Moose Resource Report

Wildlife Management Unit 57

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.

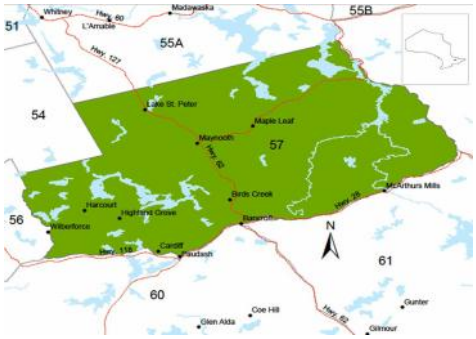
WMU 57 Description

Wildlife Management Unit (WMU) 57 covers an area of approximately 2020 square kilometres, and is located north of the town of Bancroft and south east of Algonquin Provincial Park. It includes several small communities such as Wilberforce, Maynooth and Maple Leaf. WMU 57 encompasses the Townships of McClure, Wicklow, Bangor, Harcourt, Herschel, Monteagle, Carlow, and parts of Cardiff, Faraday, Dungannon, Mayo, Raglan and Radcliffe. Approximately half of the land in WMU 57 is Crown Land, with the remainder being large areas of private land. WMU 57 is located in central Ontario and is part of Cervid Ecological Zone (CEZ) D_2.

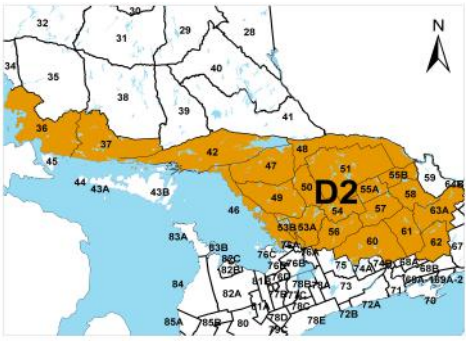
Cervid Ecological Zone D_2

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 are both managed to maintain a moderate density population. Elk are found in parts of this zone and management of their habitat is considered at the local level as needed.

The ministry's management objective for this CEZ 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 57



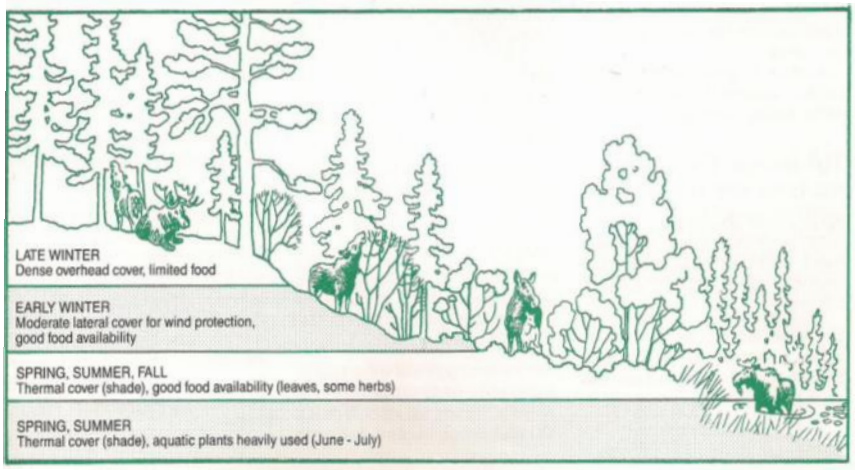
Map of Cervid Ecological Zone D_2

Ontario

Moose Habitat Suitability

The forest in WMU 57 is dominated by hard maple and intolerant hardwoods. Hardwoods tend to be found on the hilltops, and conifers (white pine, white and black spruce, balsam fir, and eastern hemlock) tend to be found in the lowland areas and on the side slopes of upland areas. The area has abundant ponds, streams and lakes, which provide a large amount of moose aquatic feeding areas. Moose tend to be found throughout most of the WMU area.

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 57 as about 32 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 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 57

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 363 ± 80 moose with a density of 22 moose per 100 km2. In 2011 the population was composed of 20% bulls, 55% cows and 25% calves.

Calf moose generally experience higher mortality from a variety of sources, including predation and harvest. However, calf recruitment in WMU 57 and most of the southern moose population is relatively high. The minimum desired calf recruitment each year is at least 30 calves per 100 cows to help ensure the population is maintained. As shown in Figure 1, estimates of calf recruitment in WMU 57 have exceeded that threshold since 1997.

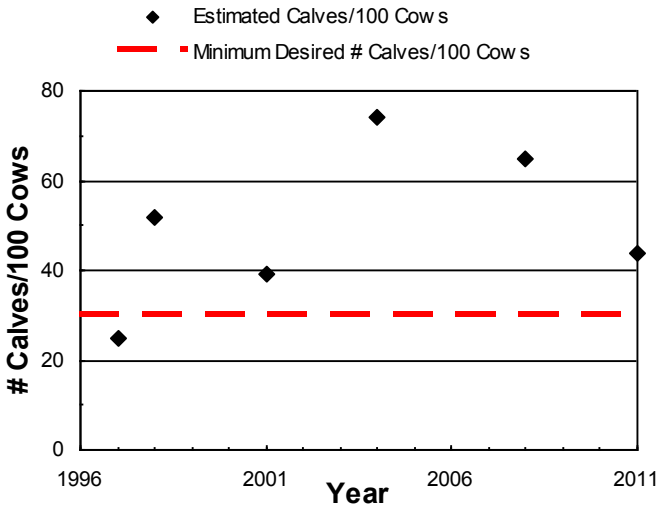


Figure 1: Calf recruitment (# Calves per 100 Cows) trends estimated from moose aerial inventories compared to lowest desired level.

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 2004, the moose population for WMU 57 has increased and is now within the desired ecological density (20 - 40 moose per 100 km2) for Cervid Ecological Zone D2 (Figure 2).

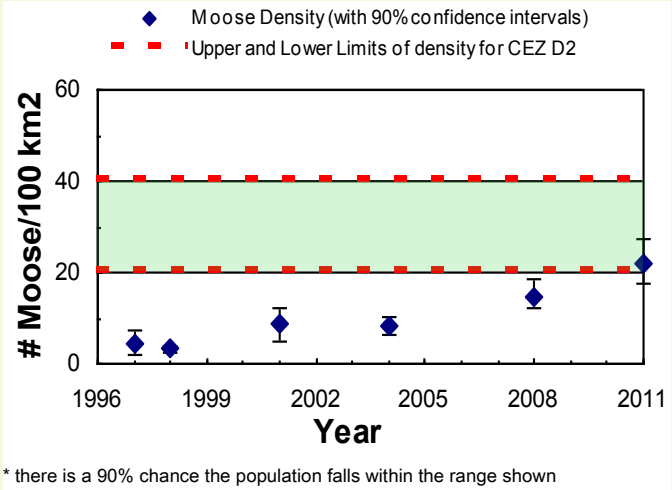


Figure 2: Moose Density (with upper and lower limits of the ecological density for CEZ D2)

Moose Management in WMU 57

Harvest Management

There are two resident moose hunting seasons in WMU 57. The 6-day archery-only season begins the 1st Monday in October and continues to the following Saturday. The 6-day gun season starts the 3rd Monday of October to the following Saturday. At this time, there is no non-resident moose season in WMU 57. There is no Tourist Industry allocation in this unit

Harvest Statistics

The estimated number of moose harvested by residents has ranged from a high of 62 to a low of 7 (Figure 3, which includes both gun and archery harvests) which is reflective of tag allocations. The 2011 harvest level was 48 animals.
Beginning in 2004, the calf harvest has been controlled in WMU 57 through a calf draw system. Prior to 2004, the majority of the harvest was calves; following the calf harvest restrictions put in place in 2004, the majority of the harvest has been comprised of bulls.

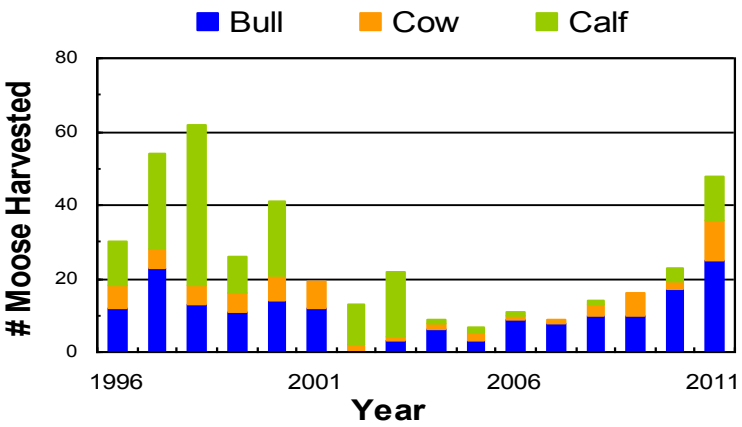


Figure 3: Resident Harvest

Information on the past success rates of hunters in filling their moose tags is also used when planning the harvest. Tag fill rates for moose harvested by residents in WMU 57 have shown considerable variation over the years. They generally range between 30 and 80% for bulls and 20 to 70% for cows, with calf tag fill rates being quite low. The 2011 bull tag fill rate was 54% for gun and 43% for archery, cow tag fill rate was 62% for gun and 21% for archery, and calf tag fill rates were 13% for gun and 5% for archery.

MNR 51953

Adult Validation Tag Quotas

Harvest planning also considers whether the objective is to grow, maintain or reduce the population size. In addition to calf tags, adult tag quotas have increased in WMU 57 since the implementation of the calf draw system in 2004 and are now approaching late 1990 levels. In 2011, the calf quota was increased substantially in order to meet objectives.

Hunter Interest

Hunter interest in WMU 57 is high relative to the tags available. Applicants decreased significantly until the implementation of different regulations in 2004, when applicants then began to increase steadily as the number of tags available has increased (Figure 4; note archery and gun tags and applicants are combined). In 2011, there was a total of 73 adult tags (gun and archery combined) for 824 1st choice applicants and 107 calf tags available for 134 first choice applicants. Therefore, there is one adult tag per 12 applicants.

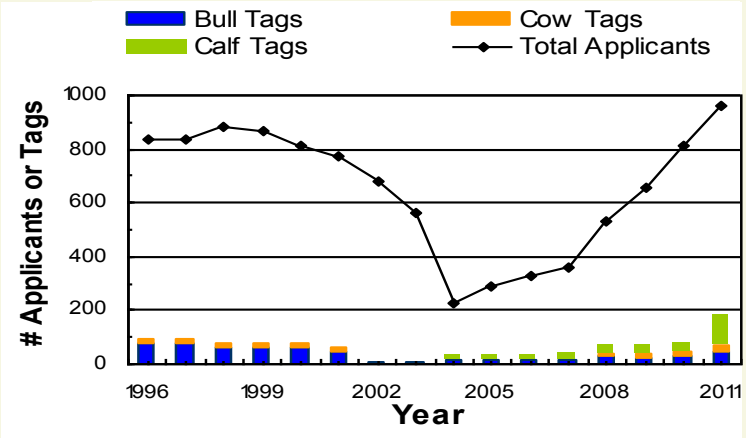


Figure 4: Resident Gun & Archery Tag Supply