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	Manitoba Hydro		*Manitoba Hydro*
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Reference: Field Survey Report – Birtle Transmission Project – Mammals Ungulate - Aerial Survey

OBJECTIVE

The objective of this field survey report is to outline the results of an intensive full coverage ungulate population survey in a 700 km² area west of Birtle Manitoba in the Birtle Transmission Project study area (Map 1). The purpose of this survey was meet the commitment of monitoring ungulate populations and distribution as outlined in the Birtle Transmission Project Environmental Monitoring Plan. The primary objective of the survey was to count the number and location of ungulates including moose, white-tailed deer, mule deer, and elk. Observations of wolves, coyotes and other infrastructure were also recorded.

METHODS

Manitoba Hydro replicated an intensive full-coverage ungulate survey designed and previously flown by the Provincial Fish and Wildlife Branch to monitor ungulate population trends and wildlife health along the Manitoba-Saskatchewan border. Manitoba Hydro initially conducted this survey in 2016 as part of pre-construction baseline data collection for the Birtle Transmission Project environmental assessment. The survey was flown in a Bell Jet Ranger with two trained observers and pilot at the same speed, elevation, spacing, and observer instructions as an intense Gassway style survey block (150 m ASL, 90-110km/hour, 500m spacing). All transects were flown in a north south orientation. Garmin GPS Units and field notepads were used to record observations. As sex ratios were not considered an important component of this survey, animals were not circled to confirm sex. If clearly visible, mule deer were distinguished from white-tailed deer, however deer were not circled to confirm species. The survey was conducted over four days February 15th to 18th, 2022. Observers were Trevor Barker and Doug Schindler.

RESULTS

Data from this survey is stored in MB Hydro data management files (EPIMS).

Weather conditions on: February 15th: -11 C, N low wind speed, clear visibility, some flurries.
February 16th: -11.1 C, N low wind speed, clear visibility, no precipitation.
February 17th: -20 C, N low wind speed, clear visibility, some flurries.
February 18th: -20 C, N low wind speed, clear visibility, no precipitation.
Snow conditions were favorable (>25cm) throughout the study area.

A summary of the wildlife detected are outlined here and in Map 1.

- A total of **311** moose were detected.
- A total of **109** elk were detected.
- A total of **73** mule deer were detected.
- A total of **2666** whitetail deer of unknown sex were detected.
- A total of **4** wolves were detected in one pack.
- A total of 65 coyotes were detected.

Table 1. Wildlife detections in the Birtle Transmission Project Survey Area

	Moose	Elk	Mule Deer	White-tailed Deer	Wolves	Coyote
2016	165	13	1	290	1	N/A
2022	311	109	73	2666	4	65

Moose appeared to be distributed throughout the survey area, with an apparent association with the heavily wooded Assiniboine and Qu'Appelle river valleys. Elk were less numerous but were apparently associated with heavily wooded areas in the northern portion of the survey area. White-tailed deer were fairly evenly distributed and apparently associated with Assiniboine River valley especially east and south of the Spy-Hill Community Pasture. Mule deer were difficult to always distinguish from white-tailed deer and may be underrepresented.

Ungulates appeared to generally be in healthy condition. A small number of moose appeared to be exhibiting signs of winter tick infestation. No ungulates appeared to be sick or disoriented. No elk appeared to have ear tags, suggesting that they were not escapees from elk farms. No observations were made of ungulate baiting or feeding. In a few livestock feedlots, white-tailed deer appeared to be taking advantage of available feed.

Numbers of all ungulates were substantially increased from the survey conducted in 2016. This may be partly explained by slightly better snow cover and survey conditions, but likely represents a large increase in ungulate abundance.

INFORMATION AND RECOMMENDATIONS

This survey methodology provided a useful snapshot of distribution and relative abundance of ungulates near the Birtle Transmission Project. Reviewing the results of this survey infers that the Project did not appear to have a negative effect on ungulates occurrence or distribution as a result of the construction or early operation. Similarly, there does not appear to have been any project-related effects at the local (LAA) or landscape (RAA) scale on occurrence or distribution on ungulates or predators. Construction related environmental mitigation was presumably effective. No recommendations for altering or changing the operation of the Project are deemed necessary. This analysis helps in understanding of longer-term trends in ungulate populations and distribution in relation to transmission projects in grassland and aspen parkland ecoregions. The cause of the large increase in ungulate populations in this study area between pre and post construction phase are not well understood but may be related to favorable recent winter weather and habitat conditions. Lower quality survey conditions in 2016, may have slight lowered detectability. Provincial biologists may have more information.

A review of construction reports also indicated that no vehicles collisions occurred with ungulates during Project construction.

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Map with sensitive data redacted

Available in accessible formats upon request