

DATE: March 16, 2018

TO: John Williams, Regional Wildlife Manager, Bemidji (e-copy)

FROM: Doug Franke, Area Wildlife Manager, Thief River Falls

SUBJECT: 2018 NW MN Elk Surveys

Minnesota DNR FAW staff used fixed-wing aircraft (Cessna 185 Skywagon) to conduct aerial elk surveys for the Lancaster and Grygla elk herds. We were also able to complete the Caribou-Vita survey again this year since Manitoba Wildlife secured funding to complete their aerial elk survey the same day on the Canadian side. We used MN DNR Forestry's Quest Kodiak turboprop airplane to complete the border survey. The MN DNR fixed-wing aircraft crew followed the same predetermined transects used in 2017—transects are spaced 1/5 mile apart and flown at an altitude of 300 to 400 feet and speeds of 80-85 mph. A pilot and two observers recorded elk locations and documented antlerless and antlered elk. Antlered elk were recorded as either branch antlered or spike bulls.

The surveys were completed between February 5th and March 11th, 2018. Snow depths and conditions varied across the elk ranges. Snow conditions were considered good in the Grygla area and fair to good in the Lancaster and Caribou-Vita survey blocks. Snow depths ranged from 12 to 15 inches in the Grygla and Caribou-Vita survey blocks and 8 to 10 inches in the Lancaster survey block. Weather conditions were average for this time of the year with temperatures ranging from a low of -15°F to a high of 34°F and mostly clear skies. We had a weather delay of one day during the Lancaster survey.

We waited again this year to complete the Caribou-Vita survey block since Manitoba Wildlife staff indicated that they were also planning to survey elk on the Canadian side in late February to early March. The surveys for both the Canadian and US border areas were completed on March 11th, 2018 within a two hour period of each other.

Grygla Survey Block

This survey started on February 5th and was completed on February 6th, 2018. The area surveyed was the same 133 mi² area that has been used the past two years. Total aircraft engine time to complete this survey (takeoff to landing) was 11.7 hours. The entire survey area received a light snowfall the day before which made for good survey conditions. The fixed-wing crew recorded elk at 5 separate locations within the survey boundary. Total elk observed was 15 and included: 7 antlerless (cows/calves) and 8 bulls (5 branch antlered and 2 spike bulls). Thief Lake WMA staff believed three of the seven antlerless elk were calves based upon ground observations during the summer.

Lancaster Survey Block—Water Tower and Percy WMA herds

This survey started on February 12th and after a one-day weather delay was completed on February 14th, 2018. The area surveyed was the same 167 mi² area that has been flown the past several years. Total aircraft time to complete the survey was 15.2 hours (takeoff to landing). The fixed-wing crew recorded elk at 5 separate locations within the survey boundary. Total elk recorded within the Lancaster survey block was 75 and included: 57 antlerless (cows/calves) and 18 bulls (13 branch antlered and 5 spike bulls). The Water Tower group had 35 antlerless elk—there were 7 branch antlered bulls located in the same woodlot as the antlerless group. The Percy WMA antlerless herd (22 elk) along with 6 branch antlered bulls and 3 spike bulls were observed approximately four miles northwest of the Percy WMA. One spike bull was located on the western edge of the Percy WMA.

Caribou-Vita Survey Block (a.k.a. border herd)

Minnesota DNR and Manitoba Wildlife staff successfully coordinated a joint aerial elk survey for the survey areas close to the US/Canadian border. This survey started and was completed on March 11th, 2018. The area surveyed in MN was the same 35.5 mi² area that has been surveyed the past few years. Manitoba also flew the same survey blocks as they did in 2017. Total aircraft time to complete the DNR survey was 3.0 hours (takeoff to landing). The fixed-wing crew recorded elk at one location (6 branch antlered bulls and 1 spike bull) within survey boundary. A majority of this herd was expected to be north of the Minnesota border—this assumption was as confirmed with the Manitoba aerial elk survey results. Manitoba completed an aerial survey for the Vita area the next day on March 12th.

Manitoba Wildlife staff used a Jet Ranger helicopter to fly north/south transects within predetermined survey blocks that covered a broad area along the border. They recorded 80 elk near the US/Canadian border and another 46 elk slightly north of Vita. Table 2 details the age/sex breakdown for these two populations in Canada.

Table 1 on page three summarizes MN DNR elk observations during the past five years of NW MN aerial elk surveys. The last two pages are maps showing the 2018 locations of elk within each survey block.

I would like to thank all those that helped with the survey this year, especially the fixed-wing pilots Chris Lofstuen, Bob Geving, and Luke Ettl who provided safe flying for all of us. Observers this year included: Kyle Arola (Thief Lake Assistant Manager), Jason Wollin (Karlstad Assistant Area Wildlife Manager), and myself. Special thanks again to Brian Haroldson who put together all of the survey materials and computer used during the survey—much appreciated!

Table 1. Comparison of aerial survey elk observations between 2014 and 2018 for the Lancaster, Caribou-Vita, and Grygla herds.

	Lancaster					Caribou-Vita (US side of border)					Grygla				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Spike bull	3	2	6	2	5	10	5	0	0	1	2	3	2	4	2
Branch antlered bull	14	16	12	14	13	7	17	6	1	6	4	6	9	6	6
Total bulls	17	18	18	16	18	17	22	6	1	7	6	9	11	10	8
Antlerless	20	16	34	45	57	34	57	4	0	0	14	9	10	7	7

Total elk	37	34	52	61	75	51	79	10	1	7	20	18	21	17	15
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Table 2. Aerial survey elk observations recorded by Manitoba Wildlife—2017 and 2018

	Border (Caribou)		Vita		Combined Total	
	2017	2018	2017	2018	2017	2018
Spike bull	2	3	4	2	6	5
Branch antlered bull	17	12	7	5	24	17
Total bulls	19	15	11	7	30	22
Cow	68	*	32	*	100	*
Calf	21	*	12	*	33	*
Total antlerless	89	65	44	39	133	104
Total elk	108	80	55	46	163	126

* Manitoba Wildlife did not differentiate antlerless elk between cows and calves in 2018



