

DATE: March 1, 2019

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

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

SUBJECT: 2019 NW MN Elk Surveys

Minnesota DNR Fish and Wildlife and Enforcement staff used a single fixed-wing aircraft (Cessna 185 Skywagon) to conduct aerial elk surveys for the Grygla and Lancaster elk herds between February 10th and February 16th, 2019. As in the past, survey transects were 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. Cow and calf elk were combined and recorded as antlerless since differentiating the two is difficult due to the animals moving and the altitude and speed of the fixed-wing aircraft. Antlered elk were recorded as either branch antlered or spike bulls.

The survey block for Grygla was expanded this year by fourteen square miles in the northeast corner after local landowners reported two mature bulls frequenting an area outside of the previous boundary. The same predetermined transects used in 2018 were flown for the Lancaster survey block. The Caribou-Vita elk survey block was not flown this year since Manitoba Wildlife was not able to fund an aerial elk survey on the Canadian side.

Observability conditions were excellent this year. Snow depths and conditions were very consistent and considered very good for both elk survey blocks. Snow depths ranged from 20 to 25 inches across both the Grygla and Lancaster areas. Weather conditions were also very good for this time of the year with temperatures ranging from a low of -10°F to a high of 13°F with mostly cloudy skies. There was a two-day weather delay between the first and second days of the Grygla survey due to snow and high winds.

Grygla Survey Block

This survey started on February 10th and after a two-day weather delay was completed on February 13, 2019. The area surveyed was the same 133 mi² block that has been used the past two years with an additional 14 mi² added in the northeast corner—147 mi² total. After the 2018 survey, Thief Lake WMA staff received information that a landowner had been feeding two bull elk just north of the survey block. This prompted the decision to expand the survey boundary. Total aircraft engine time to complete this survey (takeoff to landing) was 10.9 hours. The fixed-wing crew recorded elk at 4 separate locations within the survey boundary--all elk were observed on the first day. Total elk observed was 19 and included: 8 antlerless and 11 bulls (10 branch antlered and 1 spike). Of special note is that many of the elk were located on State Wildlife Management Area land at the time of the survey.

Lancaster Survey Block—Water Tower and Percy WMA herds

This survey started on February 15th and was completed on February 16, 2019. 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 14.5 hours (takeoff to landing). The fixed-wing crew recorded elk at 7 separate locations within the survey boundary. Total elk recorded within the Lancaster block was 94 and included: 61 antlerless and 33 bulls (22 branch antlered and 11 spikes). As with the Grygla elk herd, there were several elk either directly located on or in close proximity to State Wildlife Management Area land at the time of the survey.

- The Water Tower herd had 37 antlerless and 2 spike bull elk and were located in the same exact woodlot the antlerless group was recorded in 2018. In addition, there were 7 branch antlered and 5 spike bulls located within one to five miles of the antlerless group.
- The Percy WMA herd had 24 antlerless and 1 spike bull elk and were located approximately four miles northwest of the Percy WMA (within one mile of the 2018 location). There were 14 branch antlered and 4 spike bulls observed within 2 to 3 miles east of the antlerless group. One lone branch antlered bull was located near the western edge of the Percy WMA (similar location where a single spike bull was observed in 2018).

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

This survey block was not completed in 2019. Table 2 was included again this year as a reference—it details the age/sex breakdown for these two populations in Canada for 2017 and 2018.

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 2019 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 pilot Bob Geving who provided safe flying and A+++ landings for all of us! Observers this year included: Kyle Arola (Thief Lake Area Wildlife 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 2015 and 2019 for the Lancaster, Caribou-Vita, and Grygla herds.

| | Lancaster | | | | | Caribou-Vita (US side of border) | | | | | Grygla | | | | |
|----------------------|-----------|-----------|-----------|-----------|-----------|----------------------------------|-----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| | 2015 | 2016 | 2017 | 2018 | 2019 | 2015 | 2016 | 2017 | 2018 | 2019* | 2015 | 2016 | 2017 | 2018 | 2019 |
| Spike bull | 2 | 6 | 2 | 5 | 11 | 5 | 0 | 0 | 1 | - | 3 | 2 | 4 | 2 | 1 |
| Branch antlered bull | 16 | 12 | 14 | 13 | 22 | 17 | 6 | 1 | 6 | - | 6 | 9 | 6 | 6 | 10 |
| Total bulls | 18 | 18 | 16 | 18 | 33 | 22 | 6 | 1 | 7 | - | 9 | 11 | 10 | 8 | 11 |
| Antlerless | 16 | 34 | 45 | 57 | 61 | 57 | 4 | 0 | 0 | - | 9 | 10 | 7 | 7 | 8 |
| Total elk | 34 | 52 | 61 | 75 | 94 | 79 | 10 | 1 | 7 | - | 18 | 21 | 17 | 15 | 19 |

* Survey was not completed in 2019

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



