Moose Resource Report

Wildlife Management Unit 13

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 13 Description

Wildlife Management Unit (WMU) 13 is located in Thunder Bay District. It is bounded by TransCanada Pipeline to the north, Nipigon River and Lake Superior to the east, the U.S. border to the south and Highway 17 and the Matawin River to the west.

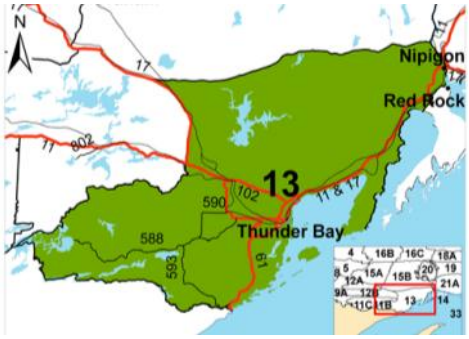
Approximately 60% of the WMU is Crown land. Private land is mainly around the City of Thunder Bay and along the Lake Superior shoreline.

WMU 13 has a total area of 13,402 km^2 and is part of Cervid Ecological Zone (CEZ) C1.

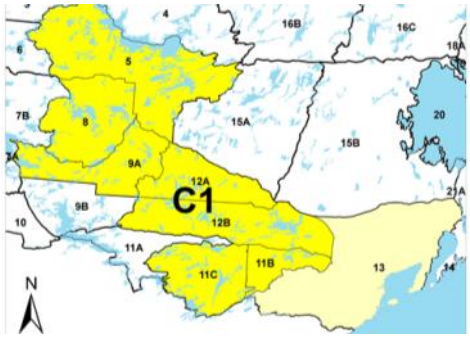
Cervid Ecological Zone C1

Moose and white-tailed are the main cervid species that live in this zone, but there may also be small numbers of elk and woodland caribou. For moose, the goal is to maintain a moderate to high density population and habitat may be managed as appropriate to achieve this. White-tailed deer are managed to maintain a low population density.

The ministry's cervid management objective is to have both moose and white-tailed deer on the same land base, and to maintain densities which reflect natural ecological conditions.



Map of WMU 13



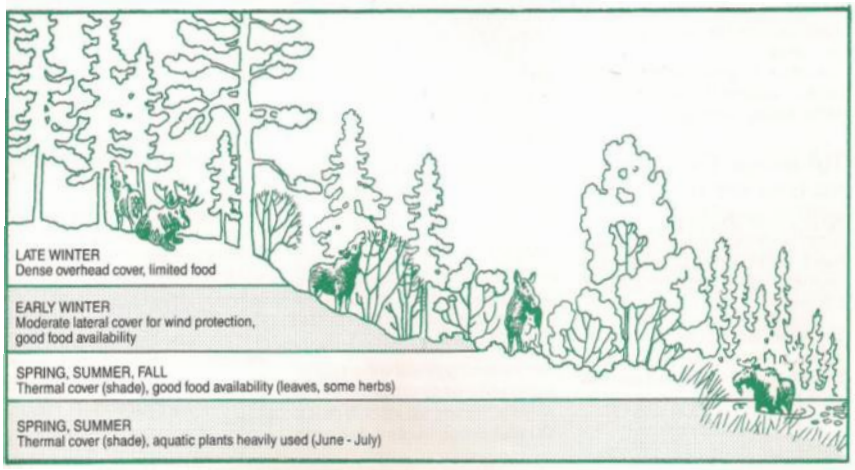
Map of Cervid Ecological Zone C1

Ontario

Moose Habitat Suitability

WMU 13 is in the transition area between the Great Lakes - St. Lawrence and Boreal forest regions. The forest is dominated by mixedwoods and mixed hardwoods. Dominate tree species include poplar, white birch, white and black spruce, balsam fir and jack pine. Outside of Parks and Conservation Reserves, Crown land is available for forest management activities which occur under the authority of Forest Management Plans. Timber harvesting is also common on private lands. Harvesting followed by natural regeneration creates good quality moose habitat.

Landscape habitat analysis modelling estimates the overall mean carrying capacity, or number of moose that the habitat can support in WMU 13 as about 44 moose per 100 km^2. 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 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 13

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 population estimate of 3549 ± 706 moose (3845 observed + missed) or a density of 32 moose per 100 km^2 of land area. In 2011, the population was composed of 54 per cent cows, 28 per cent bulls, 16 per cent calves and 2 per cent unknown. The 2011 population estimate was down slightly from the 2008 survey.

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. Calf survival estimates were below that level in 2004 and 2008 and at that level in 2011 (Figure 1).

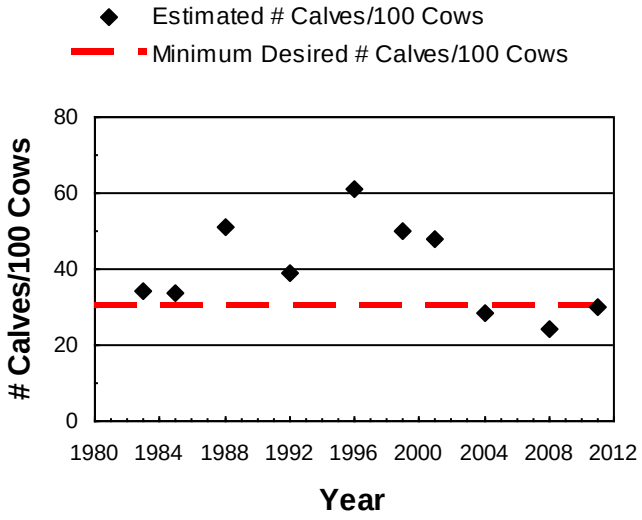


Figure 1: Calf recruitment (# Calves per 100 Cows) trends estimated from moose aerial inventories compared to lowest desired level.

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 in WMU 13 is currently within the desired ecological density (30 - 55 moose per 100 km^2 for CEZ C1 (Figure 2).

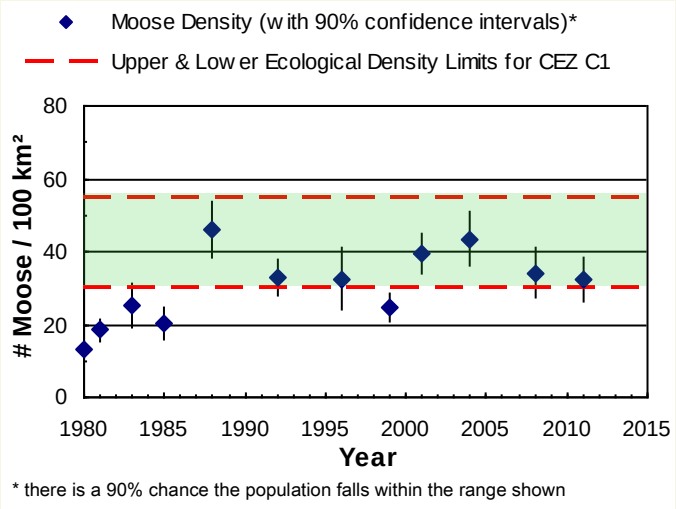


Figure 2: Moose Density (with upper and lower limits of the ecological density for CEZ C1)

Moose Management in WMU 13

Harvest Management

There are two moose hunting seasons in WMU 13. 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, 98.4 per cent of the licenced harvest is allocated to the resident hunt and 1.6 per cent to the tourist industry.

Harvest Statistics

Moose harvest grew in WMU 13 from the mid-1980s through the early-2000s. In recent years, the harvest has declined, which mirrors the trend observed in recent moose surveys (Figure 3). Over the past five years, annual average harvest by residents has been 403 moose with clients of the tourist industry taking 6 moose. Calf harvest makes up about 20 per cent of total licenced resident harvest.

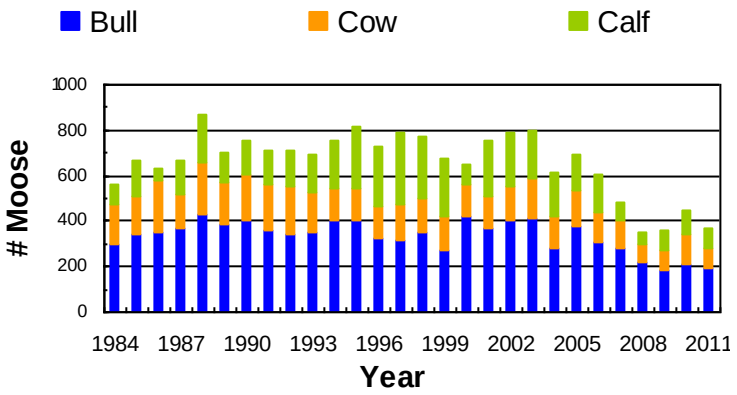


Figure 3: Resident Harvest

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 13 have generally ranged between 24 and 41 per cent. The resident bull tag fill rate for 2011 from the gun and bow hunts combined was 24 per cent and the resident cow tag fill rate was 23 per cent.

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

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 allocations in the unit were reduced in 2008 in response to a declining population trend.

Hunter Interest

Hunter interest (effort) in WMU 13 is high relative to other NWR WMUs, although the number of applicants applying to the WMU has declined. There is extensive road access throughout the unit which allows hunters to more readily 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 2011, resident gun tag quotas were 740 gun bull, 375 gun cow, 62 bow bull and 45 bow cow, with 4119 Choice 1 draw applicants (3812 gun and 307 bow). There was one adult tag available for approximately every 3 resident hunter applications.

Moose in this unit are also harvested by Aboriginal community members.

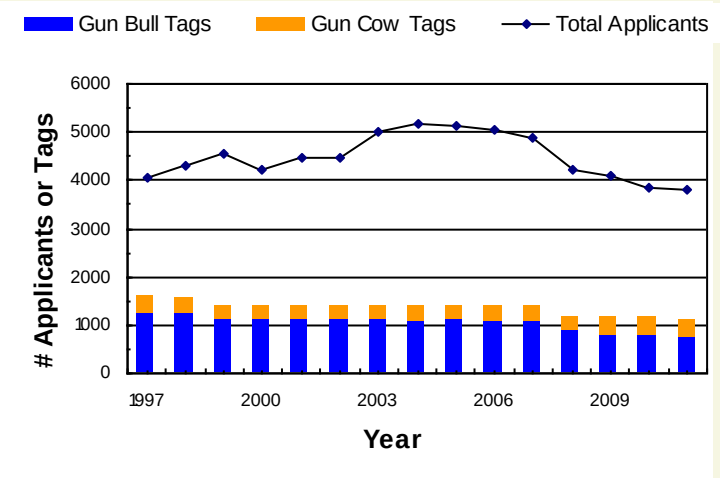


Figure 4: Resident Gun Tag Supply