

Moose Resource Report

Wildlife Management Unit 4

Moose Management in Ontario

In Ontario, the moose population and its habitat is managed using an ecological approach. This approach takes into account a wide range of factors related to moose and uses the best available science and information on moose populations and harvest. Ontario's Cervid Ecological Framework and Moose Management Policy give specific direction on how to manage moose across the province. They can be found online at ontario.ca/moose.

As part of managing moose, an objective is set for the number of moose that should be in an area. Ecological, social, cultural and economic factors related to moose are incorporated when making decisions about harvest allocation and what management actions are needed to help achieve that objective.



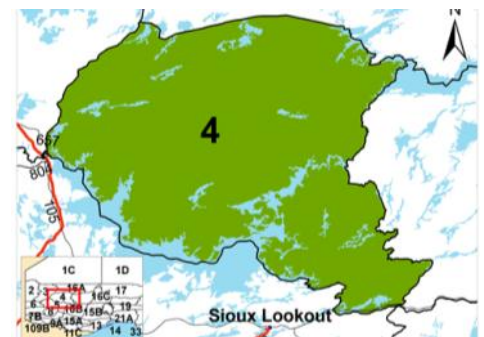
WMU 4 Description

Wildlife Management Unit (WMU) 4 is located in Sioux Lookout District. The WMU is bounded by Lac Seul on the south, South Bay Mine Road on the east, and the hydro line along the northern boundary to Blackstone Lake. The boundary continues south through Root River to Adamhay on Lac Seul, and Carling Lake to the Canadian National Railway line near the south end of Tawatinan Lake.

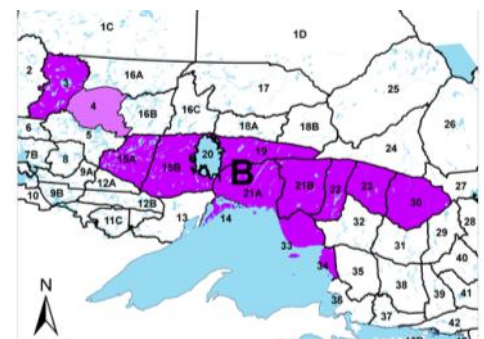
Cervid Ecological Zone B

Moose, white-tailed deer and woodland caribou live in this zone. For moose, the goal is to maintain a low to moderate density population and habitat may be managed as appropriate to achieve this. White-tailed deer are managed to maintain a low population density in this zone.

A key management objective is to minimize impacts on woodland caribou populations through maintenance or restoration activities. Within caribou range, maintaining low densities of moose and deer that reflect natural ecological conditions is consistent with managing the wildlife community and current provincial caribou and moose policy direction.



Map of WMU 4



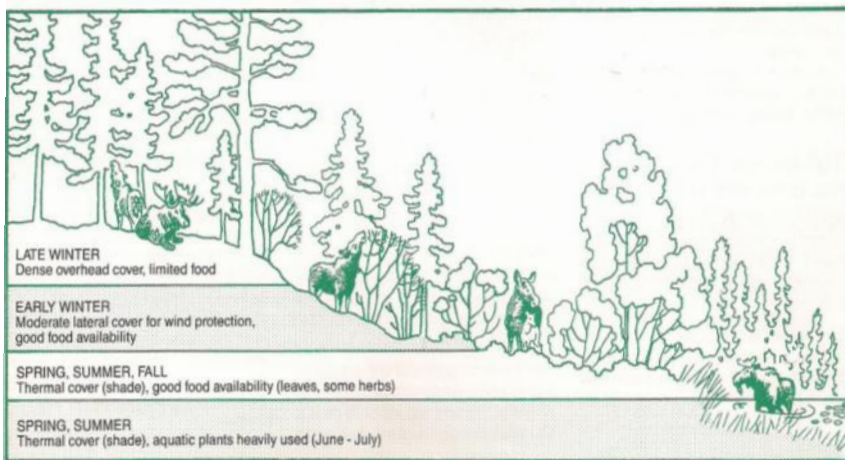
Map of Cervid Ecological Zone B

ontario.ca/moose

Moose Habitat Suitability

WMU 4 is located in the boreal forest of northwestern Ontario. Habitat is characterized by large pure stands of conifer (e.g., black spruce, jack pine), lowland black spruce swamps, and mixedwood (e.g., black spruce, poplar, balsam poplar, white birch and balsam fir) stands that occur in some areas. Pure hardwood stands (e.g., white birch, poplar, and balsam poplar) tend to be found in richer sites closer to the Lac Seul system. Timber harvesting does occur in the unit under the guidance of approved Forest Management Plans.

Landscape habitat analysis modelling estimates the overall mean carrying capacity, or number of moose that the habitat can support in WMU 4 as about 17 moose per 100 km². This considers the availability of dormant season (early and late winter) browse, growing season forage (i.e., browse and aquatic feeding areas), and both dormant and growing season cover.



Seasonal movements of moose in Ontario



Growing season browse

Moose aquatic feeding areas are generally found in cool water lakes, along medium-sized and shallow rivers and on shallow basins of cold water lakes.



Moose aquatic feeding area

Early winter habitat is primarily made up of mature or over-mature, open canopy, mixed-wood stands with less than 60 per cent tree cover, as well as areas that had been burned or cutover about five to twenty years ago.



Early winter habitat

Late winter habitat consists of denser stands of mature conifer with good overhead cover. Mixed stands made up of less than half mature conifer should also be considered as late winter habitat if pure conifer stands are not available. Upland sites are preferred.



Late winter habitat

Moose Management in WMU 4

Moose management considers the best available knowledge, including scientific, local and Aboriginal traditional knowledge, as well as social, cultural and economic values. It also respects Aboriginal peoples' unique perspectives and practices related to moose management, including the exercise of constitutionally protected Aboriginal and Treaty rights. The ecosystem based management of moose includes the management of populations, harvest and habitat, with consideration of potential stressors, such as climate change, predator-prey interactions and disease.

Population Status and Trends

Managing moose populations requires information on their abundance, distribution, harvest, and recruitment trends. In Ontario, the size of the moose population is estimated on a WMU basis through the use of Moose Aerial Inventories. Inventories use a consistent method across the province for estimating moose populations from an aircraft, and are generally conducted every three to five years.

The most recent survey completed in 2011, resulted in a population estimate of 2251 ± 551 moose or a density of 24 moose per 100 km² of land area. In 2011, the population was composed of 28 per cent bulls, 53 per cent cows, 16 per cent calves and 4 per cent unknown.

Calf moose generally experience higher mortality from a variety of sources, including predation and harvest. The minimum desired calf survival each year is at least 30 calves per 100 cows to help ensure the population is maintained. Calf survival estimates were below that level in the 2005 and 2008 surveys and nearing the threshold in the 2011 survey (Figure 1).

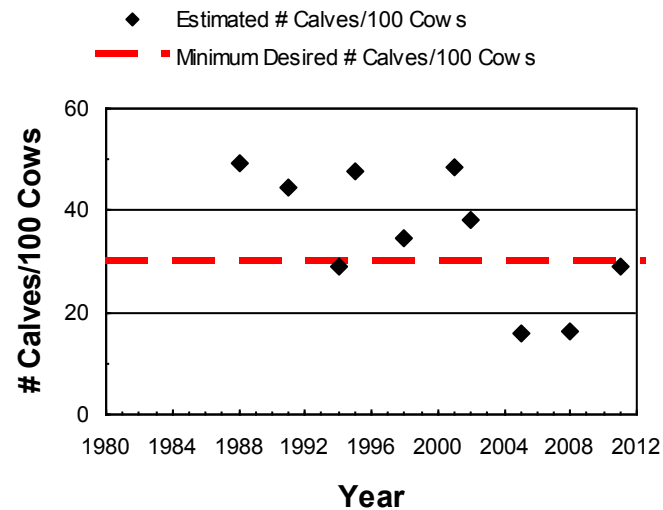


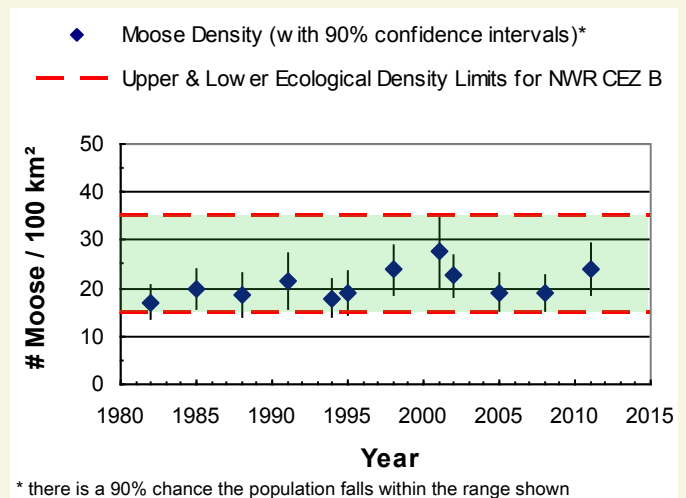
Figure 1: Calf recruitment (# Calves per 100 Cows) trends estimated from moose aerial inventories compared to lowest desired level.

Ecological Population Density

A goal of moose management is to keep the moose density within a range at which they can fulfill their natural role in the ecosystem. The desired ecological population density varies between Cervid Ecological Zones across the province.

Key factors affecting natural moose ecology are habitat suitability, other cervid species, natural predators such as wolves and black bears, and climate change.

Survey data indicates that the moose population in WMU 4 is within the desired ecological density (15 - 35 moose per 100 km²) for Northwest Region (NWR) CEZ B (Figure 2).



* there is a 90% chance the population falls within the range shown

Figure 2: Moose Density (with upper and lower limits of the ecological density for CEZ B)

Moose Management in WMU 4

Harvest Management

There are two moose hunting seasons in WMU 4. The bow season begins on the Saturday closest to September 17 and continues to the start of the resident gun season on the Saturday closest to October 8. Non-resident gun season starts two days after the resident gun season. Resident gun season closes on December 15 and non-resident gun season on November 15. In this unit, 80 per cent of the licenced harvest is allocated to the resident hunt and 20 per cent to the tourist industry.

Harvest Statistics

The estimated number of moose harvested by residents has ranged from a high of 266 to a low of 93 animals (Figure 3). Over the past five years, annual average harvest by residents has been 136 moose with clients of the tourist industry taking 37 moose. Calf harvest makes up about 17 per cent of total licenced resident harvest.

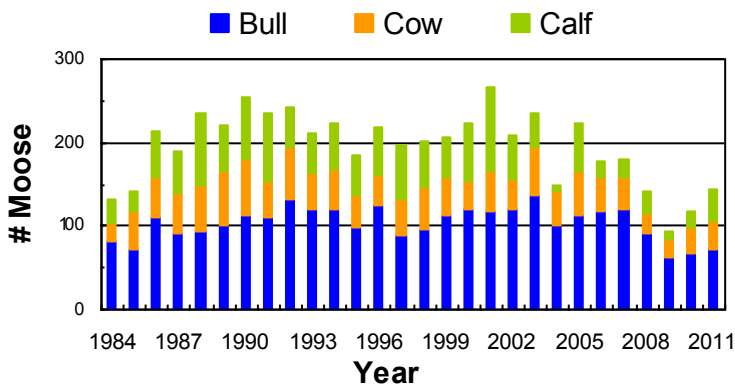


Figure 3: Resident Harvest

In addition to harvest data, information on the past success rates of hunters in filling their moose tags is used when planning the harvest. Estimated tag fill rates for adult moose harvested by residents in WMU 4 have generally ranged between 39 and 50 per cent. The resident bull tag fill rate for 2011 from the gun and bow hunts combined was 45 per cent and the resident cow tag fill rate was 36 per cent.



Adult Validation Tag Quotas

Harvest planning, including adult validation tag quotas, is done annually to reflect the most recent population survey and harvest information. Tag allocations in WMU 4 were reduced in 2008 in response to a declining population trend.

Hunter Interest

Hunter interest (effort) in WMU 4 is low to moderate relative to other NWR WMUs. The unit has a moderate level of road access throughout the unit by which hunters can travel to reach the moose population. As in most of Ontario, the number of hunters interested in hunting in this unit exceeds the amount of adult moose available for harvest (Figure 4). In 2011, resident tag quotas were 148 gun bull, 83 gun cow, 15 bow bull and 10 bow cow with 1057 Choice 1 draw applicants (985 gun and 72 bow). There was one adult tag available for approximately every 4 resident hunter applications.

Moose in this unit are also harvested by Aboriginal community members.

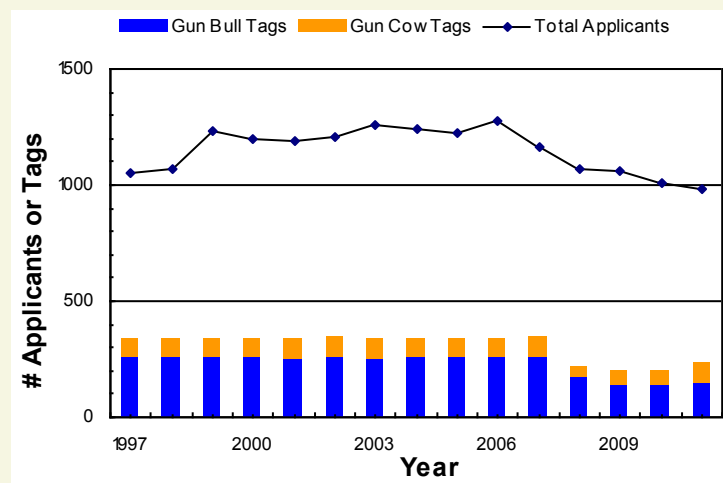


Figure 4: Resident Gun Tag Supply