

Valued Component – Moose (Update November 2004)

STATE OF KNOWLEDGE – WHAT IS HAPPENING?

A very brief overview of the state of knowledge with respect to moose in the NWT is presented below. This overview is preliminary and not intended to be exhaustive.

❖ What are the baseline conditions with respect to moose?

- The Northwest Territories is the northern edge of the range for moose, and as such densities are low (1 to 17 moose per 100 km²) compared to other areas in North America. In the NWT, moose are widely distributed south of the treeline, and more scattered near the treeline and on the tundra. Two subspecies exist, the Alaska-Yukon moose (*Alces alces gigas*) in the Mackenzie Mountains and the northwestern moose (*Alces alces andersoni*) in the rest of the territory.
- The estimated moose harvest is 1000 to 2000 per year, with hunting levels remaining constant since the 1990s for both resident and non-resident hunters. It is estimated that the subsistence harvest accounts for 80 to 90 percent of the total annual moose harvest. Non-resident sport hunters harvest an average of 40 to 45 moose per year in the Mackenzie Mountains.

❖ Have the numbers of moose decreased, increased or remained stable?

- Increases are predicted overall in the Sahtu Settlement Area due to extensive forest fires in the past 5 to 7 years (moose densities within burns tend to be at their highest between 10 and 30 years post burn).
- In the Gwich'in Settlement Area moose densities are quite low therefore results of population surveys are highly variable. Further surveys will be undertaken in the future.

KEY MONITORING INDICATORS

<i>Population size and trend</i>	<i>Age structure</i>
<i>Number harvested</i>	<i>Calf/cow ratio</i>
<i>Twinning estimates</i>	<i>Adult sex ratio</i>
<i>Areas of recent forest fires</i>	<i>Presence of contaminants</i>
<i>Presence of diseases and parasites</i>	

- In the Deh Cho, biologists began extensive surveys in 2003 along the Mackenzie Valley (23,000 km² area). The impression is that moose populations in this area are stable. A monitoring program has been proposed that would be based out of Wrigley, Fort Simpson, Jean Marie River, Nahanni Butte, and Fort Liard using aerial surveys and sample collections for animal health, condition, and contaminant levels.

- In other regions of the Northwest Territories there is limited information on moose populations. In the Fort Providence area the population of moose is believed to be declining.

❖ Have the locations of moose changed?

- Changes are not apparent, however moose tend to move into burned areas.

❖ Has the condition of moose declined?

- It is biologically unknown if the condition of moose has changed.

❖ What are the levels and trends of contaminants in moose?

- Contaminant levels in moose are generally low in the NWT, and are not a concern from human food consumption or animal health perspectives. A long-term monitoring programs on contaminants in moose has been proposed for the Deh Cho..

CURRENT MONITORING

Ongoing monitoring programs with respect to moose in the NWT are found below.

- ▶ NWT species status rank infobase (Government of the Northwest Territories since 2000).

This infobase monitors the general status of species in the Northwest Territories. It is a significant source of information for assessing future monitoring of wildlife species such as moose. The infobase is a searchable catalogue of information used to rank the status of species, thereby prioritizing them for further assessment and monitoring. The following biological indicators are used to rank species status: population size, number of occurrences, distribution, trend in population, trend in distribution, threats to population and threats to habitat. The general status ranks will be published every 5 years (see references for 2000 Status Ranks report).

- ▶ Moose monitoring - Gwich'in Settlement Area (Gwich'in Renewable Resource Board since 1996)
- ▶ Moose monitoring - Tulita area (Government of the Northwest Territories and Sahtu Renewable Resources Board, 1993, 1999)
- ▶ Moose population surveys - Norman Wells area (Government of the Northwest Territories and Sahtu Renewable Resource Board, 1984, 1989, 1995, 2001)
- ▶ Moose population surveys - Fort Good Hope area (Government of the Northwest Territories and Sahtu Renewable Resources Board, 1984, 1992, 1998)

- ▶ Gwich'in Settlement Area harvest study (Gwich'in Renewable Resource Board since 1995)
- ▶ Sahtu Settlement Area harvest study (Sahtu Renewable Resources Board since 1998)
- ▶ Inuvialuit Settlement Region harvest study (Inuvialuit Joint Secretariat since 1986)
- ▶ Fort Providence moose census (Government of the Northwest Territories)
- ▶ Fort Resolution moose census (Government of the Northwest Territories)
- ▶ Fort Smith moose census (Government of the Northwest Territories)
- ▶ Deh Cho annual population monitoring (proposed) in Wrigley, Fort Simpson, Jean Marie River, Nahanni Butte, and Fort Liard (Government of the Northwest Territories)
- ▶ Moose populations are monitored through resident hunter harvest statistics and non-resident hunter harvest and observation data (Government of the Northwest Territories)

GAPS AND RECOMMENDATIONS FOR MONITORING

A list of monitoring gaps and recommendations for future monitoring under the NWT Cumulative Impact Monitoring Program is found below.

Gaps

- ❖ Population estimates (i.e. status and trends) for moose in all regions of the Northwest Territories
- ❖ Productivity and health of moose populations in the NWT
- ❖ Harvest levels of moose populations
- ❖ Habitat inventory and status
- ❖ Contaminants, parasites, and health

Recommendations

- ❖ Determine population status and trends in selected regional populations of moose
- ❖ Determine cow/calf ratios and monitor for health and disease
- ❖ Work with communities to obtain harvest data
- ❖ Monitor changes in habitat (i.e. forest base) and assess potential impacts on moose distribution and abundance

REFERENCES

Relevant monitoring reports, past monitoring programs, research documents, and scientific publications are found below.

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