April 27, 2017

UNBC – FLNR Moose Project: Final Report

This final report summarizes the activities conducted during Years 2 and 3 of the UNBC-FLNR Moose Project (the Project). For the purposes of this report, Year 2 is assumed to coincide with the fiscal year 2015/16, and therefore includes April 1, 2015 to March 31, 2016. Similarly, Year 3 includes April 1, 2016 to March 31, 2017. The financial summary is presented according to fiscal year, in addition to year as determined by the funding agreements.

Year 2 Summary

Activities in Year 2 included mortality investigations, conducted by Bailey Helicopters, moose inventory conducted by EcoWeb Consulting, purchase and deployment of radio-collars to replace those lost through mortalities or malfunction, conduct laboratory analyses, and recruitment surveys.

A total of eight mortality investigations were conducted by Bailey Helicopters in Year 2 of the Project. Seven of these mortality events were likely related to wolf predation, while one female moose died of obstructed labour. Samples were collected when possible, and collars retrieved for further data download.

Eight additional GPS collars were purchased from Vectronics, three of which were provided under warrantee to replace malfunctioning collars. In January 2016, Diversified Environmental Services deployed these and 20 GPS collars left over from the previous year. Payment was made for blood samples sent to Prairie Diagnostic Services for progesterone (i.e., pregnancy) testing in Year 1.

The 60 telemetry collars deployed on moose were used in several ways during Year 2. Diversified Environmental Services conducted recruitment surveys in late March 2016, by locating the collared females and classifying the age and sex of all moose at those locations. Results indicated a wide variation in calf survival among the three study areas, ranging from 6.2 calves:100 cows in the Chinchaga RRA to 57.1 calves:100 cows in the Fortune core. The collars also supported an inventory of moose in the three study areas, conducted by EcoWeb Consulting. Moose population densities varied from the lowest estimated density (0.074 moose/km^2) in Clarke, intermediate estimated density of 0.076 moose/km^2 in Fortune, and highest in Chinchaga RRA at 0.151 moose/km^2.

Year 3 Summary

Activities in Year 3 included mortality investigations, conducted by Shifting Mosaics Consulting, pre-payment of GPS collar data fees, and laboratory analyses.

A total nine suspected mortality events were investigated in 2016/17 by Shifting Mosaics Consulting. Three of these events turned out to be false alarms, due to the animals remaining in a very small area for extended periods of time and thus mimicking a mortality event. Of the six actual mortality events, four were considered probable wolf predation, while one moose bore no signs of predation, and the sixth moose had 95-100% coverage by ticks but no signs of predation.

In Year 3, payment was made for laboratory tests conducted by Prairie Diagnostic Services on blood samples conducted in Year 2. In addition, we pre-paid GPS collar data fees in order to keep the collars transmitting positional data in 2017/18.