Moose Resource Report

Wildlife Management Unit 23

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.

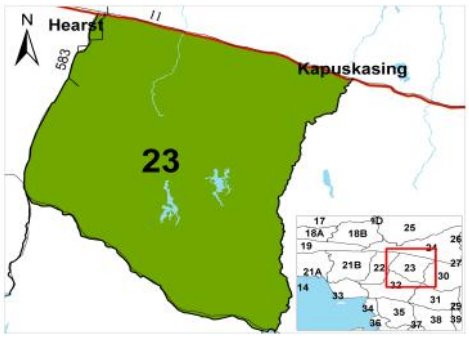
As part of managing moose, an objective is set for the number of moose that should be in an area. Ecological, social, cultural and economic factors related to moose are incorporated when making decisions about harvest allocation and what management actions are needed to help achieve that objective.

WMU 23 Description

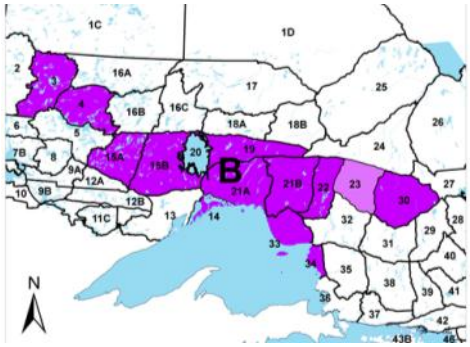
Wildlife Management Unit (WMU) 23 is located in the Hearst District of the Ministry of Natural Resources (MNR). The unit is bounded by Hwy. 11 to the north, the CNR rail line to the south, the ACR rail line to the west and the Kapuskasing River to the east. The unit is almost entirely Crown land and is largely influenced by forest management activities. The unit contains one Provincial Park (Missinaibi River) where hunting is permitted. The unit covers an area of approximately 9,450 square kilometres 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 populations are managed to maintain a low density in this zone. The ministry's management objective is to minimize impacts on woodland caribou populations through maintenance or restoration activities as directed by the Caribou Conservation Plan and associated policies. Within caribou range, maintaining low densities of moose and deer that reflect natural ecological conditions is consistent with managing the wildlife community as per the Caribou Conservation Plan.



Map of WMU 23



Map of CEZ B

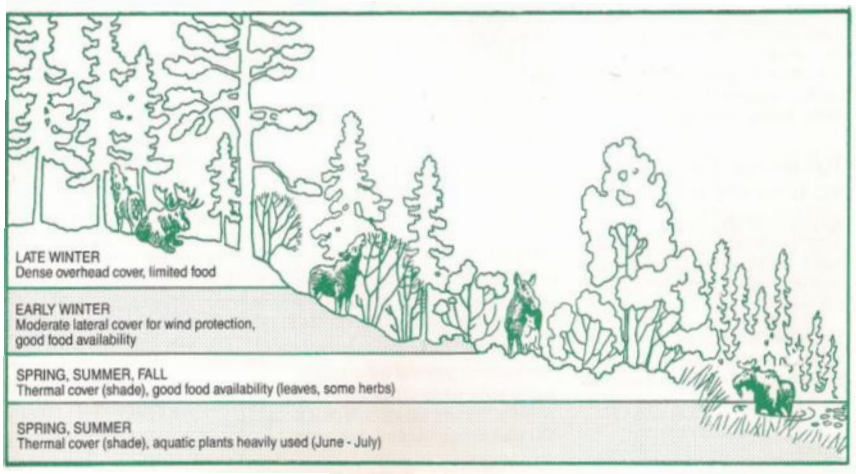
ontario.ca/moose

Ontario

Moose Habitat Suitability

The northern portion of WMU 23 is found within the Northern Clay Belt. The terrain is relatively flat and characterized by large pure stands of conifer (black spruce, cedar and tamarack) on the lowland sites with mixed wood (black spruce, poplar, white birch, balsam fir) on the upland sites. Pure hardwood stands (white birch and poplar) are found on hilltops. The southern section of the unit is generally sand plains and gravel ridges and includes not only those tree species found on the northern portion, but also includes jack and red pines with mixed wood and hardwood stands being more abundant. Aquatic feeding areas are not abundant and are rather poor in quality.

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 23 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 23

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.

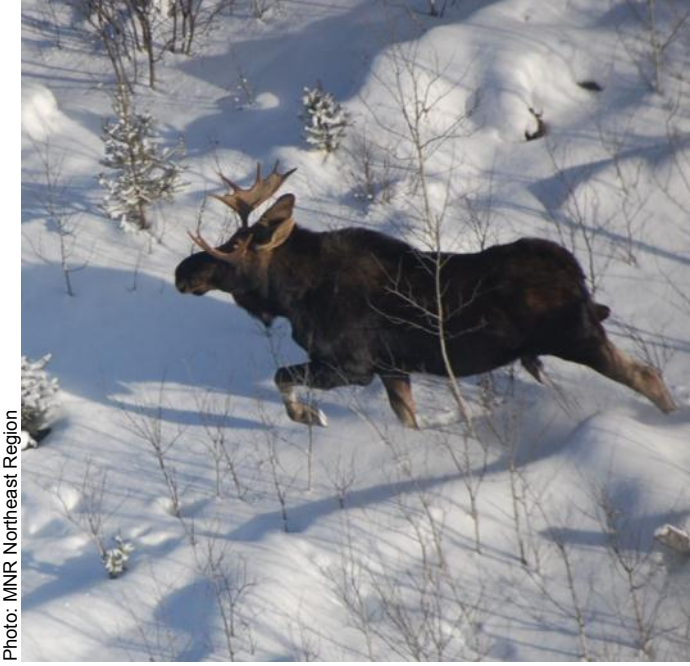


Photo: MNR Northeast Region

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 2009, resulted in a total population estimate of 1854 +/- 428 moose with a density of 20 moose per 100 square kilometres. In 2009 the population was composed of 33 percent bulls, 47 percent cows, 19 percent calves and 1 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. The last estimate of calf recruitment was above the desired minimum threshold (Figure 1).

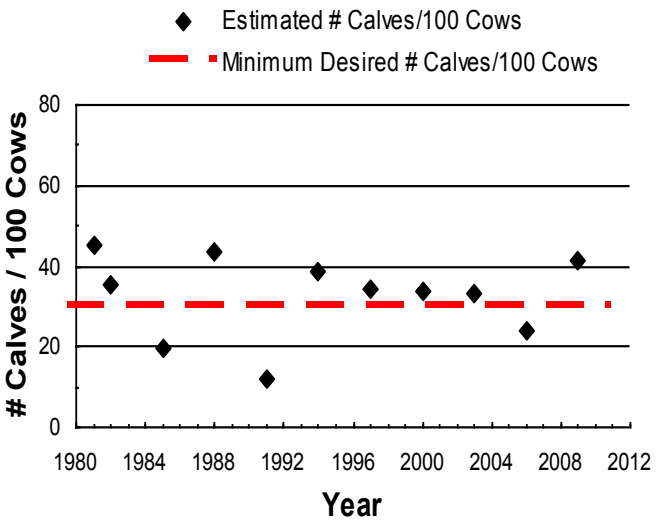


Figure 1: Calf recruitment (# Calves per 100 Cows) trends estimated from moose aerial inventories compared to lowest desired level.

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.

The moose population for WMU 23 has been maintained within the limits of the desired ecological density (10 - 25 moose per 100 square kilometres) for Cervid Ecological Zone B (Figure 2).

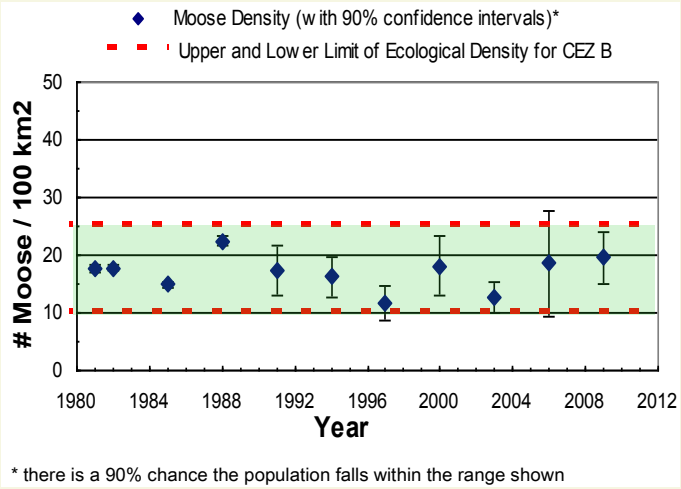


Figure 2: Moose Density (with upper and lower limits of the ecological density for CEZ B)

Moose Management in WMU 23

Harvest Management

There are two moose hunting seasons in WMU 23. 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 23, the licensed harvest is allocated with 87 percent to the resident hunt and 13 percent to the tourist industry hunt.

Harvest Statistics

The estimated number of moose harvested by residents has ranged from 42 to 201 animals (Figure 3). Over the past five years, annual average harvest by 1,100 resident hunters (8,900 hunter-days) has been 96 moose with clients of the tourist industry taking 11 moose. Calf harvests comprise about 12 percent of total licensed resident harvest.

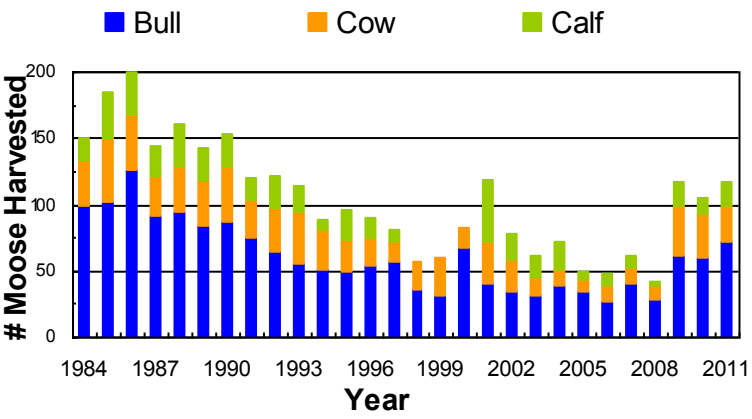


Figure 3: Resident Harvest

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 in WMU 23 are higher for gun tags compared to bow tags, although some years the bow bull tag fill rate is similar to that by gun. The past five year gun tag fill rates have averaged 53% with a range from 33 to 91 percent. In 2011, the resident gun bull tag fill rate was 59 percent and the resident gun cow tag fill rate was 52 percent.

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. Tag quotas have been stable since 2009.

Hunter Interest

Hunter interest in WMU 23 is moderate. The unit can be reached within one travel day from several larger population centres and has extensive road access which allows hunters to more readily reach the moose population. As a result, the number of hunters interested in hunting this unit greatly exceeds the amount of moose available for harvest. In 2011, resident tag quotas were 74 gun bull, 52 bow bull, 52 gun cow and 88 bow cow, with 1,433 Choice 1 draw applicants (1000 gun and 433 archery) and there was on average one adult tag available for every 5 resident hunter applications (Figure 4).

There are 10 tourist outfitters that offer moose hunting packages.

This unit it also hunted by members from the aboriginal community.

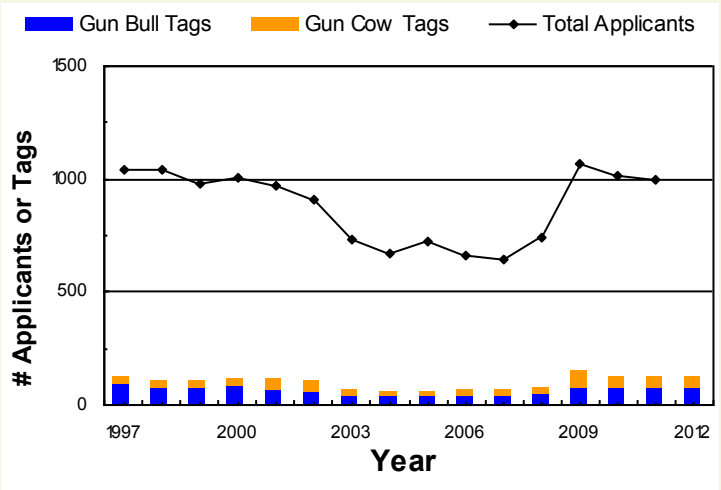


Figure 4: Resident Gun Tag Supply