulls: 168 cows: 64 calves: 274 unidentified). Of the bulls recorded, 30 were classified as A- or B-bulls (juveniles); 41 as C- or D-bulls (sub-adults) and 11 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). An additional 10 paper booklet observers collected 13 observations of elk in 10 wildlife management zones, totaling 90 elk (13 bulls: 49 cows: 21 calves; 7 unidentified). The mobile application and the paper booklets totaled 81 observations and 671 elk (95 bulls: 217 cows: 85 calves: 281 unidentified).

**Table 5.** Total number of bulls of each age cohort (juvenile, sub-adult, mature) recorded in each Saskatchewan Elk Management Unit in 2018-2019 using both paper and mobile CWMS application.

Elk Management Unit	Juvenile	Sub-adult	Mature
<i>Boreal</i>	6	3	0
<i>Parkland</i>	6	12	3
<i>Prairie</i>	18	32	11
<i>Island Forest</i>	1	1	2
<b>Total</b>	<b>31</b>	<b>48</b>	<b>16</b>

**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 2018.

<b>Elk Management Units</b>	<b>Bulls</b>	<b>Cows</b>	<b>Calves</b>	<b>Unidentified</b>
<b><i>Boreal</i></b>	<b>8</b>	<b>81</b>	<b>23</b>	<b>64</b>
WMZ 48	7	41	12	0
WMZ 49	0	34	9	11
WMZ 50	0	3	1	53
WMZ 63	1	0	0	0
WMZ 64	1	3	1	0
<b><i>Parkland</i></b>	<b>21</b>	<b>65</b>	<b>27</b>	<b>153</b>
WMZ 37	0	0	0	64
WMZ 39	5	12	4	50
WMZ 40	0	1	0	0
WMZ 41	7	6	1	0
WMZ 42E	1	6	5	0
WMZ 42W	0	2	0	0
WMZ 43	5	31	13	39
WMZ 46	2	7	4	0
WMZ 50	0	3	1	53
WMZ 54	1	0	0	0
<b><i>Prairie</i></b>	<b>61</b>	<b>62</b>	<b>35</b>	<b>27</b>
WMZ 1	1	15	2	22
WMZ 5	3	0	0	0
WMZ 9	28	24	15	4
WMZ 10	8	0	0	0
WMZ 12	0	0	0	1
WMZ 18	2	0	0	0
WMZ 19	10	0	0	0
WMZ 21	4	8	6	0
WMZ 23	0	1	0	0
WMZ 24	0	2	2	0
WMZ 30	5	12	10	0
<b><i>Island Forest</i></b>	<b>4</b>	<b>9</b>	<b>0</b>	<b>30</b>
WMZ 7E	2	0	0	30
WMZ 33	2	9	0	0
<b>TOTAL</b>	<b>95</b>	<b>217</b>	<b>85</b>	<b>281</b>

## 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 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.

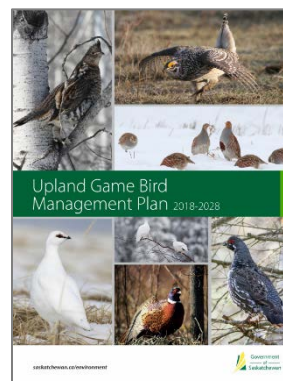
For wild turkey, the key observation period is December 1 to March 1, when birds congregate and flock numbers are more easily determined. With that said, wild turkeys are relatively new to Saskatchewan and wildlife managers are interested in their distribution across the province, so observations at all times of year are valuable.

To date, CWMS participants have observed over 4,000 sharp-tailed grouse and identified 70 lek sites. On these lek sites, almost 800 birds were observed. An additional 60 observations suggested that a lek may be in the vicinity. Only four observations of wild turkey have been reported. Observations during the key observation periods were significantly down this year, from 70 observations in 2017-2018 to 20 observations in 2018-2019 (see Table 7).

**Table 7.** Summary of upland bird observations during key observation periods in 2018-2019.

Species	Participants Submitting Observations	Number of Observations	Number of Birds Observed	Number of Leks Reported	Number of Birds Observed on Leks
Sharp-tailed grouse	12	19	94	3	27
Wild turkey	1	1	10		

For those who are interested in learning more about how upland game birds are managed in the province, the Upland Game Bird Management Plan 2018-2028 can be found [online](https://www.saskatchewan.ca/hunting) at [saskatchewan.ca/hunting](https://www.saskatchewan.ca/hunting).



## 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:

<https://www.saskatchewan.ca/residents/parks-culture-heritage-and-sport/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) 236-9819	katie.rasmussen@gov.sk.ca