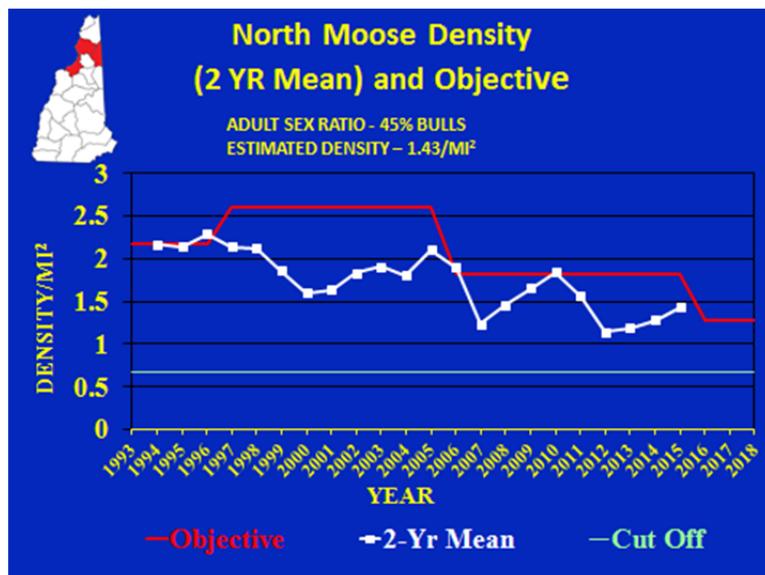
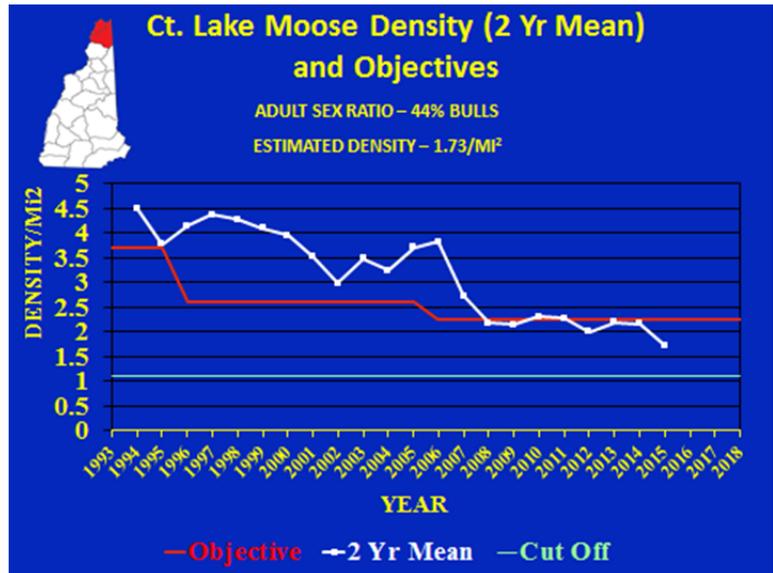


The following graphs depict the regional moose population changes over time, the changing goals as set every ten years, in conjunction with the general public, and the cut-off thresholds for permit suspension.

The **Connecticut Lakes Region** has always had the state’s highest moose density. The goal was reduced in 1996 and again in 2006 due to public concerns of over-browsing of the habitat by moose and moose/vehicle accidents. The population was reduced to goal and remained there from 2008 – 2015, when it declined below goal. Data collected from harvested moose provides information on the physical condition of moose, and this population is exhibiting very low body weights and low productivity due to chronic high tick loads.

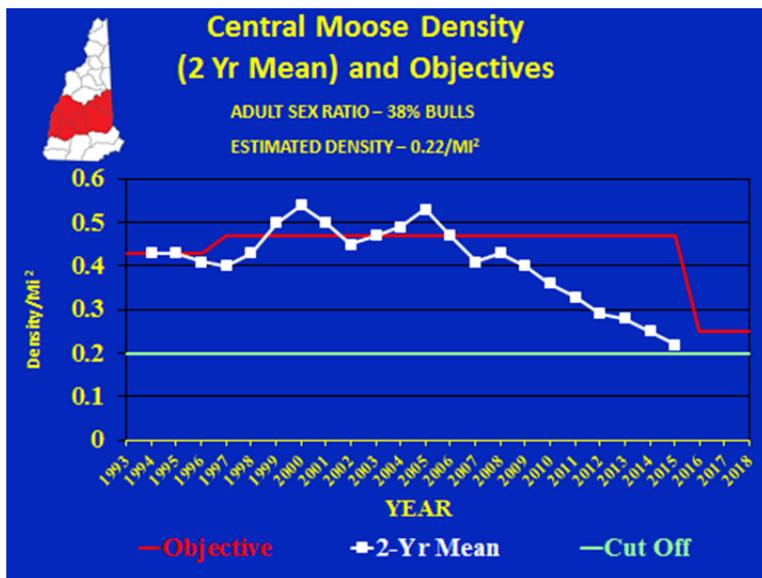
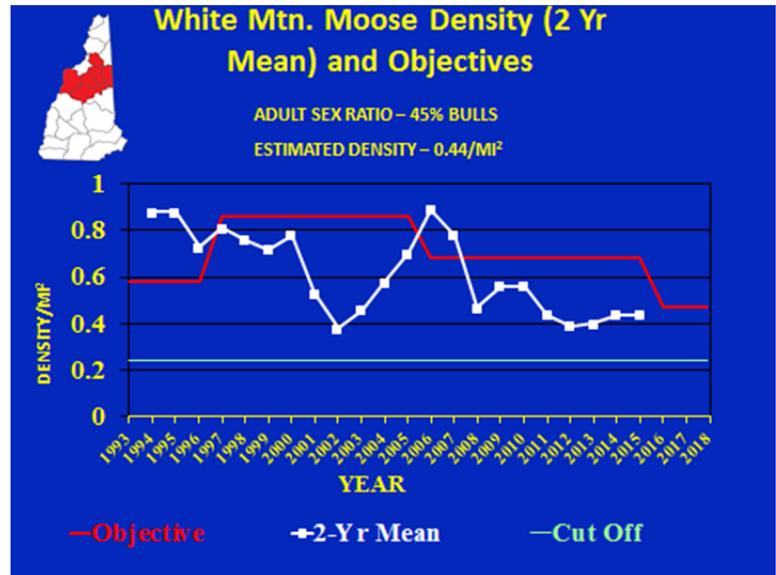
Reducing this population may alleviate these tick impacts, however, the public wanted to try to maintain the population at the goal developed in 2006. Ontario has found reduced tick impacts to moose when the moose population is maintained at densities of less than 1.0/mi². This population may not be able to be maintained at the goal due to the impacts of winter tick.



The **North Region** is the area in which the mortality studies have been conducted and are currently taking place. The public requested the goal be increased in 1996. The moose population was unable to grow to that goal, despite good habitat and very low hunting pressure. The first moose mortality study was implemented in 2001 due to concerns for possible winter tick impacts. This study demonstrated that winter ticks were the primary mortality factor for moose and were

also reducing the number of calves that cows were able to produce. Despite the fact that the moose population was never able to achieve the goal, in 2006 the general public requested a reduction in the goal, due to concerns with moose/vehicle collisions and some concerns regarding moose over-browsing of commercial forests. Since then, the population has suffered several periods of abrupt tick-induced declines, followed by population growth. The goal set in 2016 was recommended by the Department and approved by the public. It is placed at a level that, based on recent past experience, may be sustainable.

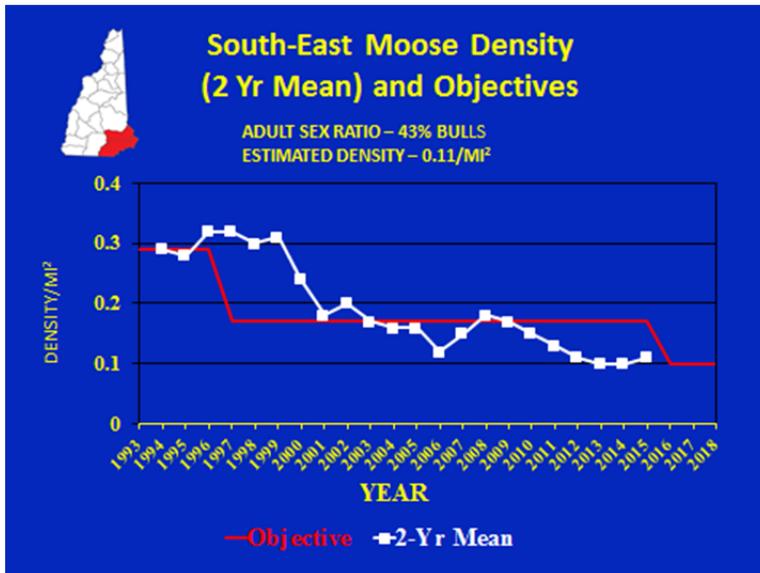
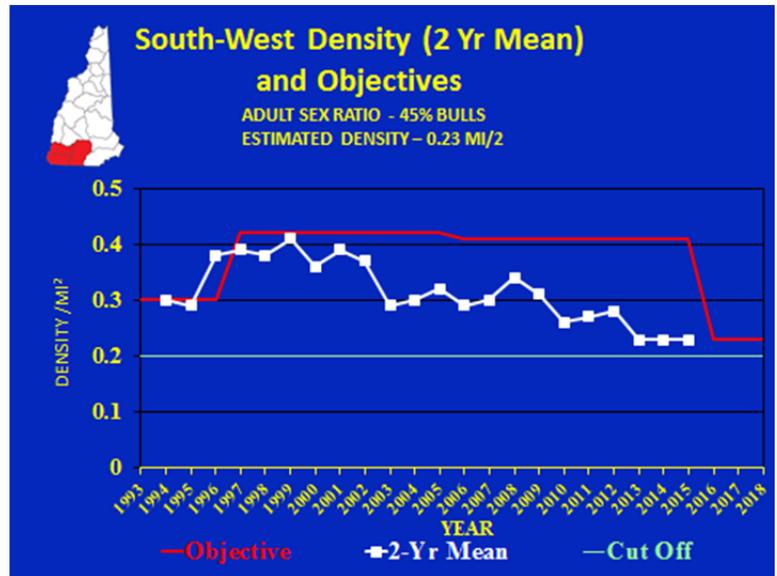
The **White Mountain Region** is comprised primarily of the White Mountain National Forest. This region has always sustained the highest number of moose/vehicle collisions, and this resulted in the public's request to lower the goal in 2006. This population has seen two very abrupt population declines, and both are believed to be due to winter tick. The population has seen stabilization since 2008. The current goal was set at a level that recent population levels suggest may be sustainable.



The **Central Region** is the northernmost region where the Department suspects increased moose mortality is likely related to brainworm infections associated with higher deer densities. At the same time, for much of its recent past, it has also had high enough moose densities to cause tick-related mortality, as well. We believe this “one-two punch” parasite load is the cause for the steady decline since 2009. As we are now seeing fewer ticks on moose in this area, it is

hoped that the population will stabilize soon. However, brainworm mortality may cause the moose population to drop to or below the cutoff threshold.

The **Southwest Region** moose population was at goal from 1993 – 2002, when it began to decline. This region’s entire area supports deer densities above the 10-13/mi² level associated with moose population declines due to brainworm observed in other areas of North America. While the population has been stable for the past three years, in the past, it has exhibited periods of stability or increase, followed by declines, and brainworm-induced mortality may cause it to decline again. The 2016 goal was set at the recent stabilization level.



The **South East Region** is the only part of the state without a cutoff threshold. Due to its high human density and traffic volume, this region’s moose population will be kept very low. Given the very high deer density here, this moose population will likely always be low due to brainworm mortality.