

DMU 115

Beaver Island

Deer Management Unit

Area Description

Beaver Island Deer Management Unit is in the Northern Lower Peninsula Region (NLP). It has roughly 27 square miles (17,056 acres) of public land which is a little more than 33% of the total acreage in the DMU. The remainder of land is in private ownership. The majority of the public land is in the south part of the Unit. Topography is relatively flat aside from dunes along shorelines. Soil types consist mainly of poorly drained soil, but range from sand to muck. The landscape is primarily forested public and private recreational land in the south and private holdings with interspersed open land on the northern parts of the island. Deer densities vary, with higher concentrations of deer on private holdings where habitat improvements are present.

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 presence. Poor forest regeneration and impacts to native flora 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 deer survey, the winter severity index, and deer-related information collected by regional wildlife biologists and the local wildlife club.

Population Assessment Factors

Winter Severity Index

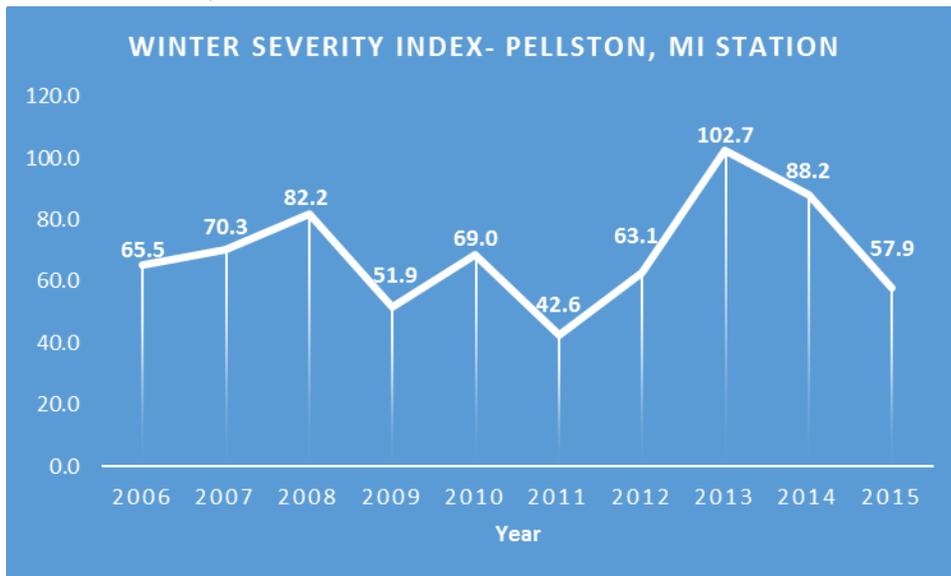


Figure 1: Graph of Pellston Area Winter Severity Index from 2006 to 2015

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 Charlevoix County area, only the Pellston 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 and browse 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

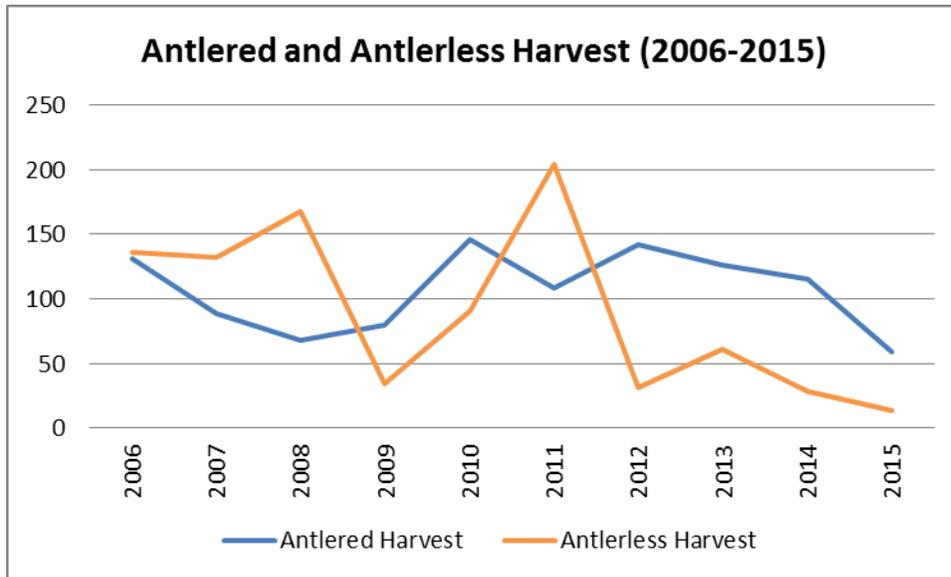


Figure 2: Graph of antlered and antlerless deer harvest levels in DMU 115 from 2006 to 2015

Deer harvest trends in DMU 115 slightly declined over the past ten years. Antlered harvest prior to 2010 reflects harvest of deer with antlers three inches and over, while antlered harvest from 2010 and later is limited to deer with three or more points on a side. Antlerless harvest includes fawn bucks as well as fawn and mature does. Deer harvest in this DMU may be impacted many factors other than population levels and antlerless quotas because it is an island unit. Weather can impact access to the DMU, and other factors not considered on the mainland can also come into play.

Antlerless License Quotas

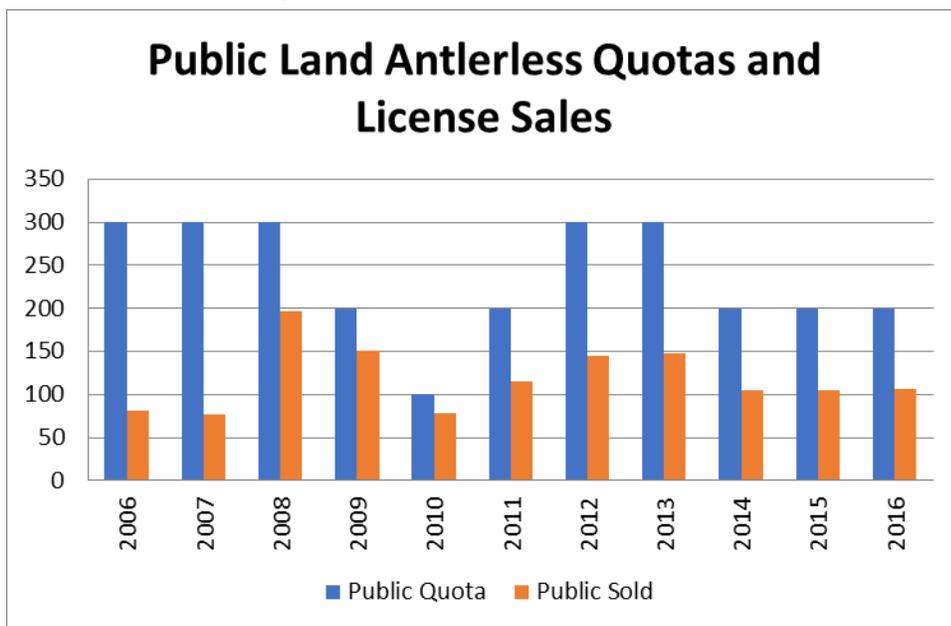


Figure 3: Graph of public land antlerless deer license quotas and number of licenses sold in DMU 115 from 2006 to 2016.

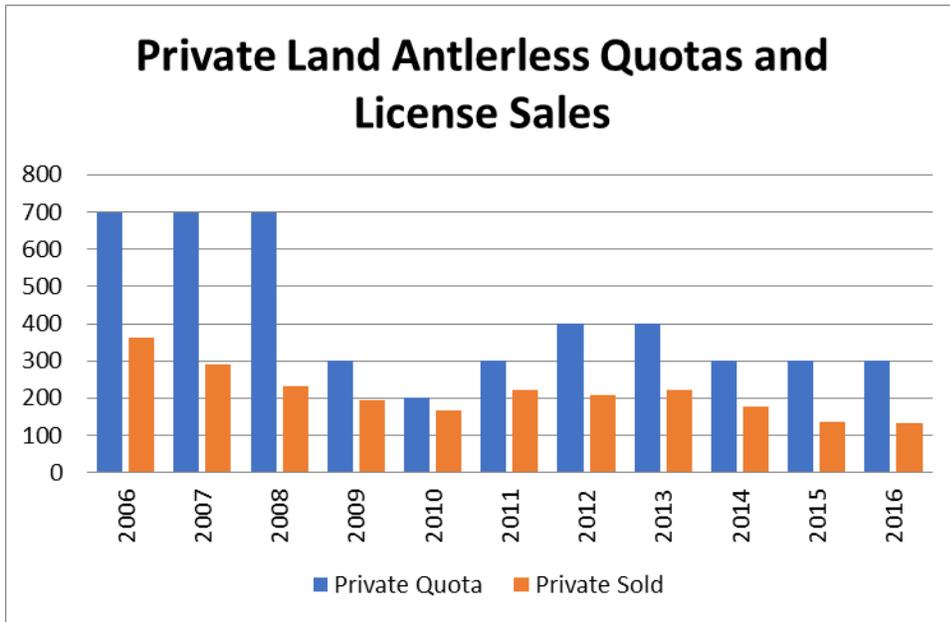


Figure 4. Graph of private land antlerless deer license quotas and number of licenses sold in DMU 115 from 2006 to 2016.

Adjustments in antlerless deer quotas within DMU 115 over the last ten years address impacts from winter severity, concerns from citizens, and desires to maintain the deer population. There is a need within this unit to provide hunting opportunities for recreation and economic benefits. While quotas have fluctuated over the years, antlerless license sales typically don't approach the quota. This indicates that antlerless deer harvest capacity is likely being met within this DMU.

Deer Hunter Numbers and Analysis

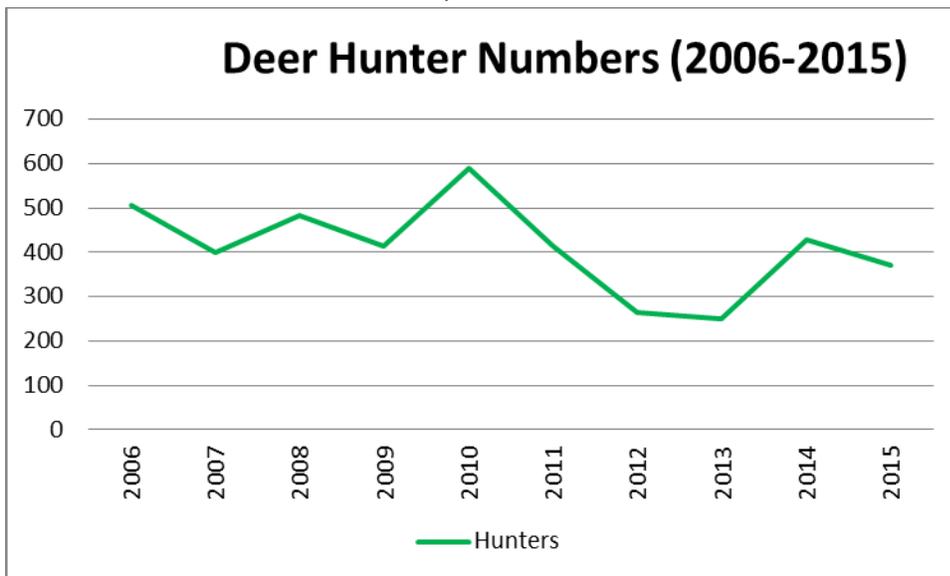


Figure 5: Graph of hunter numbers within DMU 115 from 2006 to 2015.

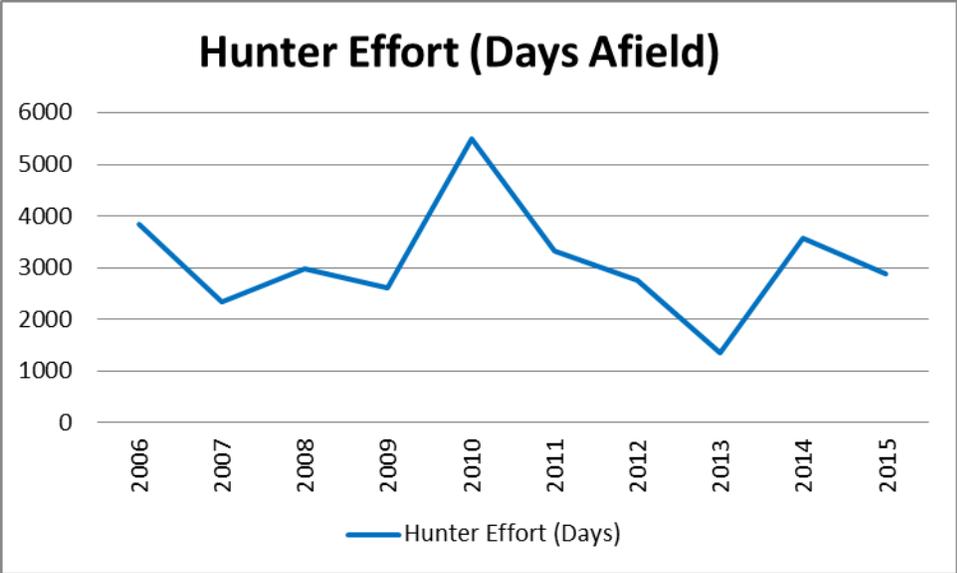


Figure 6: Graph of hunter effort (days afield) within DMU 115 from 2006 to 2015.

Trends in hunter numbers can be used to assess whether hunting is impacting deer populations. Hunter numbers in DMU 115 have shown a decreasing trend over the last ten years. However, the number of days spent hunting, while fluctuating slightly, has remained relatively stable.

Deer Management Recommendations

Trends in harvest and hunter numbers are influenced by many external factors within DMU 115, as it is an island Unit that is difficult to access. When considering hunter effort in relation to harvest levels, the data suggest the deer herd has not responded to a decrease in winter severity over the past three years. Habitat in this DMU may be limiting deer populations rather than harvest. There is a desire to maintain the deer herd through habitat maintenance, which would provide benefits to deer and other wildlife, an opportunity to recreate through both hunting and wildlife viewing, and this in turn could enhance the local economy. The capacity for antlerless harvest and therefore population control is likely being met within the DMU because an adequate number of antlerless licenses are available through the quota. Therefore, antlerless quotas are anticipated to remain similar to previous years to provide ample opportunity for hunters to recreate within the Unit.

Deer Management Unit 115



Legend

- Cities
- Highway
- Deer Management Units
- Open Water
- Developed
- Forested
- Herbaceous
- Hay/Pasture
- Cultivated Crops
- Wetlands

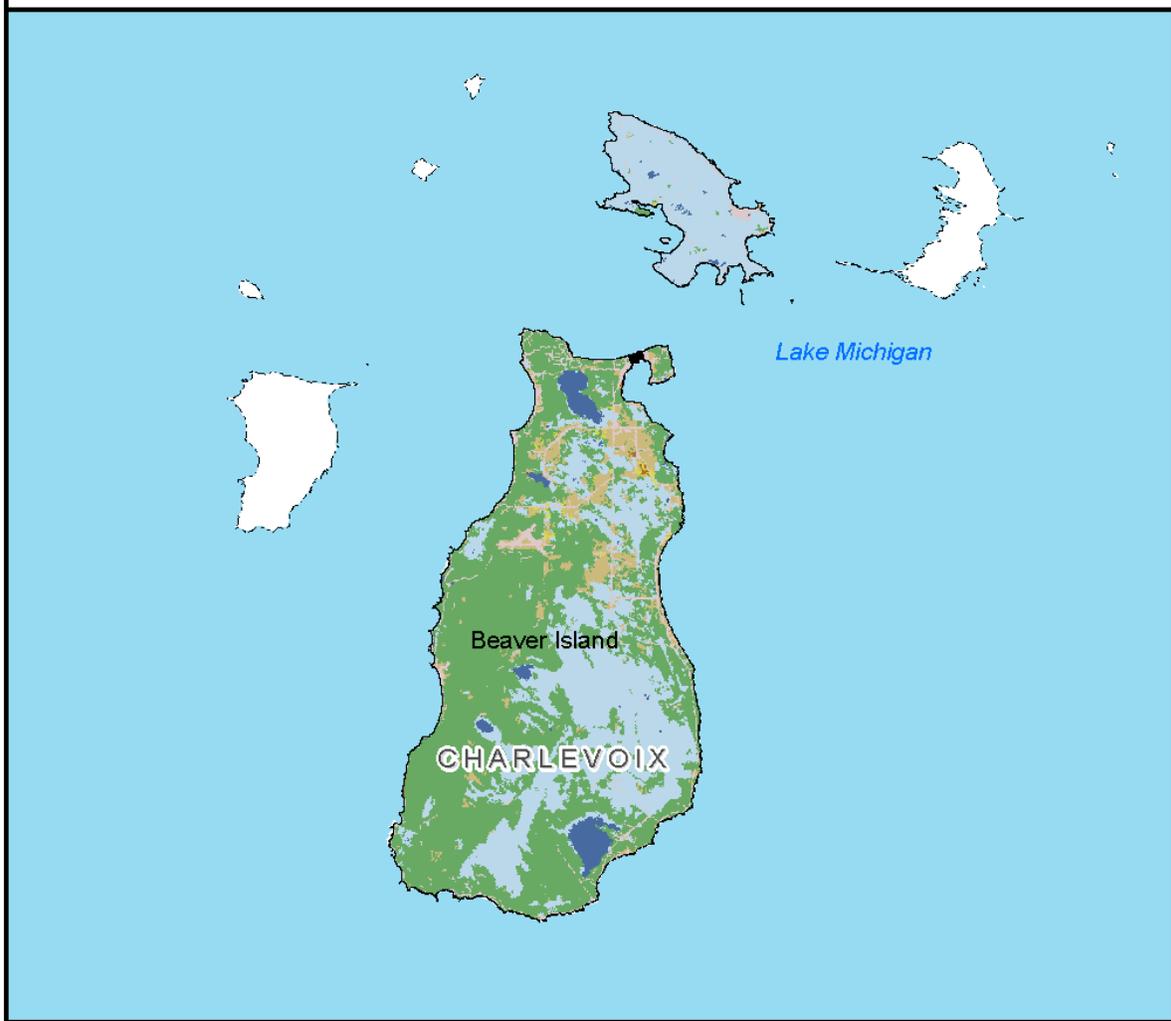


Figure 7: Map of DMU 115 depicting cover types within the unit.