

Moose Resource Report

Wildlife Management Unit 21B

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 21B Description

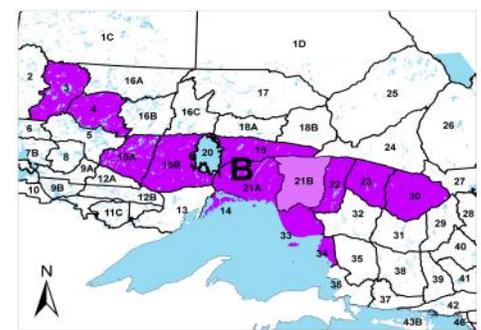
Wildlife Management Unit (WMU) 21B is located in the Wawa District of the Ministry of Natural Resources (MNR). The unit is bounded by Hwy. 11 to the north, Hwy. 631 to the east, Hwy. 17, the White River and Lake Superior to the South and the Pic River and Hwy. 625 to the west. The unit covers an area of more than 13,700 square kilometres and is part of Cervid Ecological Zone (CEZ) B.

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 populations are managed to maintain a low density in this zone. The ministry's management objective is to minimize impacts on woodland caribou populations through maintenance or restoration activities as directed by the Caribou Conservation Plan and associated policies. Within caribou range, maintaining low densities of moose and deer that reflect natural ecological conditions is consistent with managing the wildlife community as per the Caribou Conservation Plan.



Map of WMU 21B



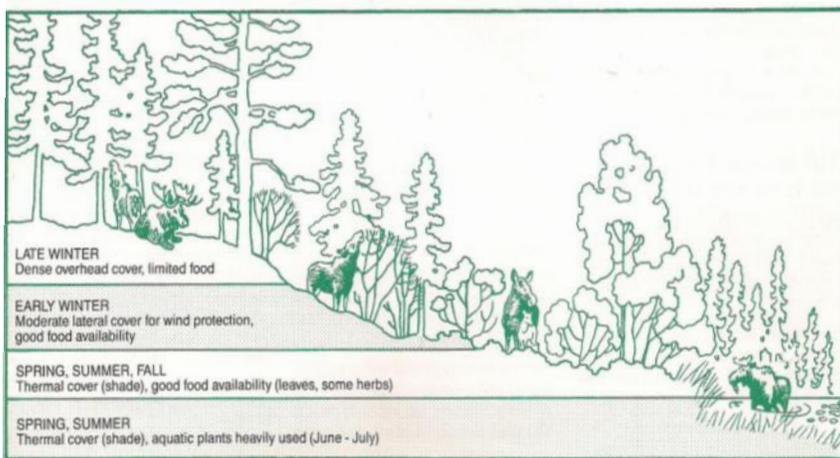
Map of Cervid Ecological Zone B

ontario.ca/moose

Moose Habitat Suitability

WMU 21B is located in the Boreal Forest of northern Ontario. The dominant tree species in this area are jack pine, white and black spruce, balsam fir, white cedar, poplar and white birch. Moose aquatic feeding areas are abundant among the numerous lakes, rivers and beaver ponds.

Using a range of landscape habitat analysis models, the ministry has calculated the overall average carrying capacity, or number of moose that the habitat can support, for WMU 21B at about 27 moose per 100 square kilometres. This considers growing season browse, aquatic feeding areas, and both early and late winter habitats.



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 21B

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 total population estimate of 3857 +/- 957 moose with a density of 29 moose per 100 square kilometres. However, some irregularities in the survey suggest the actual population is closer to 3200 moose. In 2011 the estimated population was composed of 34 percent bulls, 50 percent cows, 13 percent calves and 3 percent unknown.

Calf moose generally experience higher mortality from a variety of sources, including predation and harvest. The minimum desired calf recruitment each year is at least 30 calves per 100 cows to help ensure the population is maintained. The last four estimates of calf recruitment were below the desired minimum threshold (Figure 1).



Photo: MNR Northeast Region

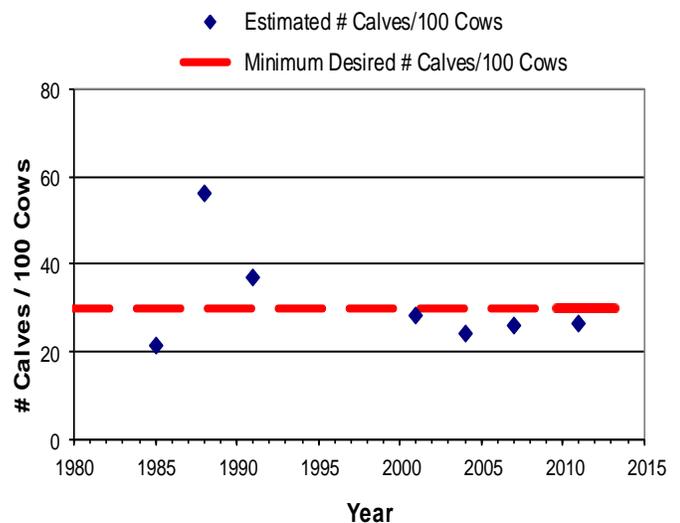


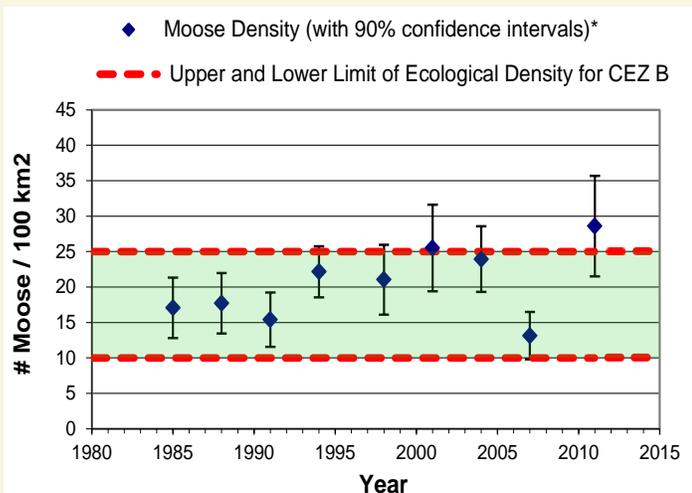
Figure 1: Calf recruitment (# Calves per 100 Cows) trends estimated from moose aerial inventories compared to lowest desired level.

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.

The moose population for WMU 21B has been within the limits of the desired ecological density (10 - 25 moose per 100 square kilometres) for Cervid Ecological Zone 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)

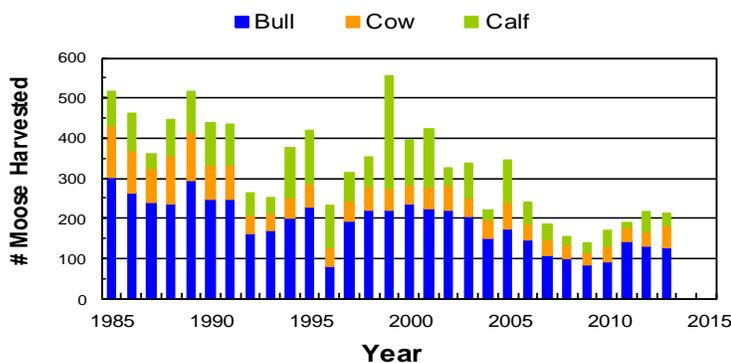
Moose Management in WMU 21B

Harvest Management

There are two moose hunting seasons in WMU 21B. The bows-only season begins on the Saturday closest to September 17 and continues to the beginning of the resident rifle season on the Saturday closest to October 8. The gun season is open until November 15 for non-residents and December 15 for residents each year. Non-resident gun season starts two days after the resident gun season start date. In WMU 21B, the licensed harvest is allocated with 94.8 percent to the resident hunt and 5.2 percent to the tourist industry hunt.

Harvest Statistics

The estimated number of moose harvested by residents has ranged from 138 to 555 animals (Figure 3). Over the past five years, annual average harvest by 2,300 resident hunters (18,400 hunter-days) has been 185 moose with clients of the tourist industry taking 5 moose. Calf harvests comprise about 16 percent of total licensed resident harvest.



Adult Validation Tag Quotas

Harvest planning, including adult validation tag quotas, is done annually to reflect the most recent population survey and harvest information. As the moose population recently increased, the number of tags available also increased and stabilized over the past three years.

Hunter Interest

Hunter interest in WMU 21B is high. The unit can be reached within one travel day from several larger population centres and has extensive road access which allows hunters to more readily reach the moose population. As in most of Ontario, the number of hunters interested in hunting this unit greatly exceeds the amount of moose available for harvest. In 2014, resident tag quotas were 325 gun bull, 70 bow bull, 130 gun cow and 100 bow cow, with 3,650 Choice 1 draw applicants (3157 gun and 493 archery) and there was on average one adult tag available for every 6 hunter applicants (Figure 4).

In 2014, there are 12 tourist outfitters that offer adult moose hunting packages. This unit is also where moose are harvested by Aboriginal community members.

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. Tag fill rates for adult moose harvested by residents in WMU 21B are higher for gun tags compared to bow tags. The past five year gun tag fill rates have averaged 36% with a range from 26 to 43 percent. In 2013, the resident gun bull tag fill rate was 36 percent and the resident gun cow tag fill rate was 38 percent.

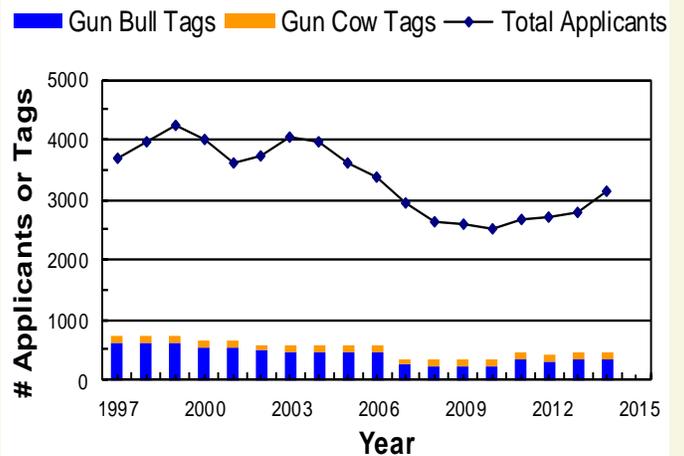


Figure 4: Resident Gun Tag Supply



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