

Moose Resource Report

Wildlife Management Unit 21A

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 21A Description

Wildlife Management Unit (WMU) 21A is located in Nipigon District.

The WMU is bounded on the west by Lake Nipigon and the Nipigon River to Lake Superior, on the south by the Lake Superior coast to Schreiber point, the US border and the Pic River. The east boundary follows the Pic River, and Caramat Road to Highway 11. Highway 11 forms the north boundary of the unit to the Blackwater River near Beardmore, where the boundary follows the Blackwater River to Lake Nipigon.

WMU 21A has a total area of 18,909 km² and is part of Cervid Ecological Zone (CEZ) B.

ontario.ca/moose

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 21A

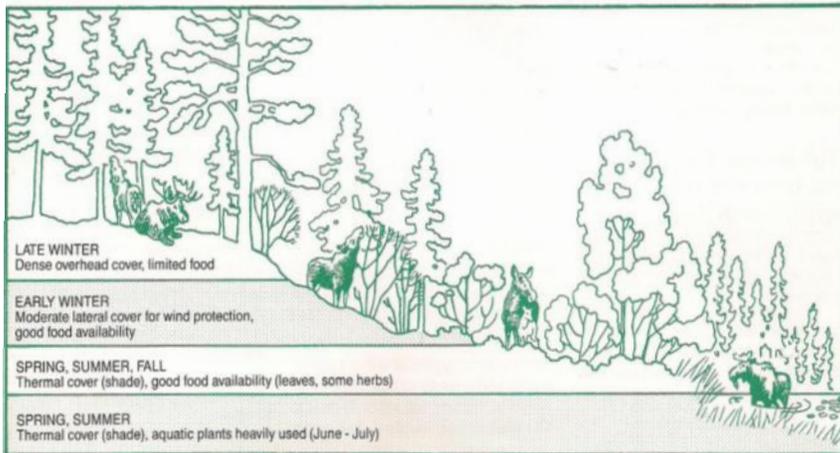


Map of Cervid Ecological Zone B

Moose Habitat Suitability

WMU 21A is located in the boreal forest of northwestern Ontario. The unit has both diverse geomorphology and habitat. Primary tree species in the unit are black and white spruce, balsam fir, poplar and white birch. Other species include cedar and pines. Numerous lakes and wetlands that provide both shelter and food sources during the ice-free season are found throughout the WMU. 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 21A as about 24 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 21A

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 2012, resulted in a total population estimate of 3771 ± 798 moose or a density of 28 moose per 100 km² of land area. In 2012, the estimated population was composed of 34 per cent bulls, 56 per cent cows and 10 per cent calves.

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. Estimates of calf abundance have been below that level since 2003 (Figure 1).

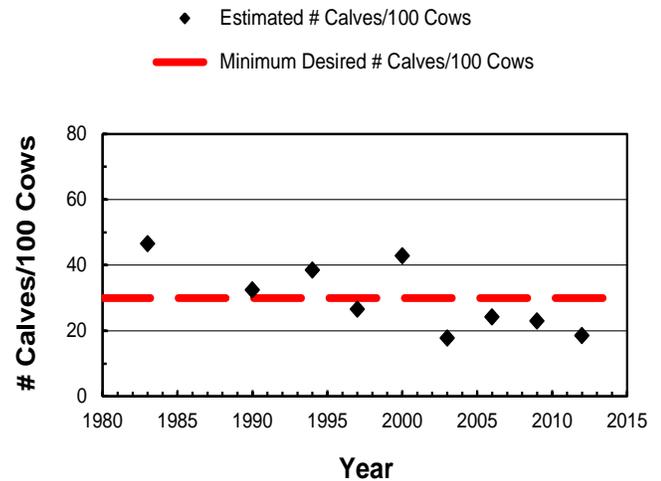


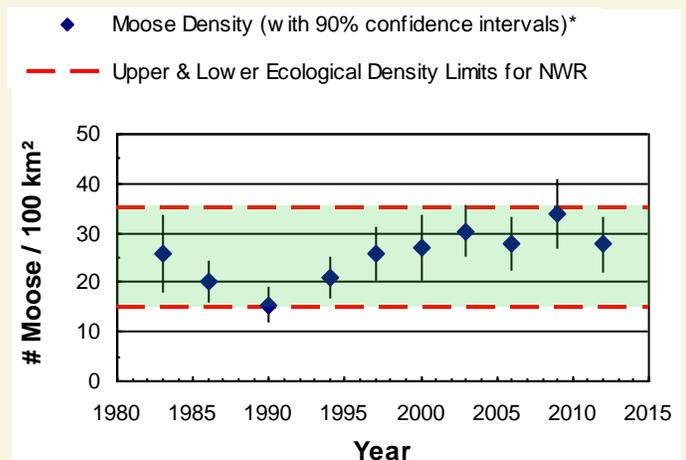
Figure 1: Calf recruitment (# Calves per 100 Cows) trends estimated from moose aerial inventories compared to lowest desired level.

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 21A has fluctuated 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 21A

Harvest Management

There are two moose hunting seasons in WMU 21A. 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, 92.8 per cent of the licenced harvest is allocated to the resident hunt and 7.2 per cent to the tourist industry.

Harvest Statistics

The estimated number of moose harvested by residents has ranged from a high of 574 to a low of 197 animals (Figure 3). Over the past five years, annual average harvest by residents has been 231 moose with clients of the tourist industry taking 13 moose. Calf harvest makes up about 12 percent of total licenced resident harvest.

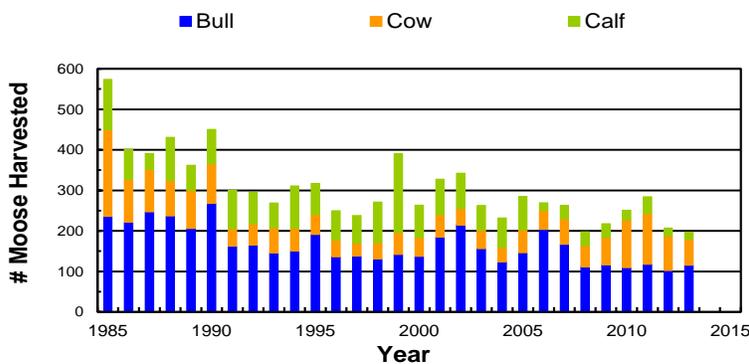


Figure 3: Resident Harvest

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 21A have generally ranged between 10 and 31 per cent. The resident bull tag fill rate for 2013 from the gun and bow hunts combined was 10 per cent and the resident cow tag fill rate was 5 per cent.



Report resource abuse. Call the toll free reporting line at any time: 1-877-847-7667



Adult Validation Tag Quotas

Harvest planning, including adult validation tag quotas, is done annually to reflect the most recent population survey and harvest information. Through time, tag quotas in WMU 21A have increased.

Hunter Interest

Hunter interest (effort) in WMU 21A is high relative to other NWR WMUs. WMU 21A 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 2014, resident tag quotas were 862 gun bull, 1398 gun cow, 104 bow bull and 200 bow cow with 5098 Choice 1 draw applicants (4519 gun and 579 bow). There was one adult tag available for approximately every 2 resident hunter applications.

In 2014, there are 13 tourist outfitters that offer moose hunting packages. Moose in this unit are also harvested by Aboriginal community members.

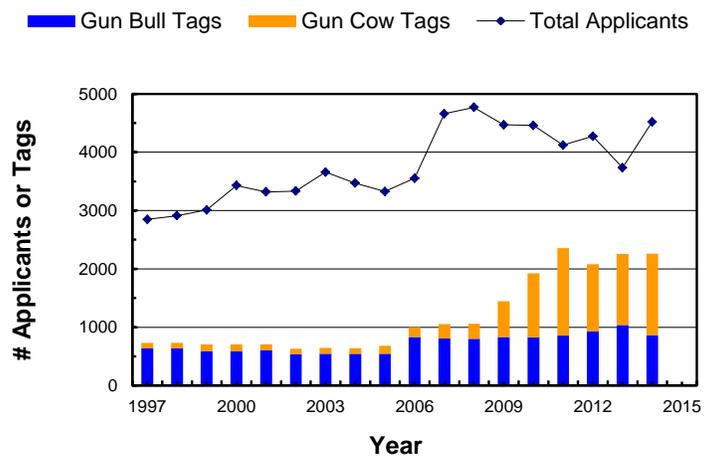


Figure 4: Resident Gun Tag Supply