

Moose Population Monitoring in the Dehcho

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Introduction:

The objective of this program is to promote and foster the annual community-based monitoring program for moose populations in the Dehcho and provide baseline information of moose populations that can be used to monitor the impacts of future development in the Dehcho, including the proposed Mackenzie Gas Project. This monitoring program has two key components: 1) an aerial survey component which will provide information on animal distribution and estimates of moose density and calf production, and 2) a biological sampling component of animals harvested from the same areas which will provide physical evidence as to the health and condition of animals that are being consumed as country foods. This kind of information is important to harvesters, First Nations, wildlife managers and land use planners in that it will provide baseline information on moose population number, health, and distribution over the landscape so that informed decisions on land use and wildlife management can be made.

This program studies the moose Valued Component and is supported by both CIMP categories because 1) it is collecting important baseline data which can be used for monitoring moose population demographics and animal health and condition, and 2) it is working with harvesters to build capacity for local harvesters to collect different biological samples from moose and to train them as local observers. Time series results of animal numbers, distribution, general health, diseases/parasites, contaminant levels can all be used in the context of cumulative impacts to educate people.

In September 2002, Dehcho First Nations and the then Department of Resources, Wildlife & Economic Development (RWED) held a regional wildlife workshop in which RWED and other government agencies sought direction for wildlife research in the Dehcho from residents of the Dehcho. High on the list was the immediate need for moose surveys to be conducted to collect baseline data, ongoing programs to monitor various wildlife populations including moose, and studies to assess the quality of country foods. Current information on moose populations along the proposed

Mackenzie Valley Pipeline corridor was one of the major data gaps in the biophysical assessment. RWED took the lead in funding and conducting the initial moose surveys during 2003/04.

Local harvesters from all communities were involved throughout the entire planning process for the surveys conducted in winter 2003/04; local harvesters were hired as observers for these large-scale surveys. Local harvesters from all communities were involved throughout the planning process for the smaller scale surveys and have provided and continue to provide biological samples used to monitor health and condition. We have worked with local harvesters on the collection of biological samples. Local harvesters continue to be active participants in aerial surveys and hired as observers.

Methods:

The aerial survey portion of the Dehcho Moose Population Monitoring Program was conducted from 15-21 November we surveyed a total of 68 sample blocks of 16-17km² in size. The monitoring areas flown are subsets of the geospatial moose surveys flown during winter 2003/04. The monitoring areas cover approximately 4300km² in the Mackenzie Valley portion and approximately 2900km² in the Liard Valley portion. We flew coverage of 16% in the Mackenzie Valley (43 blocks) and 15% in Liard Valley (25 blocks) portions of the survey. Because of inclement weather conditions during the survey we were unable to start the survey in the north being based out of Wrigley and continue southward ending in Fort Liard. We ended up completing the survey with the Wrigley portion last. Local observers from Wrigley, Fort Simpson, Jean Marie River, Nahanni Butte, and Fort Liard accompanied ENR staff on all monitoring flights. A Parks Canada staff member accompanied us on the Nahanni Park portion of the survey.

The aerial survey represents a portion of the moose monitoring program. The other key component of the program is the collection of biological samples from locally harvested moose to physically assess animal health and condition. All organ samples received prior to this year have been forwarded to private labs for analyses. We have requested moose harvesters voluntarily provide us with some basic biological samples from moose harvested this year. Because we are not requesting organ samples we are no longer reimbursing for samples. Basic analyses of these samples is done in house, but teeth aging and disease/parasite analyses are done at private laboratories.

Results:

During the survey of the Mackenzie Valley portion of the program we saw a total of 65 moose, 33 boreal caribou, and 6 wolves. For the Liard Valley portion of the program we saw a total of 13 moose, 4 boreal caribou and 26 bison. Some of these animals were observed while commuting between the blocks we were sampling.

We did not receive as many samples from harvested moose as in previous years partly because we were not reimbursing harvesters for the samples and partly because harvesters were indicating that moose were in good shape. In house basic analyses were completed and did indicate moose were in good shape. Samples forwarded to the labs also indicated a low incidence/prevalence of disease/parasites. Teeth samples were aged and reported to the harvesters.

Discussion / Conclusions:

This is the fourth year of what we hope will continue to be an annual monitoring program jointly funded by a number of agencies as it was this year. We continue to survey at a coverage we feel we can effectively complete given budget and winter weather/daylight conditions, and that provides useful information on moose density and distribution in early winter.

Following each aerial survey maps showing the results of the survey are provided to all local First Nations. The map is accompanied with a briefing that describes the results from the survey and compares it to the results of previous surveys. During community meetings we present the results of the monitoring surveys in comparison to the previous surveys. During even years, the results are also presented at the Biannual Dehcho Regional Wildlife Workshop. Hard copies of all presentations are provided to all First Nations. Poster presentations of the results of the health and condition portion of the program have been made and circulated and will be as more data are collected and analyzed. Scientific publications and reports will be produced of the elemental analyses from moose samples. All deliverables are circulated amongst all user groups. Summary reports are submitted annually for the ENR annual wildlife research permit compilation and the annual report for the western NWT biophysical study.