

Moose Adaptive Management Zone Proposal



Maine is home to the highest moose population in the lower 48 states, and Maine's moose population is relatively stable through its core range in the state. However, MDIFW's moose study has shown that winter tick, first documented in Maine in the 1930s, is impacting Maine's moose population through increased calf mortality and lower birth rates, particularly in southern and western areas of the state.

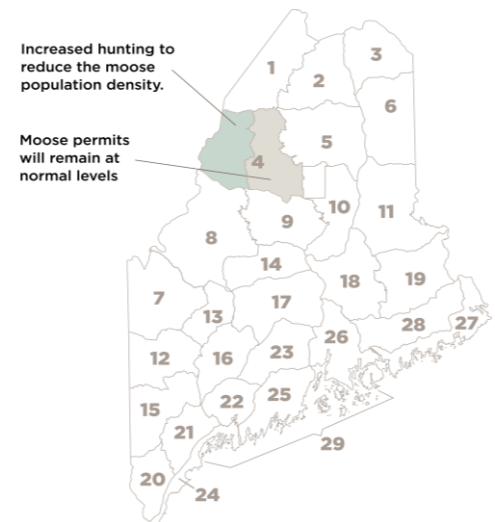
Maine's Moose Study

- MDIFW's seven-year Moose GPS collar study examined adult cow and calf mortality. Among the key findings:
 - Adult survival remains high, yet calves experienced mortality rates greater than 50% due to infestations of winter tick
 - High tick infestations result in significant blood loss that can kill calves, and impact breeding success of adults.
 - Surviving female calves have poor physical condition which can lead to delayed onset of breeding and lower twinning rates
- Impacts of winter ticks on moose has been documented in other states and provinces, but not to the degree as seen in the Northeast.
- When animal population densities increase excessively, it can impact availability of food, increase instances of disease and parasites, and impact species health.
 - In Maine, food remains stable, but significant winter tick loads can be found on almost every moose, indicating a high moose population.
 - Breeding success, including breeding success age, twinning rates, and number of calves per cow have decreased since the early 1990's.
- Elsewhere in North America where moose populations are not as high, moose have lower winter tick loads and increased breeding success,

WMD 4 Adaptive Management Zone Proposal

Our objective is to increase cow permits in the Adaptive Management Zone (1/2 of WMD 4) to reduce the moose population over 5 years to determine if a lower moose density can lessen impacts of winter tick on moose

- This proposal will show whether a lower moose population can lower winter tick numbers and thus improve moose reproduction and overwinter calf survival
- The adaptive management proposal will increase cow harvest on the west side of WMD 4 from 2021 - 2025
 - This part of the North Maine Woods has a high density of moose
 - This West side of WMD 4 is relatively small and represents only 6% of the entire core range of moose.
- The adaptive management proposal would be integrated into the current moose season framework, with additional hunting weeks in late October and early November.



Monitoring the Adaptive Management Zone

- MDIFW will continue to:
 - Place GPS collars on moose calves in WMD 4 to assess survival.
 - Conduct annual helicopter surveys to determine moose density, and sex/age composition of the moose population.
 - Monitor moose health and breeding success through the collection of biological data during the hunt.
 - Continue to examine winter tick numbers on collared and harvested moose to determine trends in tick numbers
- By intensely monitoring the moose population in the adaptive management zone, MDIFW can assess health and breeding success, and compare it with the general moose population. If successful, management methods could be utilized elsewhere in the state to ensure a healthy moose population.