

# DMU 056

## Midland County

### Deer Management Unit

#### Area Description

The Midland County Deer Management Unit (DMU) 056 is in the Northern Lower Peninsula (NLP) Region. It has roughly 333, 440 acres and consists of large portions of forested tracts. Crop land, pasture and idle grasslands make up over 50% of the land cover. About 12 % of the land use is urban. Topography is relatively flat interrupted by river corridors. Soils consist mainly of sandy types that are well drained. The landscape consists of large blocks of state land that dominate the central and western portions of the County. These large blocks of State land are dominated by forest types and provide excellent habitat for deer. The private land consists of large blocks of agricultural land adjacent to forested habitat. The real estate market for recreational hunting properties is very active and demonstrates the importance of the area for deer hunting.

DMU 056 is situated in the Gladwin Forest Management Unit. Forest cover is predominantly shade intolerant trees comprised mostly of aspen, oak and mixed upland deciduous. Early successional forests are common west of M-30. These forests, by design, have been managed for wildlife with a focus on deer and upland game birds.

Deer Population levels are primarily influenced by regulated hunting.

#### Management Guidance

Two main goals guide the deer management in this DMU: 1) impact management; and 2) hunting opportunities. Impact management refers to the reduction of undesirable effects associated with deer over-abundance. Crop damage, deer-vehicle collisions, 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 mail survey of hunters, 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 and habitat assessments.)

## Population Assessment Factors

### Winter Severity Index

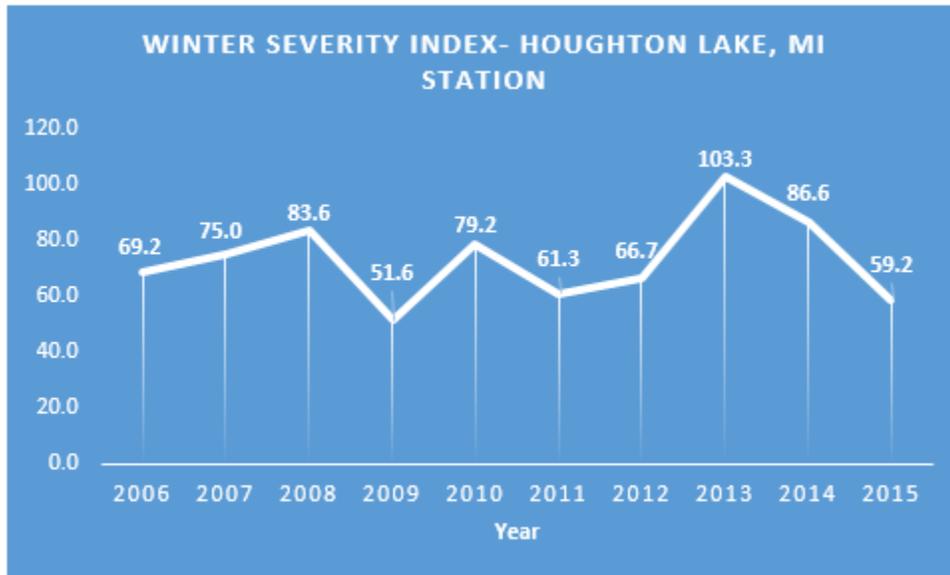


Figure 1: Houghton Lake Areas Winter Severity Index from 2006 to 2015

In northern Michigan, winter severity has 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, female deer may abort fetuses in order to survive which results in lower birth rates into the following year. Winter severity has been variable over the last four years. The mild winters observed have allowed for a slight increase in the deer population. The current management strategy centers on maintaining the population at the current level by adjusting private land antlerless license quotas. Consideration will be given to hunter densities on public lands when setting public land antlerless quotas. Deer Management Assistance Permits (DMAPs) will continue to be the primary means of addressing areas of high deer density where crop damage is prevalent on private lands.

The current Winter Severity Index (WSI) system takes advantage of standard weather data available from the National Climatic Data Center. The Department of Natural Resources (DNR) uses weekly data on air temperature, wind speed, and precipitation from weather stations throughout Michigan and the surrounding area to calculate a weekly index value from November through April. For monitoring deer related trends in Midland County, only the Houghton Lake 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. Despite several harsher winters over the past 10+ years, the last couple winters have been mild. Winter severity is the most important factor influencing deer population levels in the Northern Lower Peninsula. Relatively mild winters allow for increased deer survival, particularly for fawns which are typically the most vulnerable. Furthermore, mild winters tend to positively affect newborn survival. In general, milder winters tend to favor an increase in deer population levels.

## Deer Vehicle Collisions Data

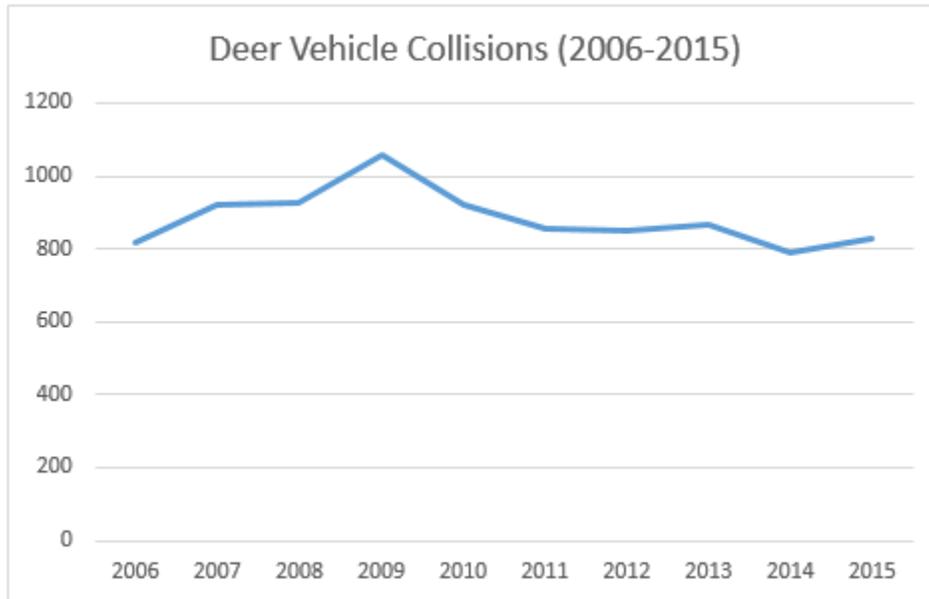


Figure 2: Midland County Deer Vehicle Collisions 2006to 2015

Collisions between vehicles and deer in Midland County, over the past four years, have been fairly stable. This indicates a stable deer population.

## Deer Harvest Analysis 2006-2015

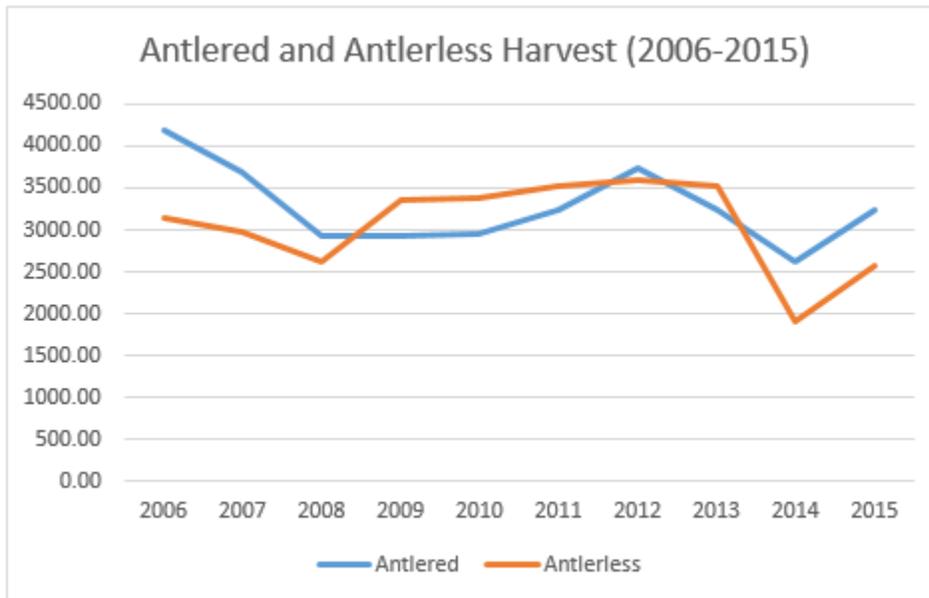


Figure 3: Antlered and Antlerless Harvest Midland County 2006 to 2015

Antlerless deer harvest within the DMU has declined over the past 4 years while antlered deer harvest has remained relatively stable. The trend in antlerless harvest is also reflected by the decline in the number of private land antlerless licenses purchased over this same period. Both the antlered and

antlerless harvest indicates that the population is likely stable to increasing. While it can be difficult to pinpoint exactly what is causing a population to increase or decrease we can make predictions based on past trends and a number of factors that can indicate changes in populations.

In Midland County over the past four years, farms with Deer Damage Shooting Permits (DDSPs) issued have varied from a low of 17 to a high of 20. The number of total DDSP Tags issued under these permits have varied from a low of 39 to a high of 73. DMAPs issued over the past four years involve an average of 5 farms per year the number of DMAP tags issued averaged 163 per year. Crop damage by deer in Midland County is not significant at this time. The number of deer crop damage complaints will be closely monitored for the next three years. A significant increase or decrease in complaints can be used as an indicator of deer population trends.

Negative impacts by deer browsing on regenerating forest stands has not been significant over the past four years in Midland County.

### Deer Condition Data 2006-2015

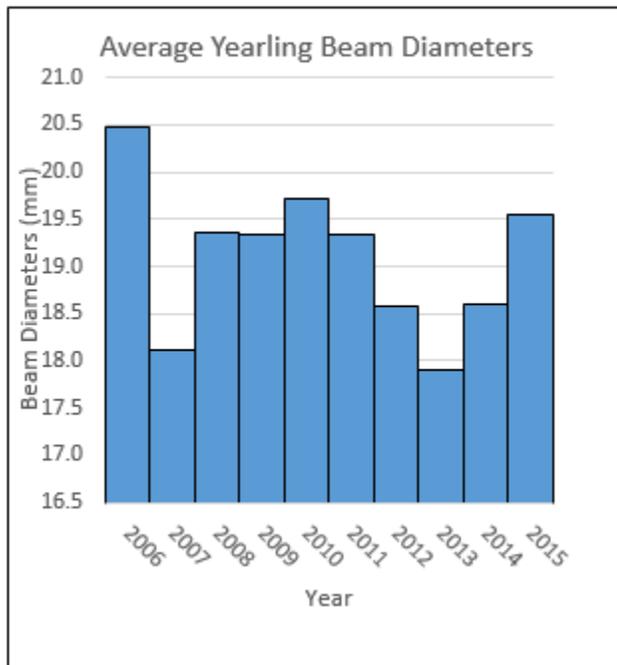


Figure 4: Midland County Average Yearling Beam Diameters 2006 to 2015

Antler beam diameter measurements taken from harvested yearling bucks have been somewhat consistent over the past 10 years, with some variation from year to year. Beam diameter measurements give an indication of overall health of the deer population. Lower average beam diameters in yearling bucks could indicate increasing competition for available browse due to a higher number of deer on the landscape. These data suggest that nutrition is not a big influence on the deer population over this timeframe.

## Deer Management Recommendations

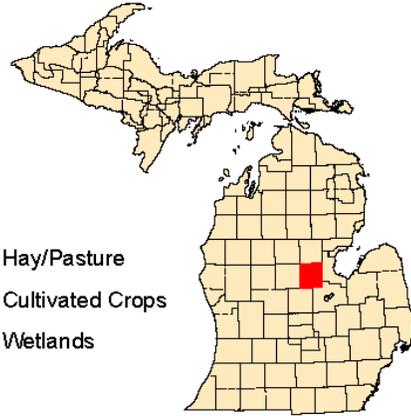
Midland County DMU 056 has a deer population that has been stable to slightly increasing the past four years. There has not been a significant movement, up or down, in the number of crop damage complaints or car-deer crashes. From year to year harvest of antlerless deer over this same period has been somewhat stable. Antler beam diameter measurements taken from yearling bucks have been somewhat consistent over the past 10 years.

Hunting opportunities in DMU 056 are plentiful. The 45,440 acres of public land provide suitable habitat for deer hunting and include ample locations for hunter access. A casual deer hunter camp survey, on public land, has been conducted by DNR Wildlife Division staff the past three years and indicates that hunting pressure on these public lands is slightly decreasing. On the 288,000 of private land the opportunities for hunting deer are abundant, in fact there are many tracts of private land that are used explicitly for deer hunting.

The recommendation for antlerless quotas will be very similar to what has been recommended in the past four years. The strategy, at this time, is to keep the deer population at the level it is at currently. Stabilizing these regulations for the next three years will manage deer numbers within acceptable levels for hunters as well as for forest health and agriculture. Law Enforcement and Forest Resource Divisions have provided input and concur with the 2017-2019 proposed deer regulations for Midland County.

We recommend an early/late private land antlerless firearm season for DMU 056 based on the occurrence of deer damage to agricultural crops. An early season will allow farms with antlerless tags to target deer on their properties where damage has occurred. The late hunt will help target deer that are more likely to have moved to better cover where they may not be vulnerable during regular hunting seasons. We are also recommending that antlerless licenses be made available to hunters for both private and public land with no changes.

# Deer Management Unit 56



## Legend

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

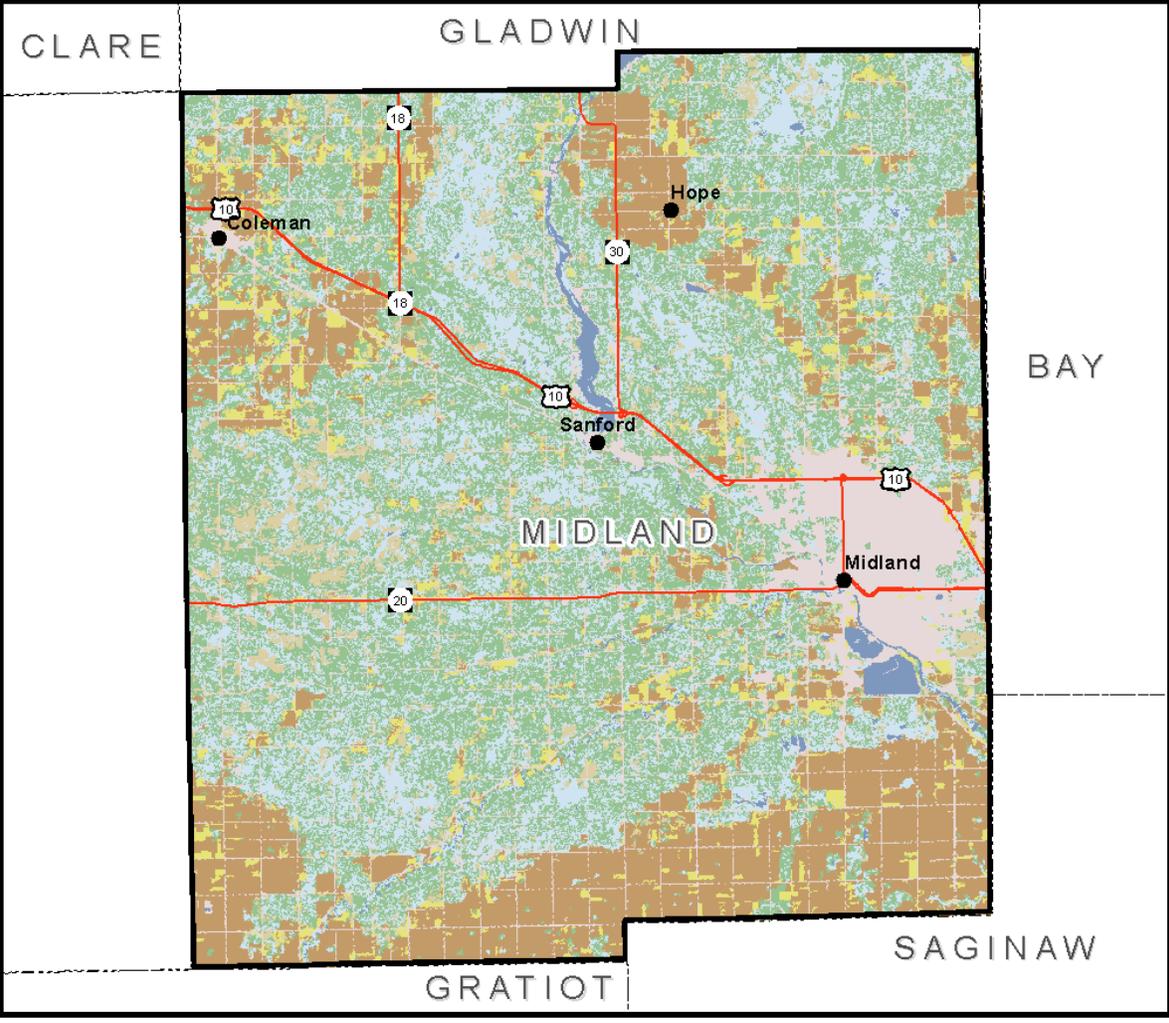


Figure 5: Map of DMU 056 depicting cover types within the unit.