

Moose Resource Report

Wildlife Management Unit 19

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 19 Description

Wildlife Management Unit (WMU) 19 is located in Nipigon District. Over 90 per cent of the area within the WMU is Crown land.

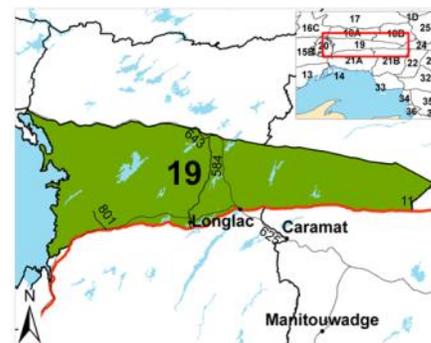
The unit is bounded by Highway 11 on the south, Lake Nipigon on the west, the abandoned Pagwa Rail line and the Nakina-Armstrong Canadian National Railroad mainline on the north and the Otasawian River on the east.

WMU 19 has a total area of 10,564 km² and is part of Cervid Ecological Zone (CEZ) B.

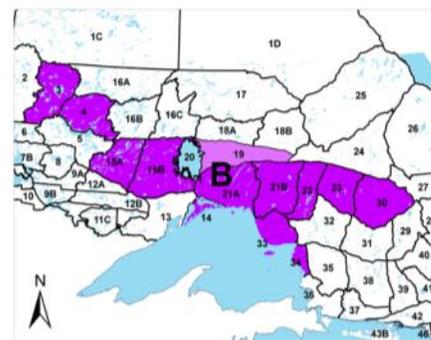
Cervid Ecological Zone B

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 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 19



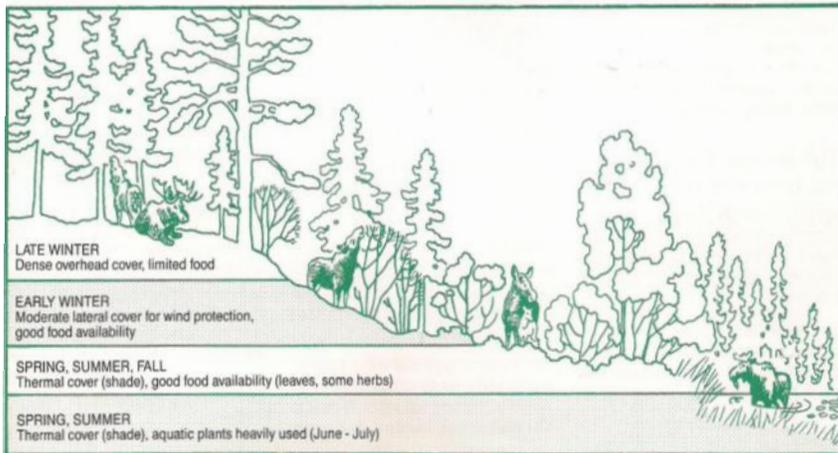
Map of Cervid Ecological Zone B

ontario.ca/moose

Moose Habitat Suitability

WMU 19 is located in the boreal forest of northwestern Ontario. Habitat in the unit is typical of a natural wildfire driven ecosystem and contains both coniferous and deciduous tree species in pure and mixedwood stands. The predominant species are black spruce, jack pine, poplar, white birch and balsam fir. 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 19 as about 18 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 19

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 2014, resulted in a total population estimate of 1593 ± 426 moose or a density of 16 moose per 100 km² of land area. In 2014, the estimated population was composed of 33 per cent bulls, 43 per cent cows, 17 per cent calves and 7 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. Through time, estimates of calf abundance have been above that level (Figure 1).

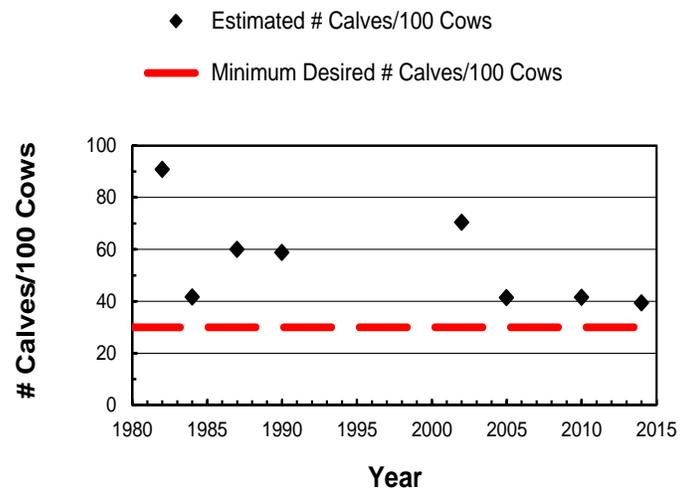


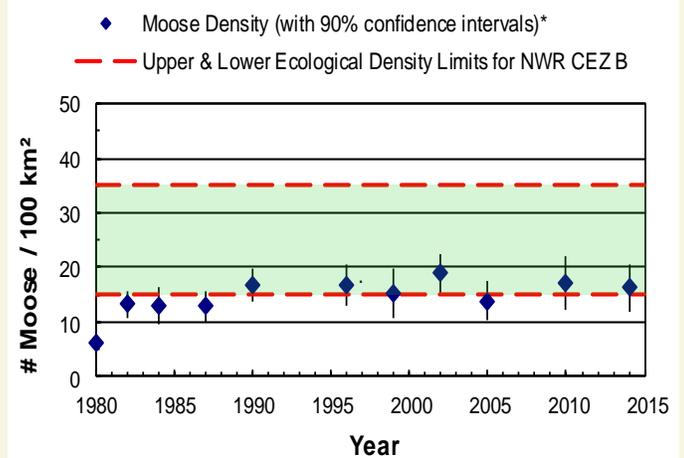
Figure 1: Calf recruitment (# Calves per 100 Cows) trends estimated from moose aerial inventories compared to lowest desired level.

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 19 is currently near the lower limit of 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 19

Harvest Management

There are two moose hunting seasons in WMU 19. 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, 95.3 per cent of the licenced harvest is allocated to the resident hunt and 4.7 per cent to the tourist industry.

Harvest Statistics

The estimated number of moose harvested by residents has ranged from a high of 186 to a low of 52 animals (Figure 3). Over the past five years, annual average harvest by residents has been 86 moose with clients of the tourist industry taking 3 moose. Calf harvest makes up about 11 percent of total licenced resident harvest.

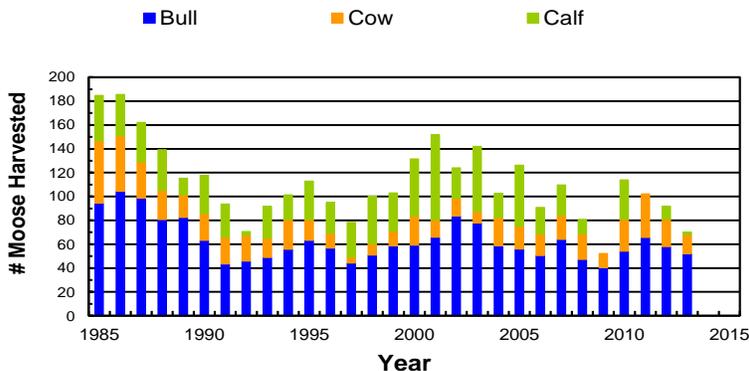


Figure 3: Resident Harvest

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 19 have generally ranged between 14 and 25 per cent. The resident bull tag fill rate for 2013 from the gun and bow hunts combined was 17 per cent and the resident cow tag fill rate was 11 per cent.



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

MNRF 51953

© Queen's Printer for Ontario, 2014



Adult Validation Tag Quotas

Harvest planning, including adult validation tag quotas, is done annually to reflect the most recent population survey and harvest information. Moose aerial inventory information from 2014 informed recent adjustments in tag quotas.

Hunter Interest

Hunter interest (effort) in WMU 19 is moderate to high relative to other NWR WMUs. WMU 19 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 128 gun bull, 59 gun cow, 145 bow bull and 100 bow cow with 1936 Choice 1 draw applicants (1331 gun and 605 bow). There was one adult tag available for approximately every 5 resident hunter applications.

In 2014, there are 11 tourist outfitters that offer adult moose hunting packages. Moose in this unit are also harvested by Aboriginal community members.

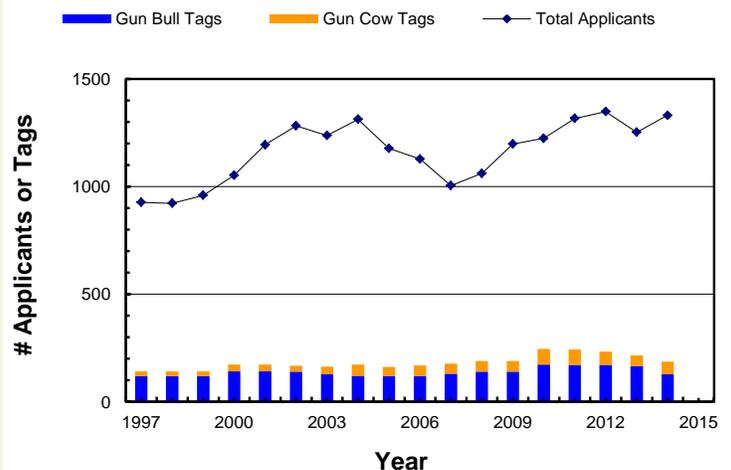


Figure 4: Resident Gun Tag Supply