

DMU 025

Genesee County

Deer Management Unit

Area Description

The Genesee County Deer Management Unit (DMU 025) is in the South East Lower Region of the Southern Lower peninsula. It covers only Genesee County. This DMU has a total area of 648 Square miles (1682 sq. km). Approximately 638 sq. miles (1652 sq. km) of it is land and 10 sq. miles (26 sq. km) of it is water. The county consists of 38% agricultural, 26% forested, 4.5% wetlands, 2% water (figure 1).

Topography in this area is relatively flat, but the southern end is hilly and covered by several lakes. Genesee County is mostly drained by the Flint River, which is dammed into Mott Lake and the Holloway Reservoir in the northeast corner of the county. The southeast corner and southern end are drained by the Shiawassee River.

There are no public hunting areas in this county. Genesee County has Michigan's fourth largest population base, and Flint is the third largest city in the state. The southern portion of the county is highly urbanized, along with the area surrounding Flint. The northern townships in the county are predominantly farms and orchards, intermixed with forests and ravines, and urban developments. Existing habitat conditions for deer outside the urban area are fairly good. Part of this is due to decreasing interest in agricultural operations, resulting in increasing idle lands, which are reverting to the early successional brush stages. Deer are move freely throughout the county and a well-adapted to suburban communities.

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, deer-vehicle collisions, and poor forest regeneration due to over-browsing. 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, 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.).

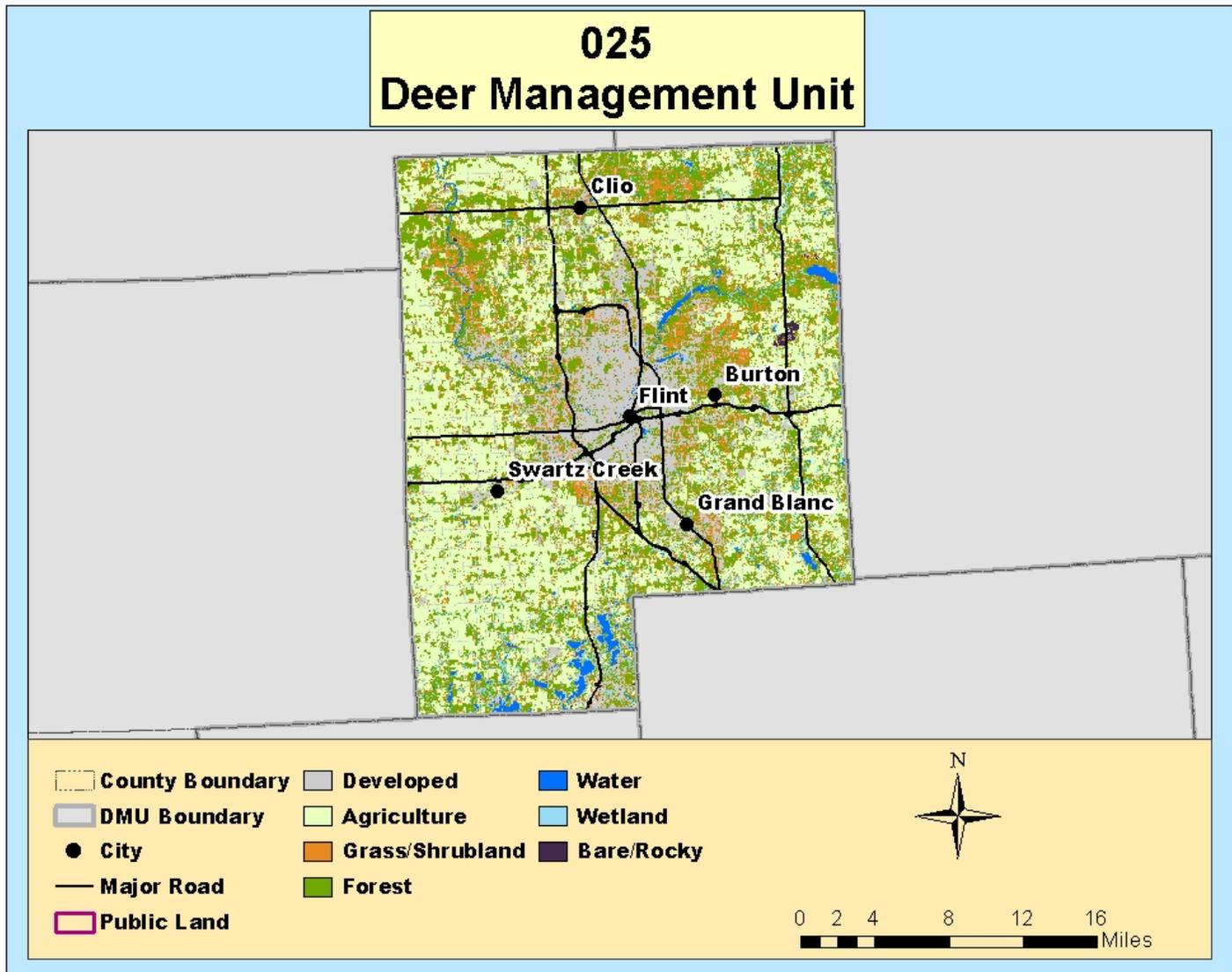


Figure 1: Habitat and land use distribution in DMU 025

Population Assessment Factors

Deer Harvest Analysis

Since there is no public land in this county hunters self-regulate harvest of antlerless deer on their own private land. Antlerless permits are liberal and allow private land owners, as well as farmers, orchard owners to allow as much hunting pressure on their lands as they see fit. Other environmental factors, such as poor weather immediately preceding fawning, increased predation, changing agricultural practices and disease can also impact deer numbers. Weather during the hunting season, can have an impact on the harvest. Ultimately, determining a cause of any population adjustment is difficult when assessing a large geographic region.

Harvest numbers of both antlered and antlerless deer have shown a decline since 2007 (figure 2). This decline may or may not be reflective of actual deer numbers. Hunter perceptions and goals can also impact harvest numbers. A shift in hunter's decisions to target older deer and pass on younger bucks results in reduced harvest numbers and increased hunter effort. Success and harvest rates are thereby suppressed not by population decline, but by the humane decision-making processes. Similarly, hunters

may self-regulate harvest of antlerless deer for a variety of reasons, such as a perception of too few deer. Hunter effort over the same timeframe also shows a similar decline indicating social factors may have some influence over both harvest and effort over time (figure 3).

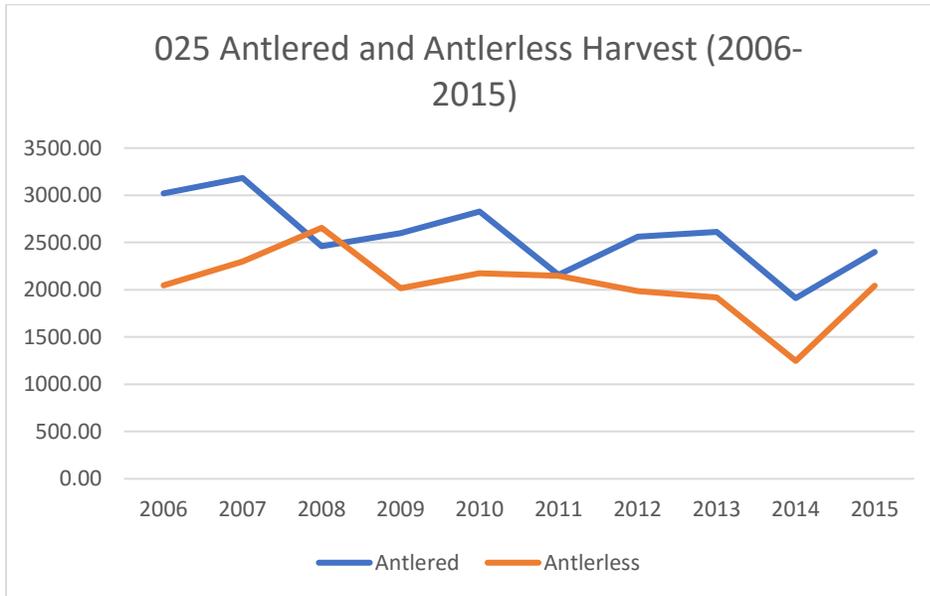


Figure 2: Harvest DMU 025

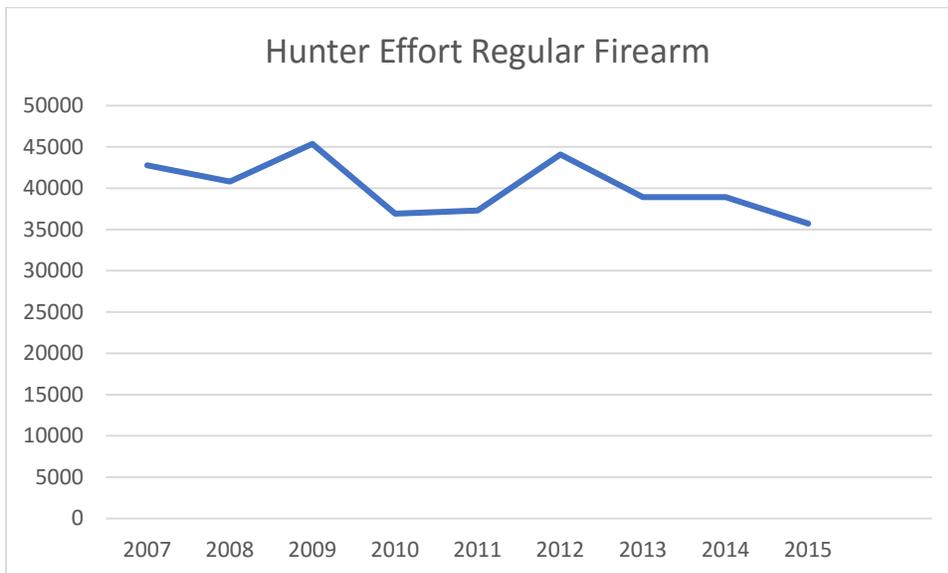


Figure 3. Hunter effort Genesee County regular firearm season

Deer Vehicle Collisions

Deer-vehicle collisions (DVC) are commonly used as an index to the deer population trend. High rates of DVC's are correlated with high deer populations and vice versa. Research has shown that there are other factors that influence the rate of DVCs. Habitat proximity to the roadway and highway characteristics

can blur the relationship between deer population and DVCs. However, DVC data can provide useful information if contextualized as one part of a deer population assessment.

DVC's have been tracked for many years to look at trends in Genesee County. The peak in DVC's took place in 2009, and since then there has been a decline in DVC's. Although changes may have occurred in law enforcement response and recording of DVC's over time we assume they have remained consistent enough to provide an accurate estimate of DVC rates relative to vehicle miles driven. The trend in DVCs since 2007 indicate the DMU deer density has experienced a slight decrease over the long term possibly indicating a slightly decreasing deer population (figure 3).

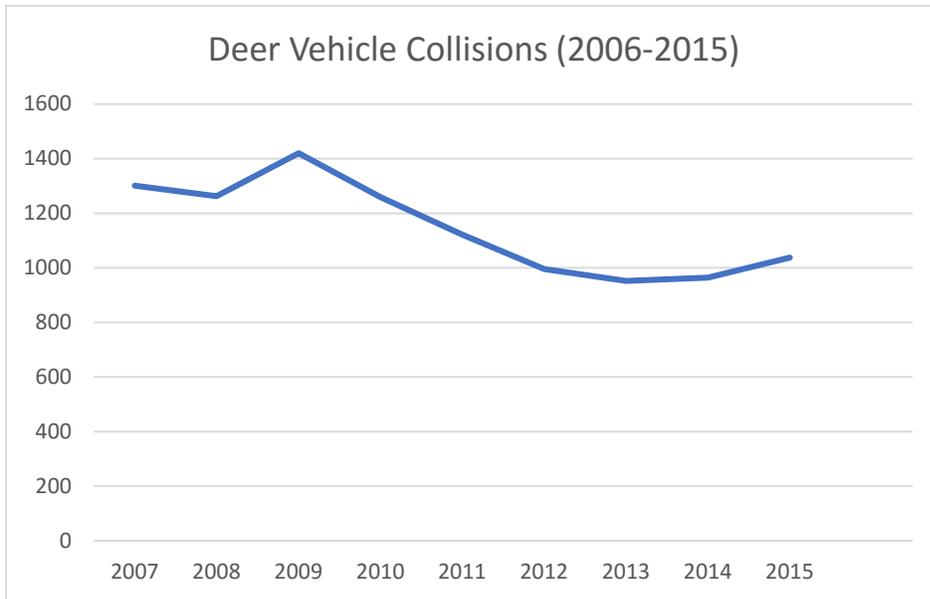


Figure 4. Deer vehicle collisions Genesee County

Deer Management Assistance and Crop Damage Permits

Deer Management Assistance Permits (DMAPs) allow for the harvest of antlerless deer by private landowners or their designees during legal deer hunting seasons. Landowners may request and be granted DMAPs by MDNR to address deer damage concerns when sufficient antlerless permits are not available in a DMU to address the landowner's needs. DMAP requests are tracked by MDNR and may trend with deer populations (i.e., an increase in deer density may result in additional DMAP requests). Requests for permits in this area is low.

Out of Season Kill Permits, or Crop Damage Permits are also requested by landowners, but allow for the harvest of antlerless deer outside of legal hunting seasons to address agricultural damage. Requests for Crop Damage Permits may also trend with deer density, but in general requests for these permits remains relatively low in this county, with most requests coming from orchard suffering from browsing damage by deer. Requests for Out of Season Kill Permits, usually increase when commodity prices are high as farmers seem less tolerant of deer damage when crop prices soar.

Deer Condition Data

Yearling main antler beam diameter, measured just above the burr is useful for determining deer body condition. This measurement is recorded by MDNR as hunters voluntarily present harvested deer at

check stations throughout the state. When aggregated by DMU, the average antler beam diameter for yearling bucks over multiple years is calculated. An upward trend indicates improving herd condition, whereas a downward trend points to declining herd condition. Generally, herd condition is a function of environmental and landscape factors. An abundance of highly nutritional food resources and good cover is beneficial for herd condition. Depletion of these resources through overpopulation leads to a decline in herd condition, observed as low yearling main beam diameters. In southern Michigan, winter severity is not likely to impact deer condition on a population level. Environmental factors may impact deer condition indirectly, though. A late frost or an especially rainy spring can negatively influence crop production which is a major source of nutrition in this DMU. Likewise, changes in land use practices can affect cover and food resources.

In the Genesee County, the average yearling beam diameters since 2007 has shown a slight decline (Fig. 4). This decline in average antler beam diameter has been statistically significant for the SLP. Also, in Genesee County the average beam diameter for 2.5-year-old bucks has shown a decline.

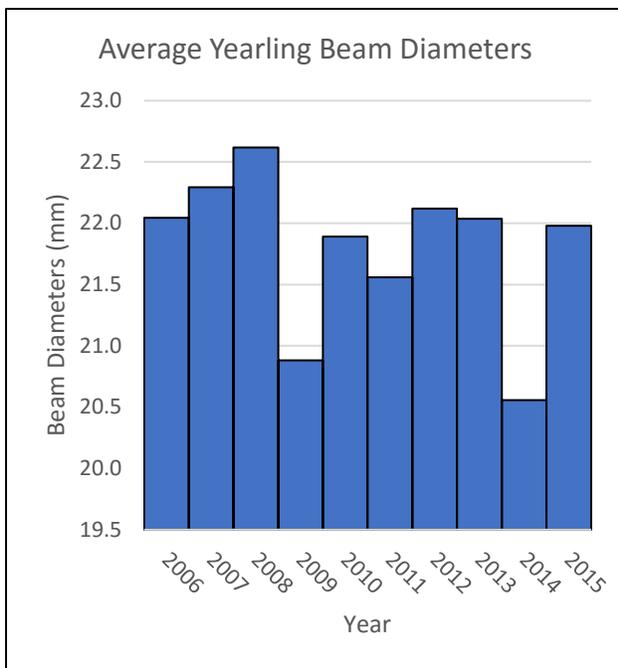


Figure 5. Average beam diameters Genesee County

Most likely, the slight reduction in deer condition can be attributable to a variety of causes including changes in land use over the long term and short term (1-2 year) environmental influences. The entire state is also showing a similar pattern so there may be additional factors causing this statewide decline. Keep in mind the amount of decline is in millimeters which the average person would not notice. Changes in land use are likely to have a longer-term impact on deer condition than environmental causes. Row crop agriculture production fluctuates with commodity prices. Higher prices give farmers incentive to put previously untilled acreage into production at the expense of quality deer habitat. The conversion of acreage from acceptable deer cover to agriculture further fragments habitat, homogenizing the landscape and reducing the richness of a “patchwork” of habitat types in which deer thrive.

Hunters who are concerned about deer condition in their areas, can assist the MDNR in management by voluntarily bringing all their deer into DNR Check stations for data collection

Deer Management Recommendations:

The deer population in the Genesee County may be showing a decline based on the above assessment factors but regardless the deer population remains high relative to other regions of the state. Hunting opportunities are limited only to private land since there is no public land in the county and therefore access to hunting land is the main issue. Liberal antlerless permits are therefore provided to try to encourage private landowners to take more antlerless deer in areas where deer can be hunted while allowing them to be the stewards of their own lands.

The goal for this area is to provide ample hunting recreation while trying to minimize deer damage and vehicle collisions. Since there is no public land in this county, access to hunting land is the main issue.

Based on this information, we recommend that the Private Land Antlerless Quota be reduced to 7000; and, we recommend that the Public Land Antlerless Quota remain 0. We also recommend that early and late antlerless seasons are open in this DMU. Since license sales are undersubscribed in this county, this reduction will have no impact on the herd and will still allow private landowners the opportunity to hunt on private land if they have access.