DMU 419
Clinton, Eaton, Ingham, Ionia, and Shiawassee Counties

Area Description

Deer Management Unit (DMU) 419 is in the Southern Lower Peninsula Region (SLP). It consists of Clinton, Eaton, Ingham, Ionia, and Shiawassee Counties and makes up the Chronic Wasting Disease (CWD) Surveillance Zone.

The vast majority of the land in DMU 419 is privately owned, but the over 20,000 acres of public land in the DMU offers plenty of hunting opportunity for those that don't have access to private land for deer hunting. Not surprisingly, nearly 94% of the deer harvested in the southcentral part of the State (which includes DMU 419) are taken on private land.

Management Guidance

Figure 1: Map of DMU 419.

DMU 419 is one of the largest DMUs in the State and was formed as part of the State's response to CWD being found in free ranging deer in northern Ingham and southern Clinton Counties. The zone was formed to create another layer of CWD surveillance outside DMU 333, which lies within DMU 419 (Figure 1). Unlike DMU 333 where mandatory deer check is in place, hunters are not required to submit their deer for testing in DMU 419. However, it is highly recommended that hunters in DMU 419 have their deer tested for CWD, especially if you hunt near the perimeter of DMU 333. Sufficient sampling in DMU 419 will help determine the geographic extent of CWD in this part of the state.

While maintaining hunting opportunities is an important part of deer management in this DMU, the management of CWD and containing its spread are of highest priority. Several regulations are in place for hunters in DMU 419 to help prevent the spread of this disease. These regulation changes include a

ban on any baiting or feeding of deer, opening the early and late antlerless seasons, and providing ample number of antlerless licenses.

Population Assessment Factors

The overall harvest for this DMU has steadily declined since 2007, but seems to have leveled off since 2014 (Figure 2). This is likely, in part, due to an overall reduction in the deer population. This trend is consistent with many other areas across the State and across the Midwest. The overall deer population in DMU 419 has dropped significantly since 2010 but has since leveled off (Figure 3). While some of the population reduction was related to a large-scale die-off related to Epizootic Hemorrhagic Disease (EHD) in 2012, numbers were trending downward prior to that point. Based on sampling through the 2016 hunting season (Table 2), it doesn't appear any population level declines in DMU 419 are due to CWD.

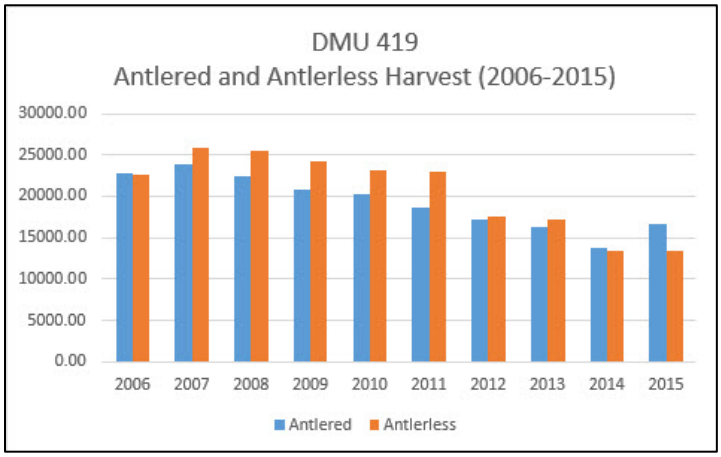


Figure 2: DMU 419 deer harvest from 2006-2015.

	Age Category		
Year	1.5	2.5	3.5
2001	77.5%	15.2%	7.2%
2002	72.7%	16.5%	10.8%
2003	77.2%	12.8%	10.0%
2004	75.9%	14.9%	9.1%
2005	75.0%	14.3%	10.7%
2006	72.4%	16.3%	11.2%
2007	68.7%	19.0%	12.3%
2008	68.2%	18.7%	13.1%
2009	60.6%	18.3%	21.1%
2010	58.0%	25.2%	16.9%
2011	60.2%	23.7%	16.1%
2012	56.0%	27.5%	16.6%
2013	60.4%	22.4%	17.2%
2014	52.9%	24.5%	22.7%
2015	54.2%	23.1%	22.7%
2016	55.5%	21.7%	22.8%

Table 1: Buck harvest for DMU 419

While lower deer numbers, in general, are likely driving the decline in harvest numbers, another set of factors that may have contributed to a decline in harvest numbers are hunter perceptions and goals. A large-scale shift in hunters' decisions to target older deer and pass on younger bucks results in reduced harvest numbers as there are fewer deer in older age classes. Since 2001, harvest of 1.5-year-old bucks has gone from 77.5% of the buck harvest to 55.5% in 2016. Conversely, harvest of 3.5-year-old and older bucks has gone from 7.2% to 22.8% in the same period (Table 1). Success and harvest rates are thereby suppressed not entirely by population decline, but by human decision-making processes as well. Similarly, hunters may self-regulate harvest of antlerless deer for a variety of factors, such as a perception of too few deer.

Deer Tested for Chronic Wasting Disease Since Detection of Positive Deer
as of January 6, 2017

	Targeted Deer	Roadkill Deer / Deer Found Dead	Deer taken on Disease Control & Crop Damage Permits	Deer culled by Wildlife Services	Hunter Harvested Deer	Total		CWD Positive Deer
CWD Core Area (17 TWP)	48	1627	824	987	4030	7516		9
CWD Management Zone (5 County)	65	236	146	1	2115	2563		0
Remainder of State	260	236	414	63	717	1690		0
Total	373	2099	1384	1051	6862	11769		9

Table 2. Chronic Wasting Disease testing numbers through January 6, 2017.

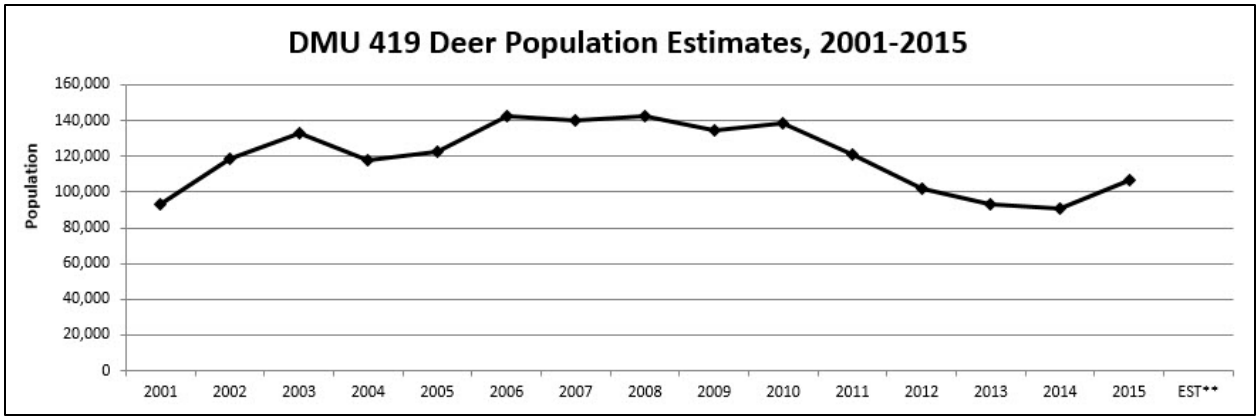
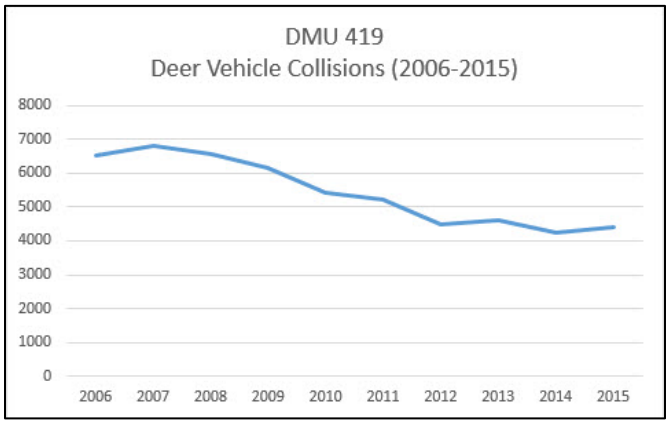


Figure 3: DMU 419 deer population estimates, 2001-2015.

Deer – Vehicle Collisions

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.



DVCs in DMU 419 have shown a steady decline since the mid-2000's (Figure 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 trends in DVCs have somewhat mimicked the trends of deer harvest in DMU 419 over the past decade.

Figure 4: Deer Vehicle Collisions for DMU 419.

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 DMU 419, very few DMAPs have been issued in recent years due to the fact most hunters could purchase enough antlerless licenses over the counter to meet their needs.

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. Crop damage complaints in DMU 419 have dropped considerably since 2009, somewhat similar to harvest numbers and deer population

estimates. While requests for Crop Damage Permits may trend with deer density, there are several factors that may impact a particular farmer's interest in asking for damage permits. Some of these factors may include (but are not limited to) personal tolerance level of damage, seasonal growing conditions, crop type, commodity prices, and past experience with crop damage. These permits are used as a means to alleviate site specific damage complaints by changing deer behavior and movement patterns and are not used to control deer numbers in a given area. In fact, the number of deer taken with Crop Damage Permits amounts to less than 0.01% compared to the deer harvested during the open hunting seasons for DMU 419.

Deer Condition Data

Yearling main antler beam diameter, measured just above the burr, and number of points are 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 and number of points 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 or loss of habitat leads to a decline in herd condition, observed as low yearling main beam diameters and antler points. 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 DMU 419, the average antler beam diameter has remained relatively steady for the past 15 years. (Figure 5).

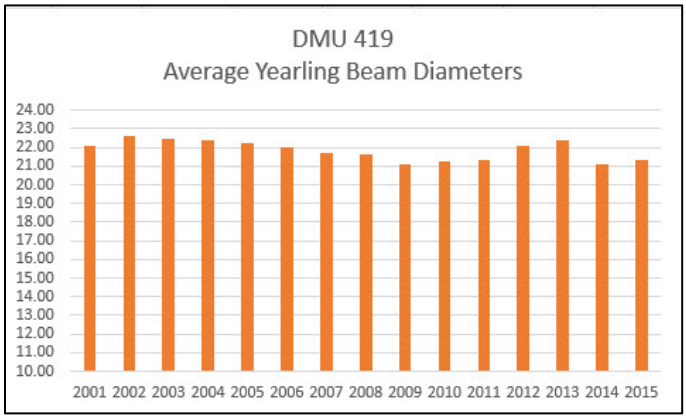


Figure 5: Average yearling buck beam diameter measurement (mm) for DMU 419.

Deer Management Recommendations

Deer populations in DMU 419 have declined significantly in the last decade but seem to have leveled off in recent years. However, the discovery of CWD in recent years will likely drive management decisions for this DMU into the foreseeable future. These recommendations will include continuing the ban on baiting and feeding of deer, continuing ample access to antlerless licenses, and continuing to offer the

early and late antlerless seasons. These recommendations will help limit the spread of CWD across the landscape and maintain a substantial annual harvest of antlerless deer to avoid another spike in deer populations and the problems associated with high deer densities.

To maintain a stable population and continue to monitor for CWD, we recommend keeping antlerless license quotas at the current level, 40,000. The total of 40,000 includes a recommended 2,000 antlerless licenses for public land in DMU 419.