Moose Resource Report
Wildlife Management Unit 50

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 50 Description

Wildlife Management Unit (WMU) 50 is located immediately west of Algonquin Park north of the Lake of Bays. Its boundaries are Algonquin Park to the east, Highway 60 along the south, Highway 11 on the west and Chemical Road east of South River along the north. The town of Huntsville and the villages of South River and Sundridge border this unit. WMU 50 is 1746 square kilometres in area, 53% private land and 47% crown land. It is part of Cervid Ecological Zone (CEZ) D2.

Cervid Ecological Zone D2

Moose and 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 within 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.

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Moose Habitat Suitability

WMU 50 habitat is characterized as rugged uplands, moderately rolling rock ridges that are shallow to moderately deeply covered with stony silty sand, with sand and gravel in depressions (Noble, 1984). This unit is covered by stands of uneven-aged hard maple and yellow birch with white birch and hemlock. Large stands of black spruce and tamarack occur in poorly drained lowlands. Red spruce is more common here than elsewhere in the province. Moose aquatic feeding areas tend to be smaller and less abundant in WMU 50 than other areas of Parry Sound District.

Using a range of landscape habitat analysis models, the ministry has calculated that the overall average carrying capacity, or number of moose that the habitat can support, for WMU 50 is about 39 moose per 100 km². This considers growing season browse, aquatic feeding areas, and both early and late winter habitats.

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.

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.

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.
Moose Management in WMU 50

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.

Five surveys have been conducted since 1996 providing population estimates ranging from approximately 525 to 690 moose (Figure 2). The last survey in 2009 estimated a population of 546 +/- 87 moose, a density of 31 moose per 100 km\(^2\) and confirmed that the population has remained stable since the mid 1990s. In 2009 the population was composed of 24% bulls, 52% cows, and 24% calves, with 46 calves per 100 cows.

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. All recent estimates of calf survival have been above this level (Figure 1).

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 1996 all estimates of the moose population for WMU 50 have been within the limits of the desired ecological density (20 - 40 moose per 100 km\(^2\)) for Cervid Ecological Zone D2 (Figure 2).
Moose Management in WMU 50

Harvest Management

The moose hunting season in WMU 50 begins on the third Monday in October and lasts for six days. This season is for resident hunters only and allows rifles, shotguns, bows and muzzle-loaders to be used. Presently there is no separate archery or muzzle-loader season.

Harvest Statistics

The estimated number of moose harvested annually by resident hunters from 1996 to 2011 has ranged from 101 to 178 animals per year, averaging 24% of the population (Figure 3). Calves averaged 33% of the harvest increasing to 38% over the last five years. Hunter interest in WMU 50 is high. The unit is bounded on the east by Algonquin Provincial Park which is well known for one of the highest density moose populations in the province. As in most of Ontario, the number of hunters interested in hunting in WMU 50 greatly exceeds the amount of available adult tags. In 2011, there were 2528 Choice 1 applicants for 137 adult tags resulting in an average of one tag for every 18 resident hunter applications (Figure 4). Resident tags for 2012 were 98 bull and 39 cow. Some harvest of moose in this unit is taken by nearby First Nation community members.

Adult Validation Tag Quotas

Harvest planning, including adult validation tag quotas, is done annually to reflect the most recent population survey and harvest information. From 1996 to 2011, the average number of adult validation tags allocated to resident hunters annually was 293 tags (Figure 4). Tourist outfitter allocation during this period averaged 26 tags. Over the last five years, resident tags and tourist industry tags average 234 and 23, respectively.

Hunter Interest

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 rate for bull hunters has averaged 28% (range, 19 to 46%). Fill rate for cow hunters averaged 45% (range, 34 to 61%) and has remained higher than bull hunter success in most years.