

DMU 149

Bois Blanc Island

Deer Management Unit

Area Description

Bois Blanc Island Deer Management Unit is in the Northern Lower Peninsula Region (NLP). It has roughly 8 square miles (5,107 acres) of public land which is a little less than 25% of the total acreage in the DMU. The remainder of land is in private ownership. Topography is relatively flat. Soil types consist mainly of poorly drained soil. The landscape is primarily forested public and private recreational land. Deer densities are relatively low throughout the Island.

Management Guidance

Two main goals guide the deer management in this DMU: 1) impact management; and 2) hunting opportunities. Impact management refers to reduction of undesirable effects associated with deer over-abundance. Crop damage, and poor forest regeneration due to over-browsing are examples. In an effort to find a middle-ground in which deer numbers provide ample hunting and wildlife viewing opportunities and mitigate unwanted impacts, we review data from several sources to adjust the harvest strategy as needed. These data include deer harvest data from check stations and an annual survey, the winter severity index, deer-vehicle collision data from the Michigan State Police, and deer-related information collected by regional wildlife biologists (e.g., number of Crop Damage Permits, spotlight surveys, habitat assessments, etc.).

Population Assessment Factors

Winter Severity Index

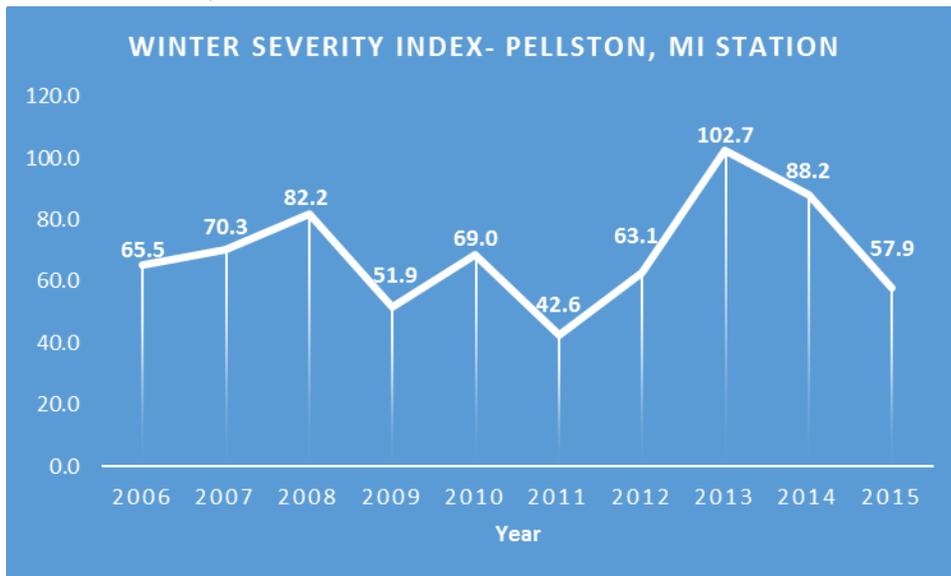


Figure 1: Graph of Pellston Area Winter Severity Index from 2006 to 2015

In northern Michigan, winter severity can have a direct impact on deer condition at the population level. Whereas mild winters allow for better survival of deer, severe winters can cause high deer mortality. In addition does may abort fetuses in order to survive which creates a lag effect into the following year. The current Winter Severity Index (WSI) system takes advantage of standard weather data available from the National Climatic Data Center. The DNR uses weekly data on air temperature, wind speed, and precipitation from weather stations throughout Michigan and the surrounding area in a series of mathematical equations to calculate a weekly index value from November through April. Normally, the WSI values from individual stations are averaged across the three regions of Michigan to give a regional perspective on winter severity. For the purpose of monitoring deer related trends in the Antrim County area, only the Gaylord Area WSI station data were used.

The DNR plots these values over time to provide insight into the pattern of winter severity over the course of the winter and to identify severe weather events. Extended periods of severe weather and very early or very late peaks in severity tend to have the greatest effect on deer. The above graph shows the cumulative WSI, or the overall severity of each completed winter season. In general, mild winters tend to favor an increase in deer population levels.

The winter of 2013 was the most severe winter in the past ten years and followed a four-year period of relatively mild winters. Deer numbers going in to the 2013 winter were increasing after the winter of 2008. As a result, the winter of 2013 had impacts on deer populations within the DMU, especially where thermal cover is lacking. Deer harvest goals were reduced at that time as a result. Since that time, however, winter severity has been insignificant as a driver of deer populations.

Deer Hunter Harvest Analysis

Legal antlered harvest reflects harvest of deer with antlers three inches and over, while antlerless harvest includes fawn bucks as well as fawn and mature does. Numbers of deer harvested in this unit

are difficult to determine due to the low numbers of deer harvested. Small sample sizes limit our ability to graph trends in antlered and antlerless harvest in DMU 149. Conversations with hunters from the DMU suggest that harvest of antlered deer may be decreasing due to the desire to harvest older bucks, which make up a smaller proportion of the population. At the same time, antlerless harvest may be increasing in spite of limited quotas on private and public lands.

Antlerless License Quotas

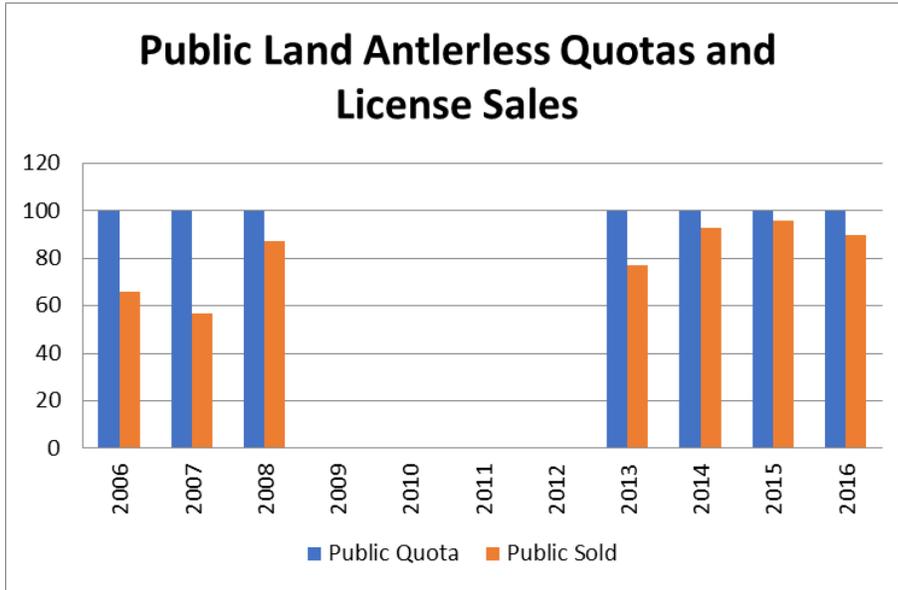


Figure 2: Graph of public land antlerless deer license quotas and number of licenses sold in DMU 149 from 2006 to 2016.

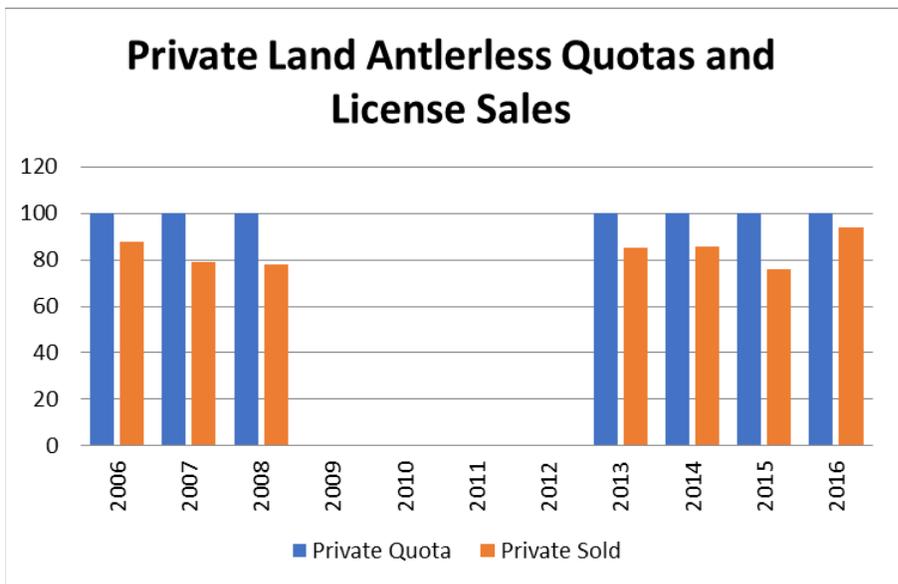


Figure 3: Graph of private land antlerless deer license quotas and number of licenses sold in DMU 149 from 2006 to 2016.

The availability of antlerless deer licenses within this DMU is stable at 100 available licenses for both public and private land. The number of antlerless licenses sold has not reached this level, but has come

close to meeting the quota several times over the years, indicating demand for antlerless deer harvest may be increasing.

Deer Hunter Numbers and Analysis

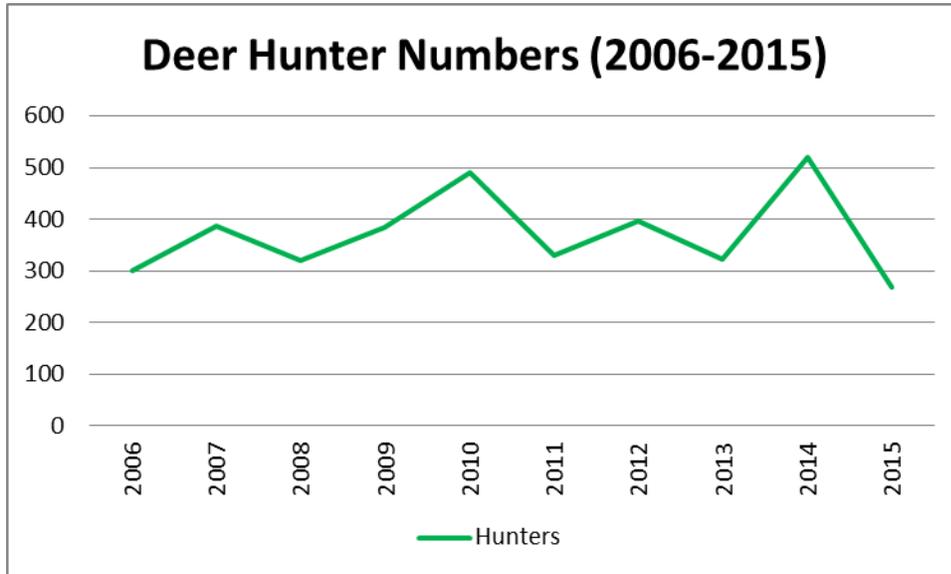


Figure 4: Graph of hunter numbers within DMU 149 from 2006 to 2015.

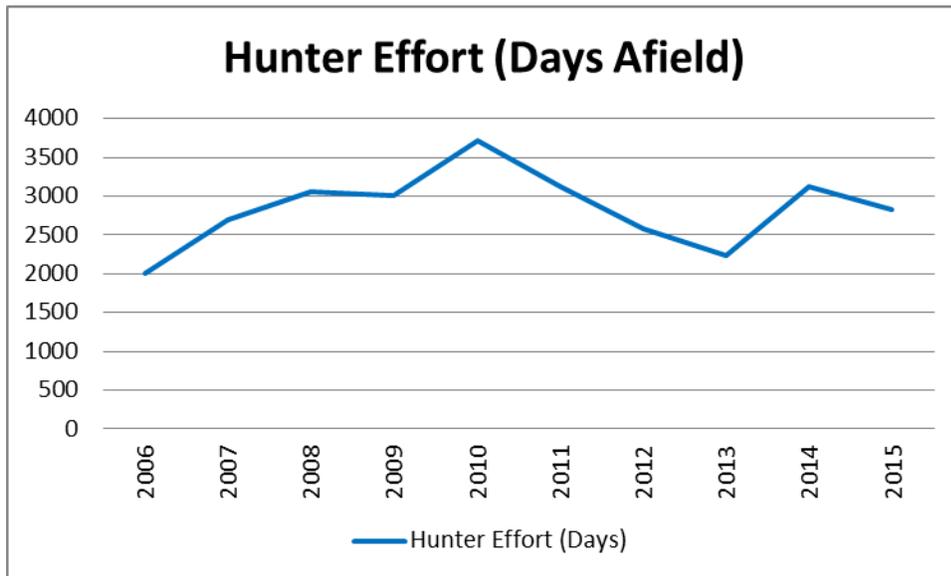


Figure 5: Graph of Hunter effort (days afield) within DMU 149 from 2006 to 2015.

Trends in hunter numbers in conjunction with harvest level trends may indicate whether hunting is impacting deer populations. Hunter numbers in DMU 149 have remained between around 300-500 over the past ten years. There is no clear trend in hunter numbers within the unit. Antlered harvest per hunter effort may indicate changes in population if trends are apparent. Over the past ten years there is no clear trend. Hunter numbers and harvest per effort in this DMU do not show a significant change and therefore other indicators may be more effective in assessing deer population trends.

Deer Management Recommendations

The indices of deer population in DMU 149 suggest that the population is being maintained at current levels, or increasing. Because this is an island DMU, an increase in deer numbers is not desirable, as impacts to habitat are magnified. The desire is to maintain the harvest levels on both public and private lands.

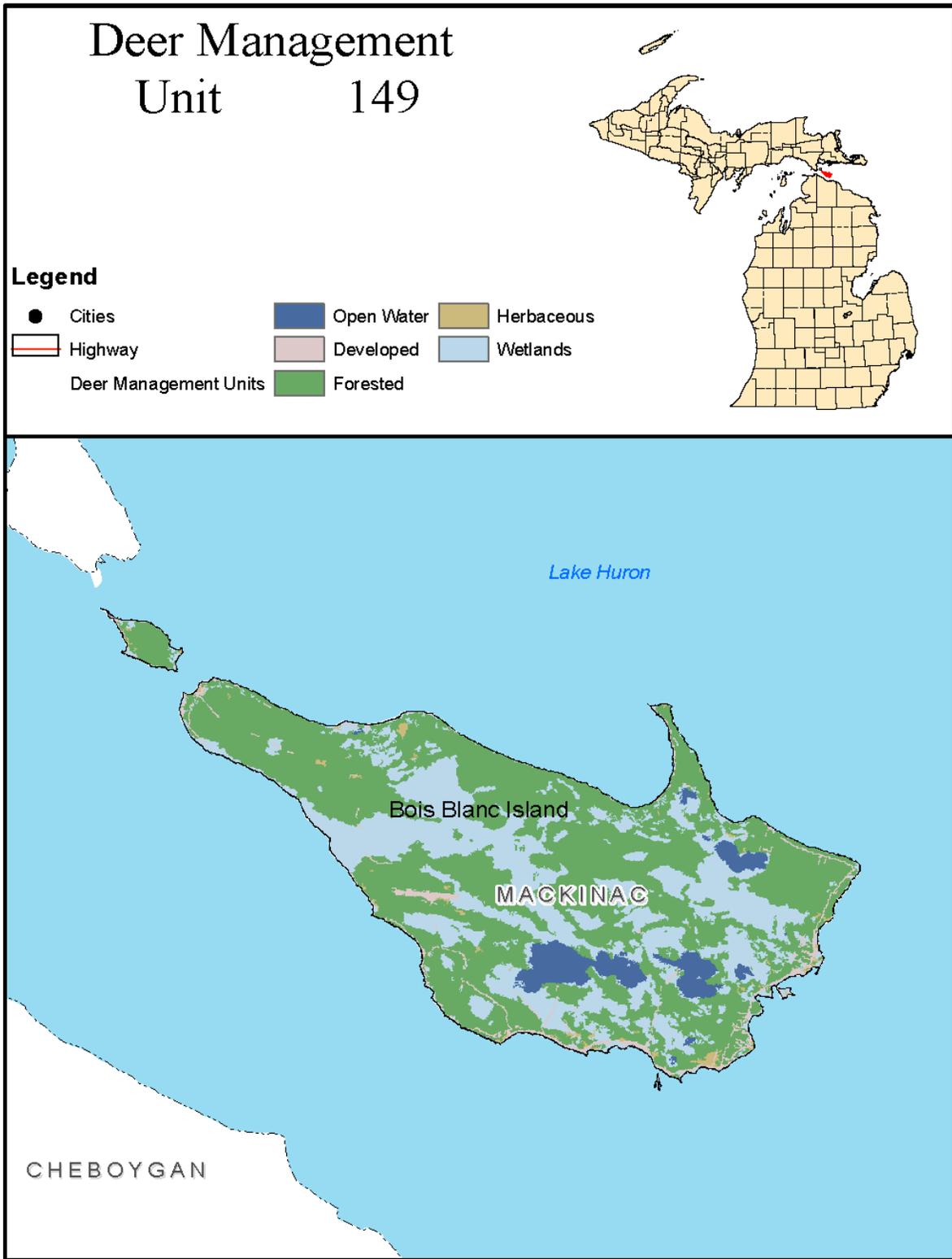


Figure 6: Map of DMU 149 depicting cover types within the unit.