

# DMU 082

## Wayne County

### Deer Management Unit

#### Area Description

The Wayne Deer Management Unit (DMU 082) lies in the Southeast Region and borders Lake Erie to the East and includes Celeron and Stony Islands in the Detroit River. The majority of public hunting opportunities in DMU 082 is available on the southeast portion of the county and includes the far northern portions of the Pte. Mouillee State Game Area. Topography is relatively flat with soils that are generally well-suited to row crop agriculture in areas that are not developed. The landscape is highly fragmented Wayne County is home to more people than any other county in the State. Because of this growth, residential and commercial development has consumed most townships except the 3 in the Southwest corner of the County. 55% of the county is developed with only 42.8% in land cover that can support deer habitat. For comparison Monroe County has 89.2% of its land cover that can support deer habitat. Habitat providing cover for deer (e.g., woodlots, shrub/brush, and wetland) is isolated and exists in small patches mainly in the southwest portion of the county (Table 1). A large percentage of the county has municipal ordinances outlawing the discharge of firearms. In most cases bow hunting is still allowed but if you are hunting in this DMU check with the local township or municipality to determine the laws in your area.

Habitat	082	082 Public Lands
Forest (%)	20.5	26.0
Agriculture (%)	7.4	5.2
Grass/Shrubland (%)	12.2	10.0
Wetland (%)	2.7	5.1
Developed (%)	54.8	40.1
Water (%)	2.0	13.6
Bare/Rocky (%)	0.3	0.1

Table 1. Habitat composition of DMU 082 as compared to only the public hunting lands in DMU 082.

#### Management Guidance

Two main goals guide the deer management in this DMU: 1) urban deer and impact management; and 2) hunting opportunities. Urban deer management includes social impacts and issues on top of Impact management which refers to the reduction of undesirable effects associated with deer over-abundance. Landscape and garden damage, crop damage, and deer-vehicle collisions are examples.

Hunting opportunities is a major issue in this county due to hunting restrictions and limited public hunting land. 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 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, input from hunters and Conservation Officers etc.).

## Deer Harvest Analysis

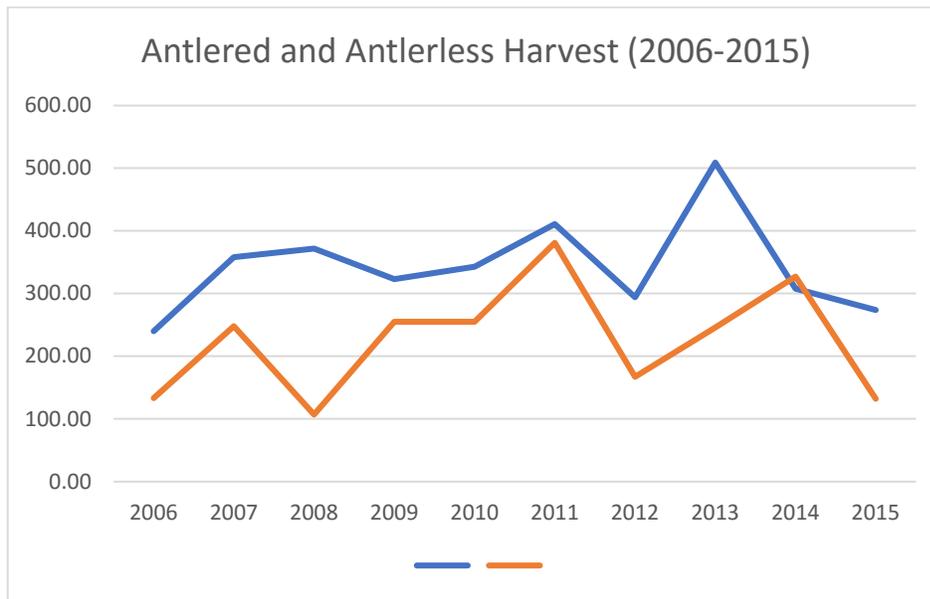


Figure 1: Graph of antlered and antlerless harvest in DMU 082 (Wayne County)

The antlerless and buck harvest is extremely variable; there is not a trend or direction (Fig. 1). Hunter success is dependent on several outside factors, the least of which is finding land and areas to hunt. Firearm hunting is very limited in this DMU and impacts hunter success. Other environmental factors, such as poor weather immediately preceding fawning, increased predation, and changing agricultural practices, can also impact deer numbers.

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 results 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. Similarly, hunters may self-regulate harvest of antlerless deer for a variety of factors, such as a perception of too few deer. If you had to decide on a trend for DMU 082 over the last ten years you would have to say the antlered and antlerless harvest is generally increasing. Social factors (i.e. hunter perceptions and goals) may have some influence over both harvest and effort, but it is more likely that an elevated antlerless quota and the increased use of crossbows has led to the general increase in harvest of a relatively small

deer herd with firearm use restrictions. Ultimately, determining a cause of any population adjustment is difficult when assessing a large geographic region. Especially one as restricted as DMU 082.

## Population Assessment Factors

### Deer-Vehicle Collisions

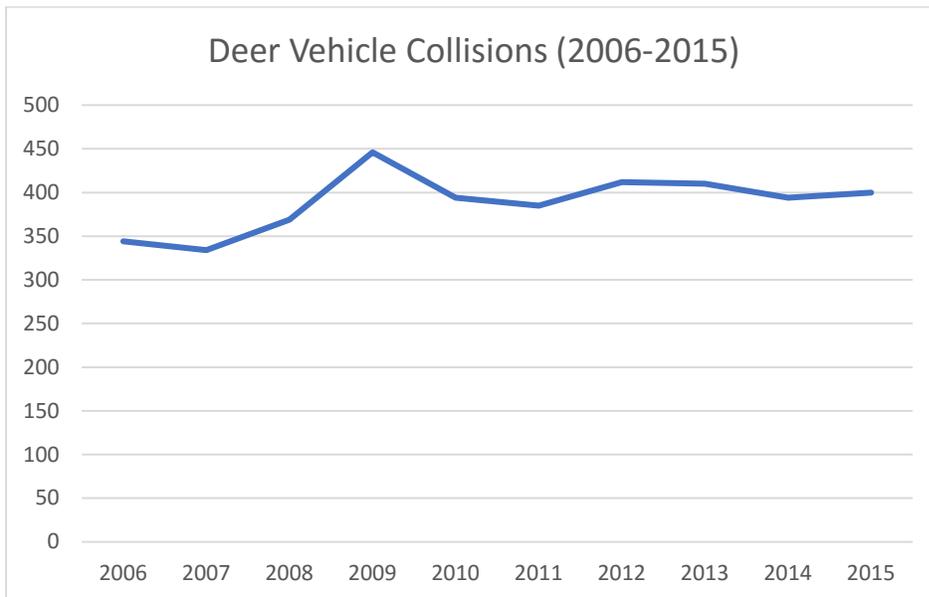


Figure 2: Graph of deer vehicle collisions in DMU 082 (Wayne County)

Deer-vehicle collisions (DVC) are commonly used as an index to the deer population trend, the idea being that high rates of DVCs are correlated with high deer populations, and vice versa. Research has shown that there are other factors that influence the rate of DVCs. Habitat proximate 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.

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 raw data of DVC's have steadily increased over the last 10 years (Fig 2). It has ranged from 273 accidents to a high of 446.

### 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). In the Wayne DMU, we had 0 requests for DMAPS.

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 by individuals also trend with deer density. In the Wayne DMU we issue 3 to 5 crop damage permits per year.

### Deer Condition Data

Yearling main antler beam diameter, measured just above the burr, is useful for determining deer body condition. These measurements are 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. Likewise, changes in land use practices can affect cover and food resources.

In the Wayne DMU, the average antler beam diameter (fig. 3) has been statistically insignificant, it has basically held steady over the last ten years. There is not a general trend in the results so it can be assumed that the general condition of the Wayne DMU deer herd is the same today as it was 10 years ago. The beam diameter data set is dependent on deer brought into the check station, Wayne DMU hunters only checked 27 antlered deer in 2014, 16 in 2015 and only 17 in 2016. This is a small sample size and can cause outliers to have a significant impact on the final average beam diameter number.

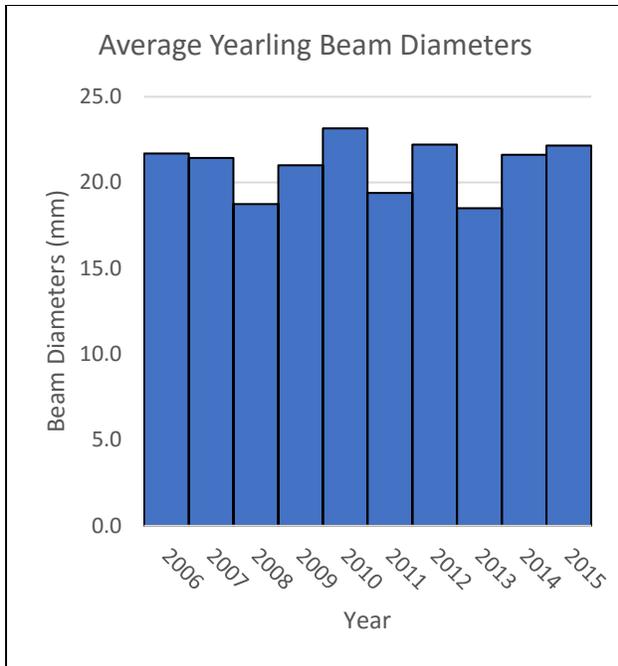


Figure 3: Graph showing the average beam diameters of yearling bucks brought into the check station from DMU 082 (Wayne County)

### Impact of Severe Winter Conditions

Winter conditions in DMU 082 are rarely severe, and have little to no impact on heard population. Hard winters in DMU 082 can have an effect on deer condition come spring time but it does not cause a spike or impact on the DMU population.

### Deer Management Recommendations

Deer densities in the Wayne DMU range from 0-5 deer per square mile. We would like to continue to decrease deer numbers in the Wayne DMU (DMU 082) due to social factors such as Deer Vehicle collisions, agricultural / landscape damage and urban issues. This deer herd is also limited by suitable habitat and can quickly overpopulate an area. Antlerless deer quotas are recommended to stay the same in DMU 082. In most cases the general hunting seasons should be adequate to relieve damage complaints. Wayne County DMU is unique in its social dynamic and its deer herd is managed different than most other DMU's. Based on the above information, we recommend that the Private Land Antlerless Quota remain at 1,200 and that the Public Land Antlerless Quota remain at 100. We recommend that the DMU be open to early antlerless and late antlerless on private land only.

DMU 82

Wildlife Biologist

Zach Cooley

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