

# DMU 063

## Oakland County

### Deer Management Unit

#### Area Description

The Oakland County Deer Management Unit (DMU) lies in the Southeast Region of the Southern Lower Peninsula (SLP) and covers only Oakland County.

Oakland County has a total area of 908 square miles and has the second largest population of any other county in Michigan. Land use in Oakland County consists of 11.5% agriculture, 37% forested and 4% water (table 1). The northern townships of the county are the most rural, and agriculture can still be found here, but with increasing land values, many farms have been sold for development. This County has seen a steady increase in residential and commercial development over the last decade. This county includes 6 state recreation areas, 3 state parks (one co-managed with Wildlife Division), 2 mini game areas, and 2 Huron Clinton Metroparks, which total over 37,000 acres. 3,479 acres are managed specifically for wildlife.

table 1. land use in deer management unit 063

<b>Habitat</b>	<b>063</b>	<b>063 Public Lands</b>
<b>Forest (%)</b>	37.0	61.2
<b>Agriculture (%)</b>	11.5	5.7
<b>Grass/Shrubland (%)</b>	15.3	12.3
<b>Wetland (%)</b>	6.9	15.1
<b>Developed (%)</b>	24.8	2.3
<b>Water (%)</b>	4.1	3.4
<b>Bare/Rocky (%)</b>	0.4	0.1

Many townships/cities/villages in Oakland County have some type of hunting and/or trapping restrictions. Approximately 40% of the entire county is closed to hunting. Deer densities can vary widely in local situations depending where you are, and deer are well adapted to these urban conditions. In addition to the state land, large park systems, like the Huron Clinton Metroparks and the Oakland County Parks system, offer plenty of deer habitat. In the past, when there was no active control on these populations, the deer numbers increased beyond biological and social carrying capacity. These parks systems served as a deer reservoir with resulting impacts on surrounding ownerships (which often were also closed to hunting due to development). At some parks the deer density was high enough to impact deer reproductive capacity. Currently most of the major park systems are doing some form of active deer management using recreational hunting and controlled culling.

## 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.).

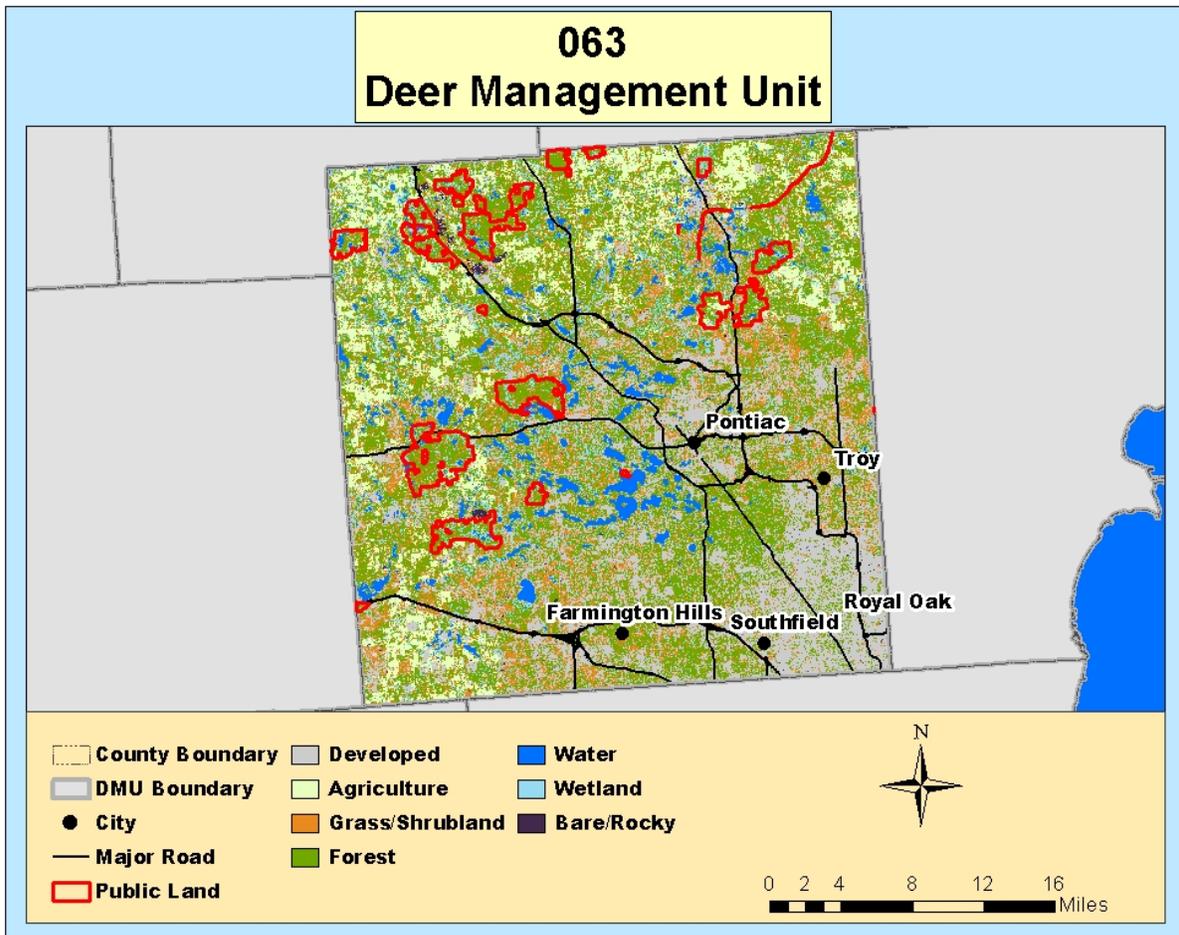


Figure 1. Habitat and land use distribution in deer management unit 063.

## Population Assessment Factors

### Deer Harvest Analysis

The deer harvest in DMU 63 has shown a slight increase in antlerless harvest, and decrease in buck harvest since 2002 (Figure 2). This may have indicated a decrease in the deer population over time. 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. Deer in urban areas continues to be a problem.

Environmental factors, such as poor weather immediately preceding fawning, increased predations, 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.

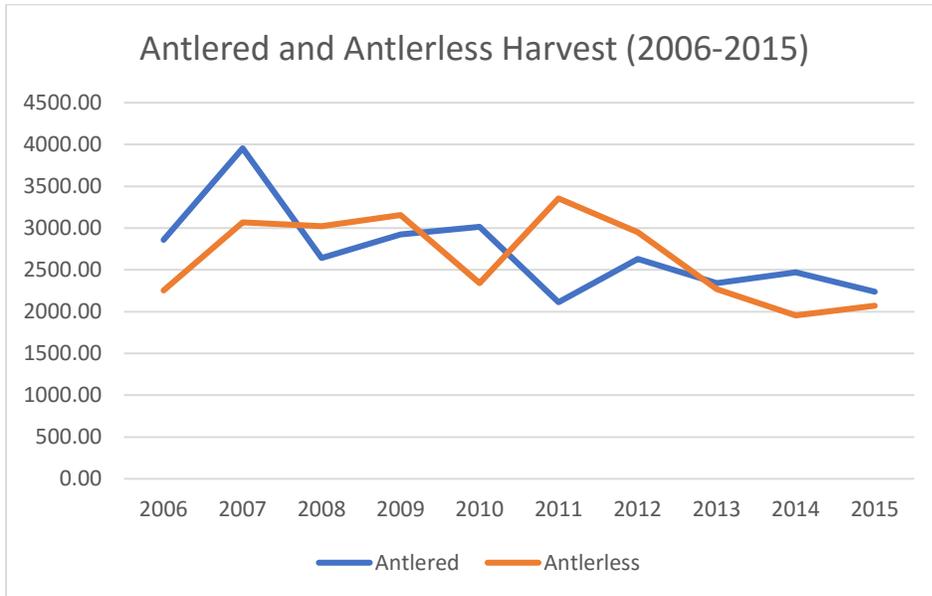


Figure 2: Harvest trends for DMU 063

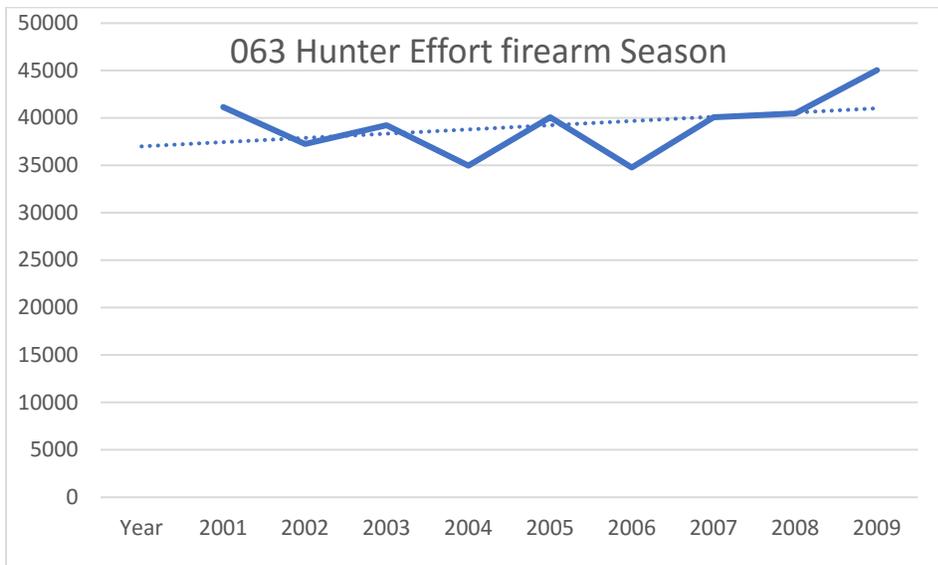


Figure 3. Hunter effort Oakland County regular firearm season

### 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.

DVC's have been tracked for many years to look at trends in Oakland County. The peak in DVC's took place in 2009, followed by a sharp decline in 2012 and rising in the last couple of years. 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).

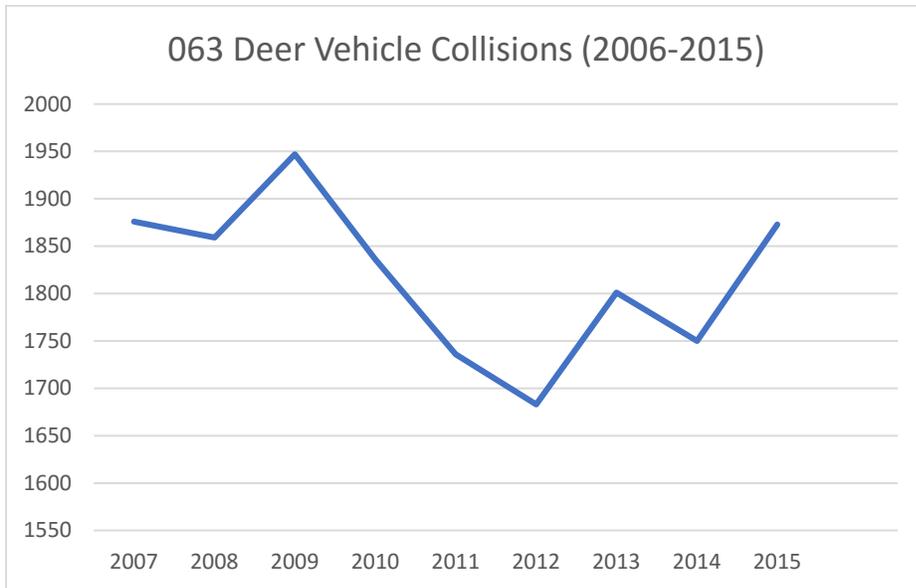


Figure 4. Deer vehicle collisions Oakland County

### Deer Management Assistance and Crop Damage Permits

Deer Management Assistance Permits (DMAPs) or “Block permits” 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 Oakland County, the average yearling beam diameters since 2006 has shown a slight decline (Fig. 4). This decline in average antler beam diameter has been statistically significant for the SLP. Also, in Oakland County the average beam diameter for 2.5-year-old bucks has shown a decline.

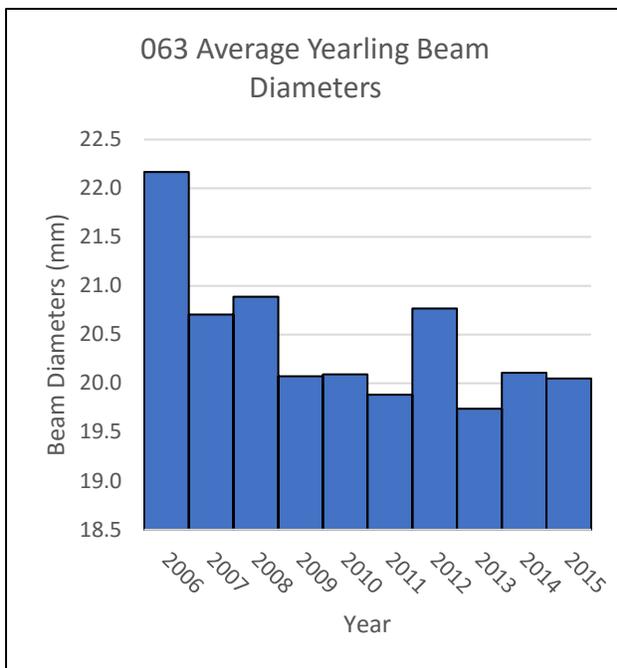


Figure 5. Average beam diameters Oakland County

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 untilld 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 density in Oakland County remains high relative to other regions of the state. Hunting opportunities are limited due to the high amount of urban areas, and areas that have hunting closures and restriction, even though good deer populations exist in these areas. Only a small amount (7%) of this county is in public ownership, and therefore deer management lies in the hands of private land owners. Many private landowners are reluctant to allow others to hunt their properties for fear of liability and damage to their properties. 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. Antlerless permits are also provided for state lands, to allow maximum recreation with minimal disturbance, and limited hunters. As car deer collisions continue to increase in this county, we may need to address an urban deer management strategy for this area. Further work with municipalities to either allow some limited hunting (which may mean changes in local hunting laws), or culls within their communities may be considerations where hunting is not an option.

Based on this information, we recommend that the Private Land Quota be reduced to 6,000 which still will allow sufficient permits for those that apply; and, we recommend that the Public Land Quota remain 2500. We also recommend that early and late antlerless seasons are open in this DMU.