Moose Resource Report

Wildlife Management Unit 42

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.

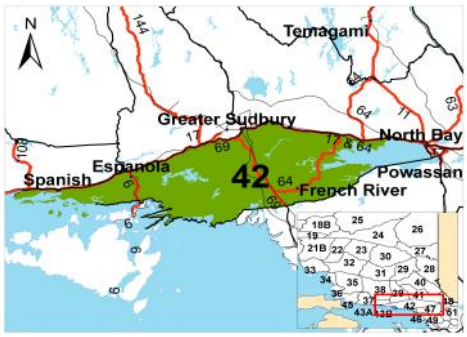
As part of managing moose, an objective is set for the number of moose that should be in an area. Ecological, social, cultural and economic factors related to moose are incorporated when making decisions about harvest allocation and what management actions are needed to help achieve that objective.

WMU 42 Description

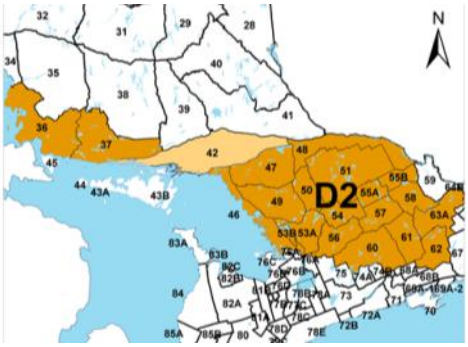
Wildlife Management Unit (WMU) 42 is located south of the City of Sudbury and is managed out of the Sudbury District of Ministry of Natural Resources (MNR). The unit is bounded by Highway 17 to the north and the shorelines on Georgian Bay, the French River and Lake Nipissing to the south. Approximately half of the unit is Crown land. The unit covers an area of about 6,500 square kilometres 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 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 42



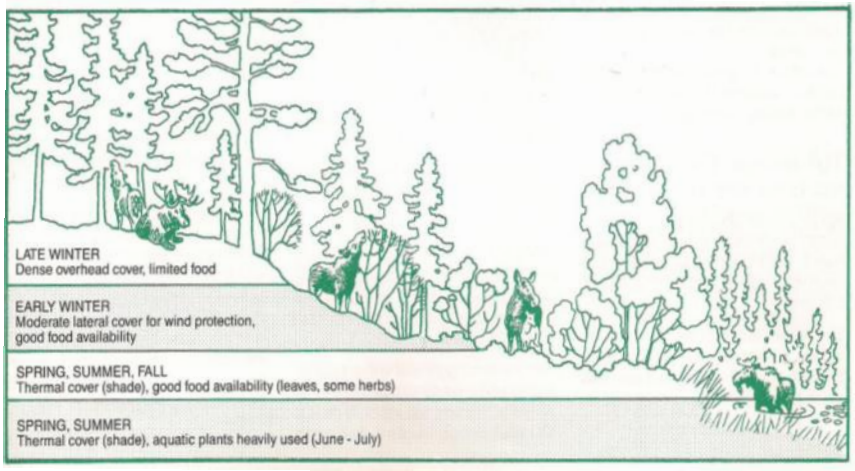
Map of Cervid Ecological Zone D_2

Ontario

Moose Habitat Suitability

WMU 42 is located in the Great Lakes-St. Lawrence Forest and is characterized by extensive bedrock outcrops and generally shallow soils. This landscape supports even-aged, mixed stands of white pine, red pine, white spruce, poplar and white birch. Stands of tolerant hardwoods are few and scattered throughout the unit. Jack pine stands are scattered along with lowland pockets of black spruce.

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 42 at about 21 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 42

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.

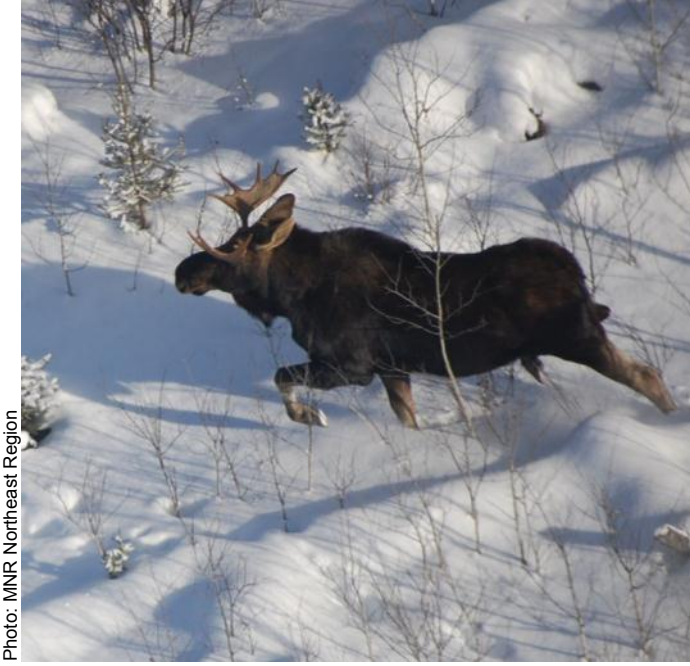


Photo: MNR Northeast Region

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 2154 +/- 414 moose with a density of 37 moose per 100 square kilometres. In 2011 the population was composed of 21 percent bulls, 51 percent cows, 26 percent calves and 2 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. Over the years calf recruitment has ranged from 36 to 77 calves per 100 cows. The 2011 estimated calf recruitment of 52 calves per 100 cows was well above the minimum desired threshold (Figure 1).

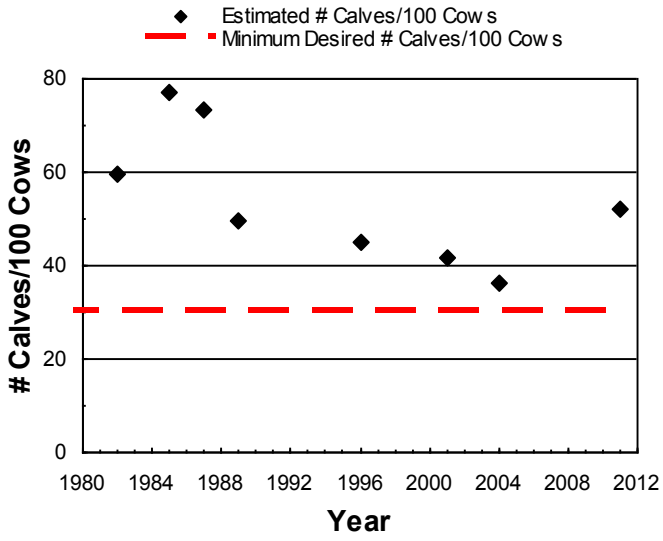


Figure 1: Calf recruitment (# Calves per 100 Cows) trends estimated from moose aerial inventories compared to lowest desired level.

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.

In recent years the moose population for WMU 42 has remained within the limits of the desired ecological density (20 - 40 moose per 100 km2) for Cervid Ecological Zone D2 (Figure 2).

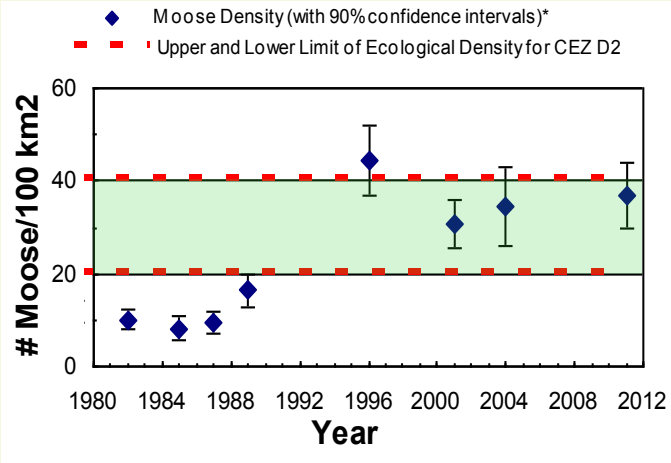


Figure 2: Moose Density (with upper and lower limits of the ecological density for CEZ D2)

Moose Management in WMU 42

Harvest Management

There are two moose hunting seasons in WMU 42. 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 42, the licensed harvest is allocated with 93.3 percent to the resident hunt and 6.7 percent to the tourist industry hunt.

Harvest Statistics

The estimated number of moose harvested annually by residents has ranged from 38 to 422 animals (Figure 3). Over the past five years, annual average harvest by 2,700 resident hunters (21,000 hunter days) has been 165 moose (of these, 137 were calves) with clients of the tourist industry taking 5 moose. Calf harvests comprise about 83 percent of total licensed resident harvest. About 25% of the fall calf population is being harvested; this is very high and severely limits the number of adult moose available for harvest.

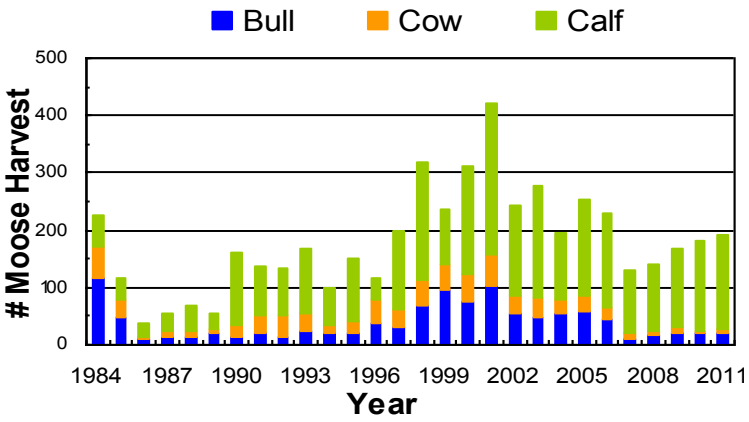


Figure 3: Resident Harvest

In addition to harvest data, information on the past success rates of hunters in filling their moose tags is used when planning the harvest. The past five year gun tag fill rates have averaged 68% with a range from 32 to 100 percent. In 2011, the resident gun bull tag fill rate was 68 percent and the resident gun cow tag fill rate was 60 percent.

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MNR 51953

Adult Validation Tag Quotas

Harvest planning, including adult validation tag quotas, is done annually to reflect the most recent population survey and harvest information. To ensure that harvest levels remain sustainable in the presence of the very high calf harvests and consistently high tag fill rates experienced in WMU 42 requires that few adult tags can be made available.

Hunter Interest

Hunter interest in WMU 42 is high. 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 31 bull and 12 cow, with 2,297 Choice 1 draw applicants and there was one adult tag available for every 53 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.

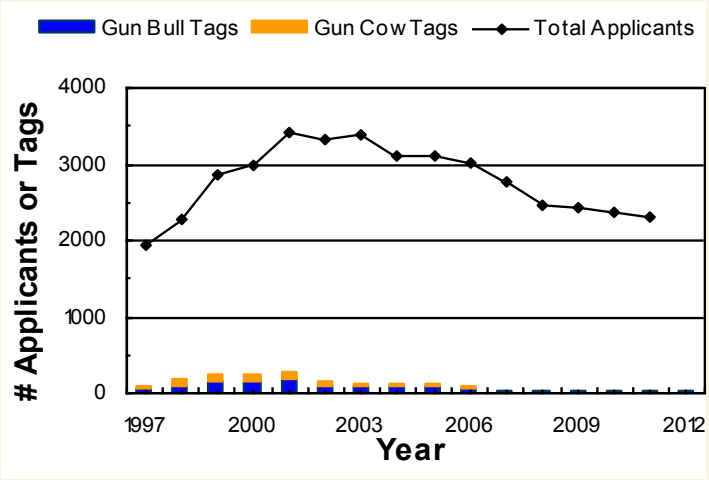

Figure 4: Resident Gun Tag Supply