

# DMU 009 – Bay County

## Deer Management Unit

### Area Description

The Bay County Deer Management Unit (DMU 009) is located in the Southern Lower Peninsula in the Saginaw Bay region of Wildlife Division’s Southeast Region management unit. Bay County, at 428 square miles, contains roughly 10,850 acres of public land comprised of properties owned and managed by the Department of Natural Resources Wildlife Division and Parks Division. Public lands open to deer hunting in DMU 009 are:

- [Nayanquing Point State Wildlife Area](#)\*
- [Fraser Township #1 State Game Area](#)
- [Fraser Township #2 State Game Area](#)
- [Pinconning Township \(Cody-Esty Road\) State Game Area](#)
- [Crow Island Sate Game Area](#), northern portions that lie in Bay County
- [Quanicassee State Wildlife Area](#), western portions that lie in Bay County
- [Tobico Marsh Wildlife Unit](#) of [Bay City State Recreation Area](#)

\*Due to Nayanquing Point State Wildlife Area also being an intensively managed waterfowl hunt area, deer hunts are regulated through drawings and occur in accordance with annual waterfowl seasons and area conditions; hunters interested in pursuing deer at this location will need to call the local field office (989-697-5101) in advance for specific information.

Topography in DMU 009 is generally flat with lake plain soils that are well-suited to row crop agriculture. Outside of northwestern portions of the county, which contain some fairly large contiguous blocks of private forest land, habitat in this DMU is highly fragmented due to the predominance of agriculture. This DMU also contains urban areas of Bay City, and suburban and exurban areas of both Bay City and Saginaw. With the exception of State Game and Wildlife Areas, along with the previously mentioned private land forest stands, habitat providing cover for deer (e.g., woodlots, shrub/brush, and wetlands) is relatively isolated and exists in small patches. A county-level and public land breakdown of habitat composition, by percentage, for DMU 009 can be found in **Table 1**.

**Table 1.** Habitat composition of DMU 009 as compared to only public land located within DMU 009

Habitat	Public Lands in	
	DMU 009	DMU 009
Forest	17.6	18.1
Agriculture	59.5	28.4
Grass/Shrubland	7.3	6.8
Wetland	3.9	26.3
Developed	10.0	2.0
Water	1.3	16.8
Bare/Rocky	0.5	1.6

## Management Guidance

Two main goals guide deer management in this DMU:

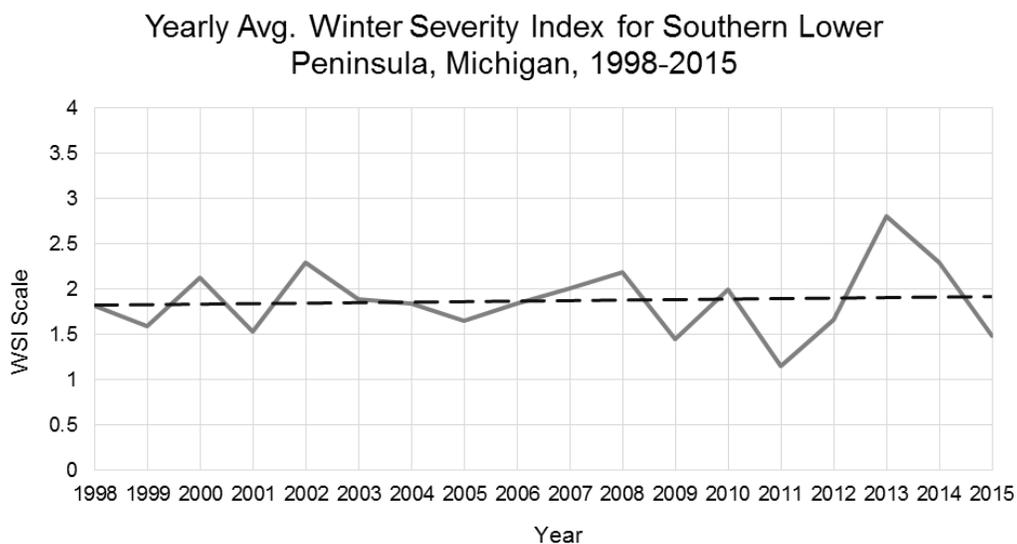
1. Impact management
2. Hunting opportunities

Impact management refers to reduction of undesirable effects associated with deer over-abundance, with examples being crop damage, deer-vehicle collisions, and poor forest regeneration due to over-browsing. In an effort to find a middle-ground in which deer numbers provide ample hunting and wildlife viewing opportunities, while trying to mitigate unwanted impacts, DNR reviews data from several sources to adjust harvest strategies as needed. These data include deer harvest data from check stations and annual surveys, winter severity indices, 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 issues, habitat assessments, etc.).

## Population Assessment Factors

### Winter Severity

Winter severity is known to affect deer survival. As such, a Winter Severity Index (WSI) is one of many metrics that DNR uses when assessing harvest strategies. Information related to the DNR's WSI calculations and uses can be found on the [DNR's website](#). **Figure 1** shows the average yearly WSI from 1998 through 2015 for the Southern Lower Peninsula. While relatively stable over time, the severe winter of 2013/2014 has caused the WSI to exhibit a slight increase in severity over the plotted time period.



**Figure 1.** Graph of Southern Lower Peninsula Yearly Average Winter Severity Index, 1998-2015.

Despite occasional harsh cold over the past 10+ years, the trend has been for milder winters. Winter severity, while a large driver for deer populations in the Upper and northerly portions of the Northern Lower Peninsula, is not a larger driver in observed deer populations in the Southern Lower Peninsula. Relatively mild winters allow for increased deer survival, particularly for fawns which are typically the most vulnerable. Furthermore, mild winter tend to be positively affects newborn survival. In general, milder winters tend to favor an increase in deer population levels.

## Deer-Vehicle Collisions

The number of deer-vehicle collisions in DMU 009 has stayed relatively constant over the past decade, fluctuating between 400 and 500 incidents; vehicle collisions were low between 2011 and 2013, but have shown a steady increase in the past three years. While reasons behind this observed increase are several-fold, and cannot be directly tied to an increase in the regional deer herd, the information is useful when taken into consideration with annual check station registered harvest.

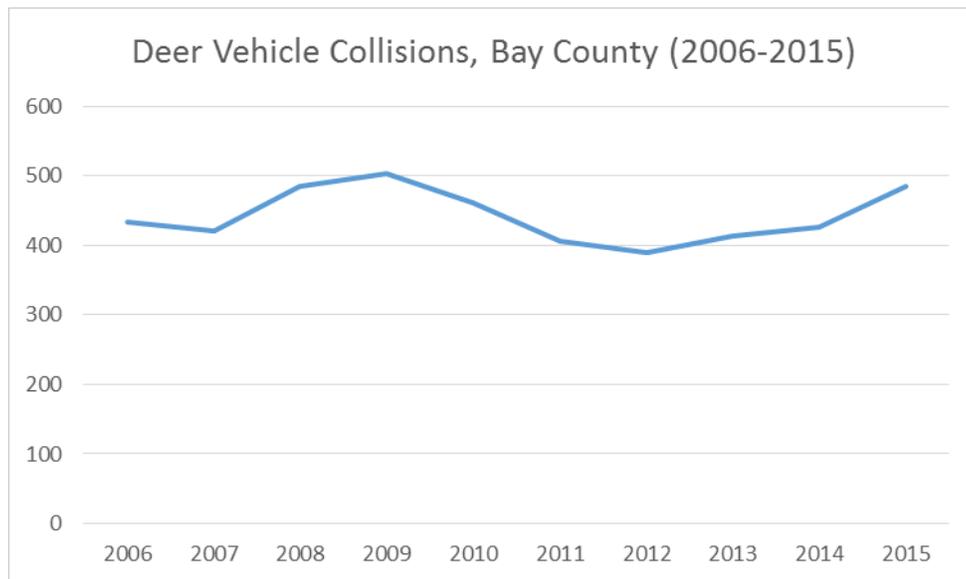


Figure 2. Graph of deer-vehicle collisions in Bay County, 2006-2015.

## Crop Damage

In the event that an agricultural producer experiences crop damage, the DNR has a system in place to issue either an out of season kill tag (OSS), to be used outside of a recognized deer season, or a Deer Management Assistant Permit (DMAP), to be used during a recognized deer season, to help alleviate deer-related crop damage. **Table 2** and **Table 3** show the number of permittees, the number of tags issued, and the number of tags filled for OSS and DMAPs for 2014 and 2015, respectively.

**Table 2.** Out of Season kill permits issued, DMU 009, 2014-2015

Year	OSS Permittees	OSS Issued	OSS Used
2014	29	175	82
2015	26	117	58

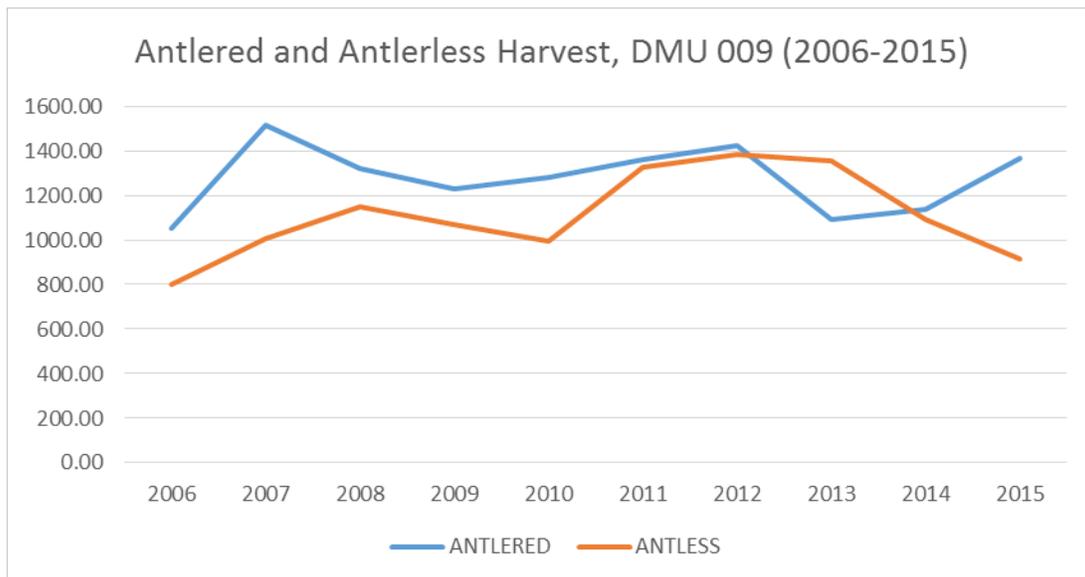
**Table 3.** Deer Management Assistant Permits issues, DMU 009, 2014-2015

Year	DMAP Permittees	DMAPs Issued	DMAPs Used
2014	6	98	21
2015	3	60	18

Both OSS and DMAPs have shown decreases in number of permittees and number of permits issued between 2014 and 2015; this may indicate a reduction in the size of the regional deer herd in areas that were experiencing crop damage, which translates to DNR that the program is effective at a local scale or that deer may be exploiting more natural food sources when available. Out of season kill permits and DMAPs generally account for less than 5% of the annual deer harvest for the counties in which they are issued.

### Deer Harvest Analysis

Antlered and antlerless harvest has fluctuated over the past decade; antlerless harvest has shown greater fluctuations compared to antlered harvest. Antlerless harvest has spanned from roughly 800 animals on the low end in 2006, to roughly 1,400 animals on the high end in 2012.



**Figure 3.** Graph of annual antlered and antlerless deer harvest, DMU 009, 2006-2015.

### Antler Beam Diameters

When gauging the health of regional deer herds a metric that DNR utilizes is average beam diameters of 1.5 year old bucks registered at DNR deer check stations. **Figure 4** shows a trend of decreasing average antler beam diameters since 2006. High deer densities lead to reduced resource availability, which may impact the quality of deer seen on an annual basis. This may also indicate a trend of meat hunters

avoiding doe harvest and harvesting young bucks with their deer license or unrestricted tag, the assumption being that increased doe numbers deplete available resources for antlered deer. Annual variations in available resources and WSI are also contributing factors to observed antler beam diameters.

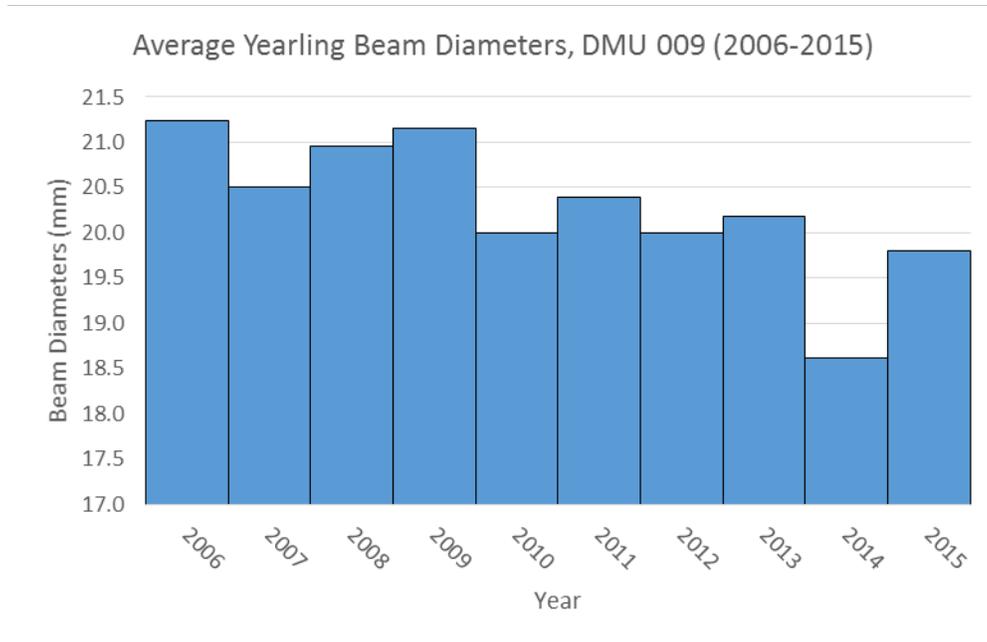


Figure 2. Graph of average yearling beam diameters for DMU 009, 2006-2015.

The ten-year average number of deer hunters in DMU 009 is 4,836; the number of hunters in DMU 009 in 2015 was 4,489, or roughly a -7% decline compared to the long-term average. Decreasing hunter numbers may lead to increased harvest opportunities and reduced public land competition for existing hunters, but also leads to recognized hunting seasons being less capable in achieving regional deer management goals.

## Deer Management Recommendations

The deer population has likely increased in this DMU in the last decade. As a result, deer densities remain high compared to other regions of the state. Observed densities will continually require the issuance of DMAPs and Deer Damage/Out-of-Season Permits throughout much of the unit, as harvest through the general hunting seasons is inadequate to relieve damage complaints and deer-vehicle collisions.

Hunting opportunities remain robust due to these continued high deer densities. This information is annually used to determine harvest recommendations. Based upon this, it is recommended that the private land quota remain at 3,000 antlerless licenses and the public land quota remain at 200 antlerless licenses for the 2017-2019 seasons. In addition, it's recommended that this DMU is open for the early and late antlerless seasons. These recommendations are unchanged from license availability in the 2014-2016 seasons.