

Moose Resource Report

Wildlife Management Unit 37

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 37 Description

Wildlife Management Unit (WMU) 37 is located in the Sault Ste. Marie and Sudbury Districts of the Ministry of Natural Resources (MNR).

The unit stretches from Thessalon and Hwy. 129 eastward to the Spanish River, just west of Espanola. The unit covers an on-shore area of about 4,700 square kilometres and is part of Cervid Ecological Zone (CEZ) D₂.

Cervid Ecological Zone D₂

Moose, white-tailed deer and elk live in this zone. For moose, the goal is to maintain a moderate to high density population. The summer and winter habitat of white-tailed deer may be managed to maintain a moderate density population. Elk exist in portions of this zone and management of populations and habitat is considered at the restoration level. The ministry's management objective is to have moose, white-tailed deer and elk on the same land base, and to maintain densities which reflect natural ecological conditions.



Map of WMU 37



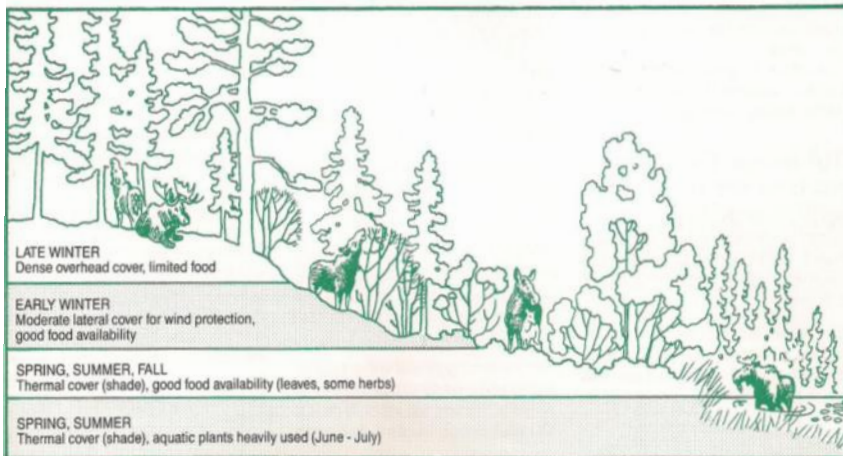
Map of Cervid Ecological Zone D₂

ontario.ca/moose

Moose Habitat Suitability

WMU 37 is mostly in the Great Lakes-St. Lawrence Forest. The forest is dominated by tolerant hardwoods, such as yellow birch, sugar and red maples, basswood and red oak. The hardwoods in this unit are commonly found together with coniferous species, such as eastern white pine, red pine, white spruce, eastern hemlock and eastern white cedar. Moose aquatic feeding areas are found throughout the unit.

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 37 at about 35 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 37

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 2009, resulted in a total population estimate of 985 +/- 187 moose with a density of 19 moose per 100 square kilometres. In 2009 the population was composed of 25 percent bulls, 64 percent cows, 16 percent calves and 6 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. In 2009 the estimated calf recruitment of 29 calves per 100 cows was close to the desired minimum threshold (Figure 1).



Photo: MNR Northeast Region

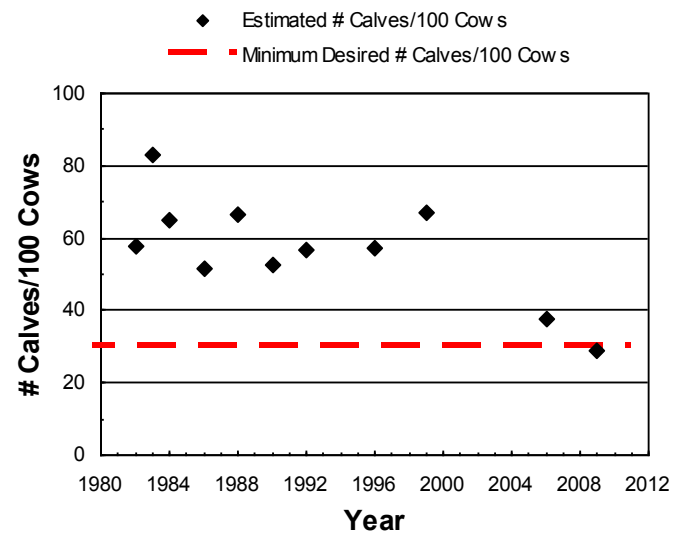


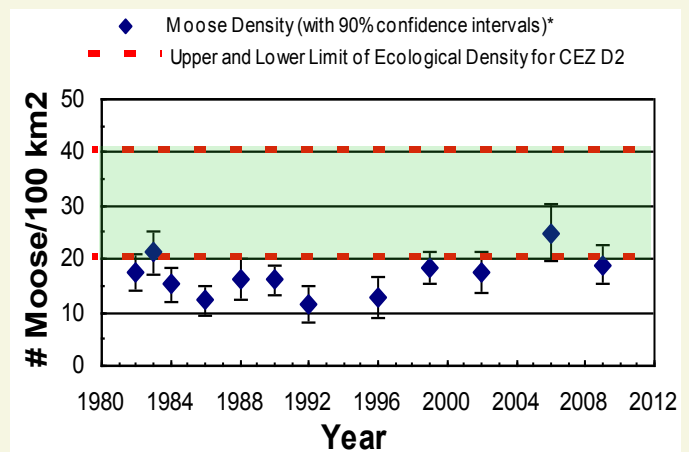
Figure 1: Calf recruitment (# Calves per 100 Cows) trends estimated from moose aerial inventories compared to lowest desired level.

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.

Since 1982, the moose population for WMU 37 has been mainly below the lower limit of the desired ecological density (20 - 40 moose per 100 square kilometres) for Cervid Ecological Zone D2 (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 D2)

Moose Management in WMU 37

Harvest Management

There are two moose hunting seasons in WMU 37. 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 each year. Non-resident gun season starts two days after the resident gun season start date. In WMU 37, the licensed harvest is allocated with 92.3 percent to the resident hunt and 7.7 percent to the tourist industry hunt.

Harvest Statistics

The estimated number of moose harvested by residents has ranged from 31 to 300 animals (Figure 3). Over the past five years, annual average harvest by 1,100 resident hunters (8,000 hunter days) has been 50 moose with clients of the tourist industry taking 3 moose. Calf harvests comprise about 44 percent of total licensed resident harvest.

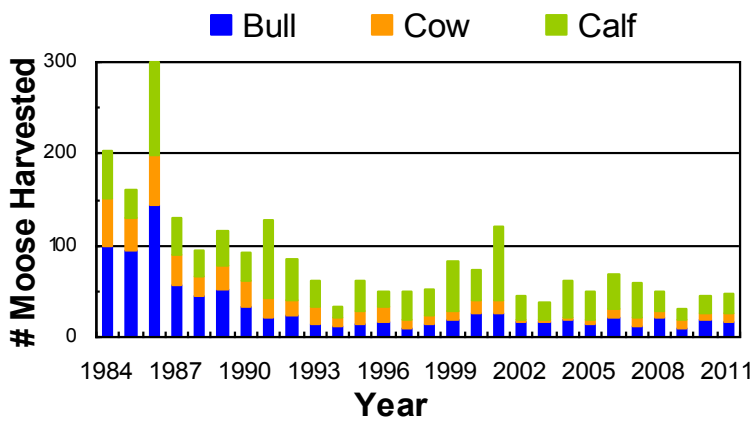


Figure 3: Resident Harvest

In addition to harvest data, information on the past success rates of hunters in filling their moose tags is used when planning the harvest. Tag fill rates for adult moose harvested by residents have generally been higher for bulls compared to cows. The past five year gun tag fill rates have averaged 46% with a range from 35 to 61 percent. In 2011, the resident gun bull tag fill rate was 55 percent and the resident gun cow tag fill rate was 44 percent.



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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 quotas were substantially reduced in early 2000's and have remained low and stable since 2006 reflecting lower moose densities, low calf recruitment and high composition of calves in the harvest.

Hunter Interest

Hunter interest in WMU 37 is moderate. The unit can be reached within one travel day from many 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 2011, resident gun tag quotas were 32 bull and 20 cow, with 965 Choice 1 draw applicants and there was one adult tag available for every 19 resident hunter applicants (Figure 4).

There are 10 tourist outfitters that offer moose hunting packages.

This unit is also where moose are harvested by Aboriginal community members.

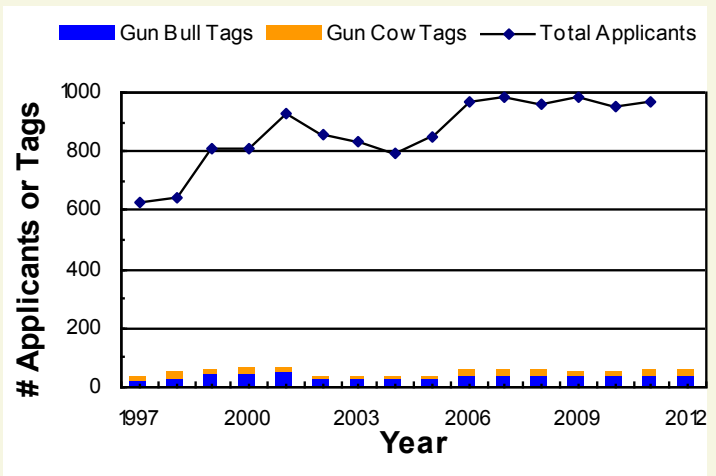


Figure 4: Resident Gun Tag Supply