

Moose

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Summary of Assessment

Two distinct populations of moose exist in Nova Scotia:

Cape Breton

The population in northeastern Cape Breton began with an introduction of moose from Alberta in the 1940s, increased steadily until 1980s, and stabilized in recent years. It is considered **hyper-abundant** – the population has exceeded the capacity of the habitat.

Sustainable: Based on the knowledge of the biology, status, harvest level, and trend of moose in Nova Scotia within the context of the existing management and monitoring framework, the current use of the species in Cape Breton is likely sustainable.

Mainland

On the mainland, the native subspecies of moose declined over the past 30 years. It is considered **uncommon**.

May not be sustainable: Based on the knowledge of the biology, status, and trend of moose in Nova Scotia within the context of the existing management and monitoring framework, any use of the species on Nova Scotia's mainland is not considered to be sustainable. Moose have been designated as an Endangered species on the mainland and any harvest is strictly prohibited.

Key knowledge, management and/or monitoring strengths

Cape Breton

- ▶ Periodic **aerial surveys, pellet counts, and track counts** have been used to estimate moose abundance; the use of aerial infrared sensing as a survey tool holds promise for long-term monitoring. Annual data collected from harvester reports informs management decision-making.
- ▶ Current **harvest management** aims to help reduce the population in the region. The hyper-abundance of the species in the area indicates that the population is not currently at risk of overuse.
- ▶ Moose harvest in Cape Breton is regulated through an **on-going formal management structure** with licenses issued annually through a draw system for specific seasons and zones. Compliance with strict protection measures is believed to be high.
- ▶ **Harvest of moose in Cape Breton has remained relatively stable** in recent years. There is a moderate chance of increase in the harvest level to reduce the population in the area.

- ▶ **The main threat to moose in Cape Breton is overabundance leading to habitat degradation.** Harvesting mitigates this risk and decreases the risk of density-dependent disease outbreak in the population.
- ▶ **Budgetary and human resources** are sufficient to allow on-going annual collection of harvester reports.

Mainland

- ▶ Periodic **aerial surveys, pellet counts, track counts**, and mainland sightings by the public have been used to estimate moose abundance; the use of aerial infrared sensing as a survey tool holds promise for long-term monitoring.
- ▶ **No hunting of moose has been permitted** on mainland Nova Scotia in over 30 years. A Recovery Strategy and a Recovery Action Plan for the mainland population aim to maintain the population of mainland moose in Nova Scotia within their current range, mitigate threats that limit recovery, and maintain and enhance habitat.

- ▶ On the mainland, **forestry management practices** aim to provide suitable habitat for moose. These Moose Special Management Practices have been applied within five Significant Mainland Moose Population Concentration areas where moose are known to occur.



The five mainland moose population areas.

Gaps identified

The following gaps in available information, and current management and/or monitoring regimes have been identified:



Cape Breton

- ▶ **No habitat management** specific for moose in Cape Breton is currently in place, but the species derives benefit from forestry practices in the region.
- ▶ The Mi'kmaq community and the province are working toward better co-management to address the current lack of detailed **harvest information from the Mi'kmaq hunt** which would improve confidence in moose management and harvest controls.
- ▶ **Habitat monitoring** across the province is ongoing, but informal. It is known that habitat in Cape Breton is being degraded, but quantitative regular monitoring has not occurred. Habitat modeling may be helpful to monitor habitat availability in the future.
- ▶ **Management of moose harvest** in Nova Scotia could be improved with the use of a robust population estimate.
- ▶ Although **harvester reports** are mandatory, compliance is not 100%. Additional effort could improve compliance.

Mainland

- ▶ **Habitat monitoring** across the province is ongoing, but informal. On the mainland, habitat is monitored to verify that forestry managers are adhering to guidelines, but additional work will assess whether and to what extent these practices are benefiting moose.
- ▶ Mainland moose face **threats** from disease and parasites, poaching, vehicle collision, development, forest practices, and climate change. The interactions between these threats are not well understood.

Summary of supporting information

Biological characteristics

Moose are generally solitary animals, relatively tolerant of human activity and disturbance. They make use of a variety of habitat types and eat a seasonally diverse diet. Mature females most often produce a single calf annually. Young normally do not disperse a great distance.

Status

Cape Breton: The high density of moose in northwestern Cape Breton has resulted in substantial ecosystem damage and habitat degradation in the area due to over browsing. The population increased steadily since the introduction of moose from Alberta in the 1940s, but has stabilized in recent years.

Mainland: the native subspecies of moose declined over the past 30 years, although the data are not available to provide clear trends for mainland moose. There are several threats to the mainland moose, although the interactions between them is not well understood.

Management

Cape Breton: The Cape Breton Island moose population is harvested as a means of population control as well as to support traditional and cultural values of Nova Scotians. A set number of moose licenses are issued annually. There is no management plan in place, and there is no habitat management for moose in Cape Breton.

Mainland: The hunting of moose on mainland Nova Scotia has not been permitted in over 30 years. A Recovery Strategy and Action Plan both exist for the mainland population. Forestry management practices aim to provide suitable habitat for the species in areas that it is known to occur.

Control of harvest

Cape Breton: The majority of moose harvested in Nova Scotia are taken from provincial Crown lands. Harvest management is controlled by regulations that apply equally on all lands regardless of ownership. Management could be improved with the use of a robust population estimate incorporating the use of aerial infrared surveys.

Mainland: Harvesting prohibited.

Harvest trend

Harvest of moose in Nova Scotia has been stable in recent years.

Cape Breton: There is a moderate chance of increase in the harvest level in Cape Breton to reduce the population in the area.

Mainland: The mainland moose population will not sustain a harvest in the foreseeable future.

**Periodic aerial surveys
have been used to estimate
moose abundance.**



Monitoring

Cape Breton: The effect of harvesting on the moose population in Cape Breton is monitored through harvester reporting data collected annually, and periodic field surveys.

Mainland: Habitat monitoring across the province is informal.

**Incentives and benefits
from harvesting**

Cape Breton: The harvest of moose in Cape Breton has contributed to maintaining lower densities of the species in areas where harvest is permitted. As a result, habitat degradation due to over browsing is reduced and the remaining individuals benefit from improved habitat.

Mainland: Harvesting prohibited.

Protection from harvest

Cape Breton: Harvest of moose is limited to specific seasons, bag limits, and management zones. Harvest is prohibited within provincial parks, nature reserves, urban areas, and some game sanctuaries and wildlife management areas (as per regulations). A limited, controlled hunt in part of Cape Breton Highlands National Park has been conducted to investigate the response of habitat to reduced moose density. The hyper-abundance of the species in Cape Breton indicates that the species is not at risk of overuse.

Mainland: Harvesting prohibited.