

# DMU 044

## Lapeer County

### Deer Management Unit

#### Area Description

The Lapeer Deer Management Unit (DMU) lies in the Southern Lower Peninsula (SLP) region and covers only Lapeer counties. The majority of public hunting opportunities in this DMU are available on Lapeer State Game Area (8,589 acres). Its topography is generally, gently rolling to quite hilly. The County has many inland lakes such as Barnes Lake-Miller Lake, Lake Neppessing, The Holloway Reservoir, Big Fish Lake, and Lake Metamora. The landscape is highly fragmented due to the predominance of agriculture on privately-owned lands, which constitute 53% of the DMU. The forested is approximately 27%. This county has a nice mixture of agriculture and forest, which provides good deer habitat (Table 1, Figure 1).

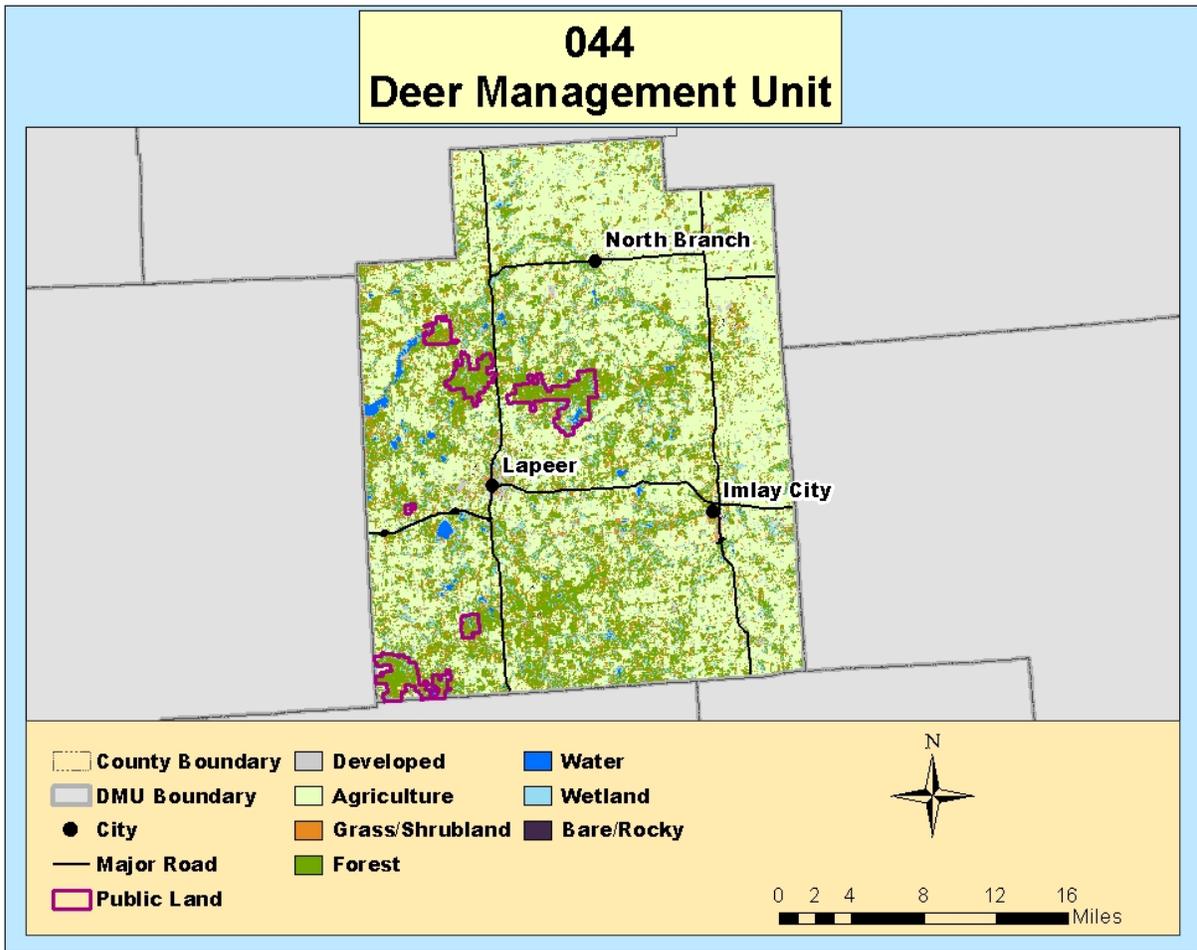


Figure 1. Habitat and land use distribution in Deer Management Unit 044.

Table 1. Habitat composition of DMU 044 as compared to only the public hunting lands in DMU 044.

Habitat	044	044 Public Lands
Forest (%)	26.6	69.1
Agriculture (%)	52.8	6.7
Grass/Shrubland (%)	8.3	10.1
Wetland (%)	7.9	11.8
Developed (%)	3.4	0.9
Water (%)	0.9	1.5
Bare/Rocky (%)	0.1	0.0

Northern Lapeer County has more agriculture than the southern areas and therefore supports a large deer herd. Many of the farmers that would like to see less deer, don't have the time to deer hunt to try to reduce the population. There is a strong opinion in farmers in this area that they do not like to allow hunting on these farms, unless they are close friends and family. Therefore, the farms that complain of deer damage often do not harvest many deer on their property.

## 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, population models, habitat assessments, etc.).

## Population Assessment Factors

### Deer Harvest Analysis

The buck harvest has been very consistent over the last 10 years, with a slight increase over the last few years. The antlerless harvest exceeded the buck harvest in 2007 and remained high for several years, but dropped sharply in 2011. This may be because hunters are changing behaviors and shifting away from taking antlerless deer, a change in deer population structure, or a combination of both (Fig. 2). The liberalization of antlerless permits was intended to limit the productivity of the deer herd and allow farmers to deal with their crop damage problems. Other environmental factors, such as poor weather immediately preceding fawning, increased predation, and changing agricultural practices, can also impact deer numbers. Ultimately, determining a cause of any population adjustment is difficult when assessing a large geographic region.

Hunter perceptions and goals can also impact harvest numbers. A large-scale shift in hunters' decisions to target older deer and pass on younger bucks can result in reduced harvest numbers and increased hunter effort, as there are fewer deer in older age classes. Success and harvest rates are thereby suppressed not by population decline, but by human decision-making processes. Other influences on overall deer harvest include environmental factors, such as poor weather immediately preceding fawning, increased predation, changing agricultural practices, disease and weather during the hunting season. Similarly, hunters may self-regulate harvest of antlerless deer for a variety of factors, such as a perception of too few deer.

Over the last 10 years the trend shows and overall reduction in harvest, with buck harvest taking a slight increase, while during this same time hunter effort has remained stable. This is most likely an indication that the herd has been reduced over time.

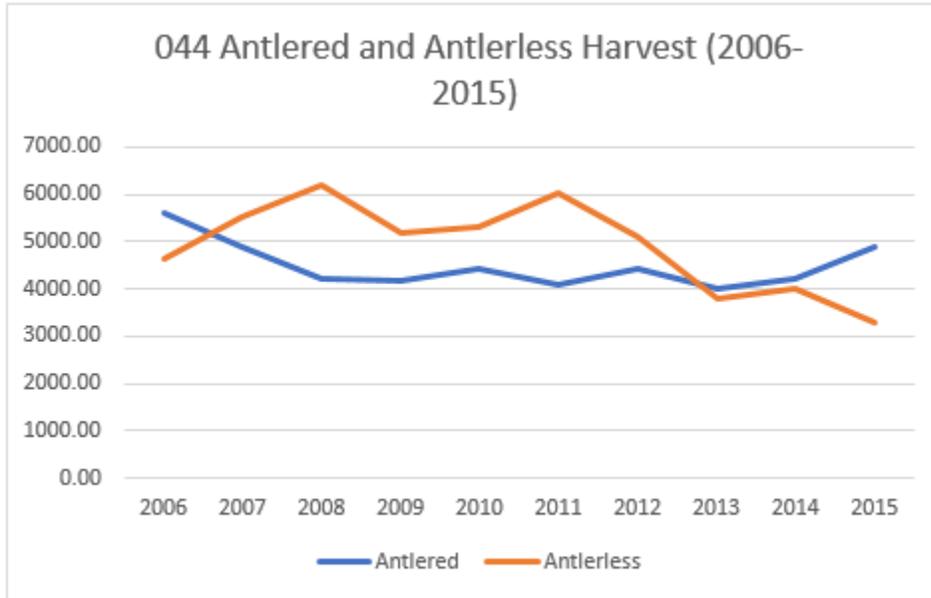


Figure 2: Harvest Lapeer County

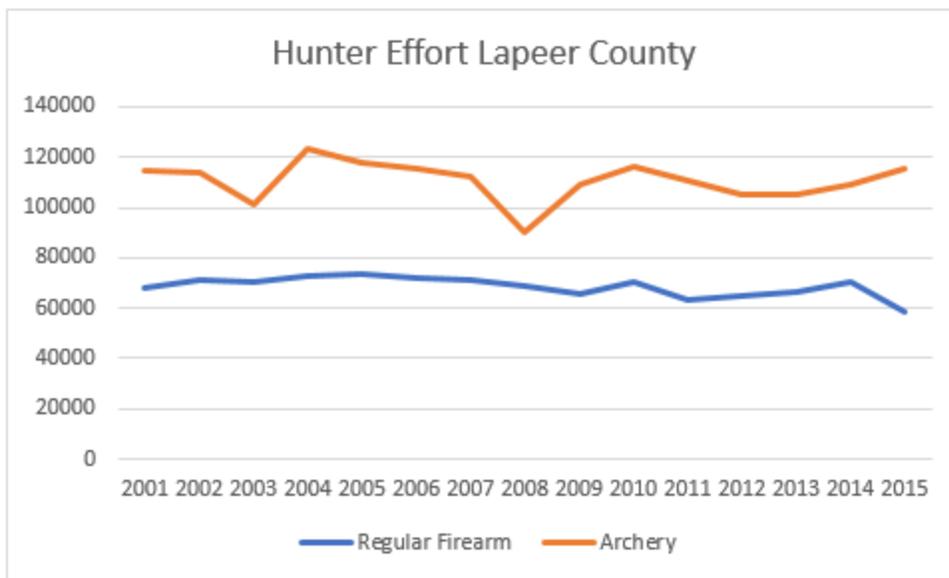


Figure 3. Hunter effort Oakland County regular firearm season

### 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.

DVCs indexed by vehicle miles travelled have shown a slight decline from 2006-2015 in the DMU (Fig. 4). These data are provided by the Michigan State Police. Although changes may have occurred in law enforcement response and recording of DVCs over time, we assume they have remained consistent enough to provide an accurate estimate of DVC rates relative to vehicle miles driven. The displayed DVCs are an additional indicator that there has been a slight decline in the deer population over the past 10 years.

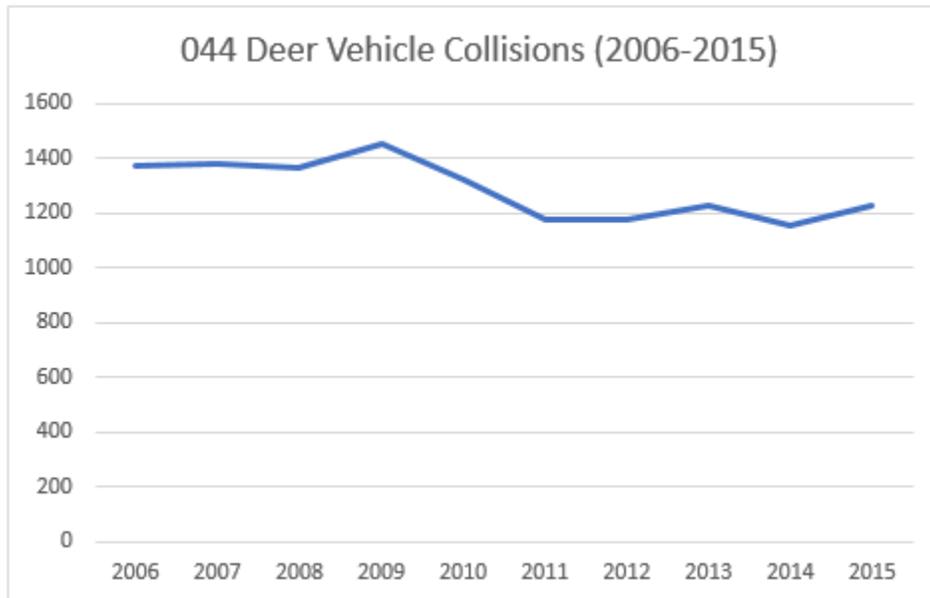


Figure 4. Deer vehicle collisions Lapeer County

#### 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. Requests for permits in this area is low.

#### 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 Lapeer DMU, the beam diameter has been relatively consistent, with a slight decline over time. In general, the beam diameter has shown a decline for the entire SLP (Fig. 5).

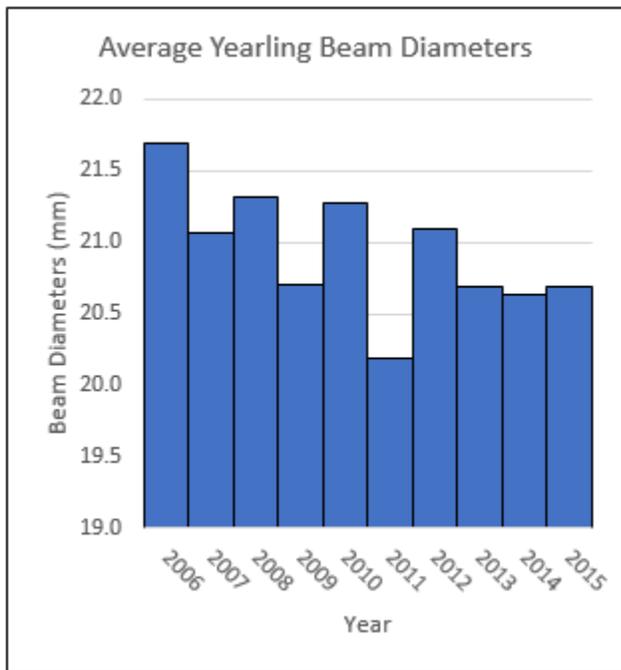


Figure 5. Average beam diameters Lapeer County

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:

In Lapeer County deer density remains high, especially relative to other regions of the state, even though there has been a reduction in the deer numbers over the past 10 years. When deer numbers get above the tolerance level of farmers, then more requests for DMAP and Out of Season permits will come in to help relieve the complaints.

Hunting opportunities remain robust due to the continued high deer density. As this unit was formerly part of DMU 486, it is not possible to know the rate at which antlerless tags were filled. In general permits for this area are usually always undersubscribed. The goal for this area is to provide ample hunting recreation while trying to minimize deer damage and vehicle collisions. Liberal antlerless permits will remain available, as the population in this county is very stable. Even though there are public lands in Lapeer County most hunting opportunity in this DMU remains on private land.

Based on this information, we recommend to reduce the Private Land Quota to 12,000. Since this area is undersubscribed this will still allow opportunity for all private landowners to purchase antlerless licenses. We recommend that the Public Land Quota remain 2000. We also recommend that early and late antlerless seasons are open in this DMU.