

Deer Management Unit

155

Area Description

DMU 155 is located in western Delta and southeastern Marquette counties and has totaled 265 sq. miles since 2002. Eighty-six percent of the unit is privately-owned land, which includes about 36 sq. miles of commercial forest land. State Forest land comprises about 14% (36 sq. miles) of the unit. State land is comprised of numerous small compartments occurring most frequently along the east side of the unit.

Land use and habitat quality for deer

DMU 155 is at the northern end of a “farm belt” that extends into adjacent DMU 055 southerly to the City of Menominee. Farmland is concentrated along the west side of the unit but occurs throughout. The combination of farm fields and forest cover provides excellent habitat for deer in much of the unit.

Typical winter weather, as related to deer

Winter weather is relatively mild in the south-central U.P. Only about 60-80 inches of snowfall occurs each year. Compared to areas influenced by Lake Superior, which may receive 200-300 inches of snow annually, DMU 155 experiences a shorter period of snow cover with lower weekly depths—although northern portions of the unit can sometimes experience harsh conditions. Relative to many other DMU’s in the U.P., deer in DMU 155 experience higher mobility in their search for food resulting in relatively good over-winter survival and fawn recruitment most years. However, in the winters of 2012-13 and 2013-14 there was above average snowfall that caused a noticeable decline in the deer population within DMU 155. The deep snow conditions resulted in both fawn and adult deer mortality. Fortunately the past three winters have had average or below average snowfall. The decrease in snowfall has resulted in increased fawn recruitment and a partial population rebound within this DMU.

Management Guidance

Provision of antlerless harvest opportunity has been historically desirable in this unit for a couple of reasons. First, there is a strong interest in the “let em go, let em grow” philosophy dating back to the period 2001-05 when this unit had mandatory antler point restrictions in place. Hunters have shown a tendency to bypass young bucks so they can grow older, and antlerless licenses aid this effort. Secondly, 6-10 farms typically report agricultural crop damage, and antlerless licenses are a tool to address this problem. Finally, state forest managers support antlerless harvesting to reduce deer browse impacts on tree regeneration.

Deer Harvest Analysis

During the last ten years, DMU 155 has yielded respectable buck harvest densities in the range of 4-8 per sq. mile. Although the buck kill has declined in recent years, this DMU consistently ranks as one of the top 3 units for buck harvest in the U.P. region—typically topping 4 bucks harvested per sq. mile. This harvest density signifies a sizeable deer herd compared to other locations and good buck hunting opportunity.

Antlerless deer harvest opportunity historically has been liberal on private lands and modest on public lands. Antlerless license quotas were reduced for both private and public land during the 2014-2016 regulation cycle resulting in a decline in antlerless harvest within this DMU. The private land antlerless quota was reduced from 3,000 to 1,500 and the public land quota was reduced from 400 to zero. These reductions were in response to a declining population due to harsh winters. These reductions resulted in the lowest antlerless harvest in recent history, with 1-3 antlerless deer being harvested per sq. mile. In comparison there was an average of 5 antlerless deer being harvested per sq. mile in 2001-2013. It's important to note that antlerless harvest was not permitted on regular or combination deer licenses during both the 2015 and 2016 seasons which further reduced the antlerless harvest.

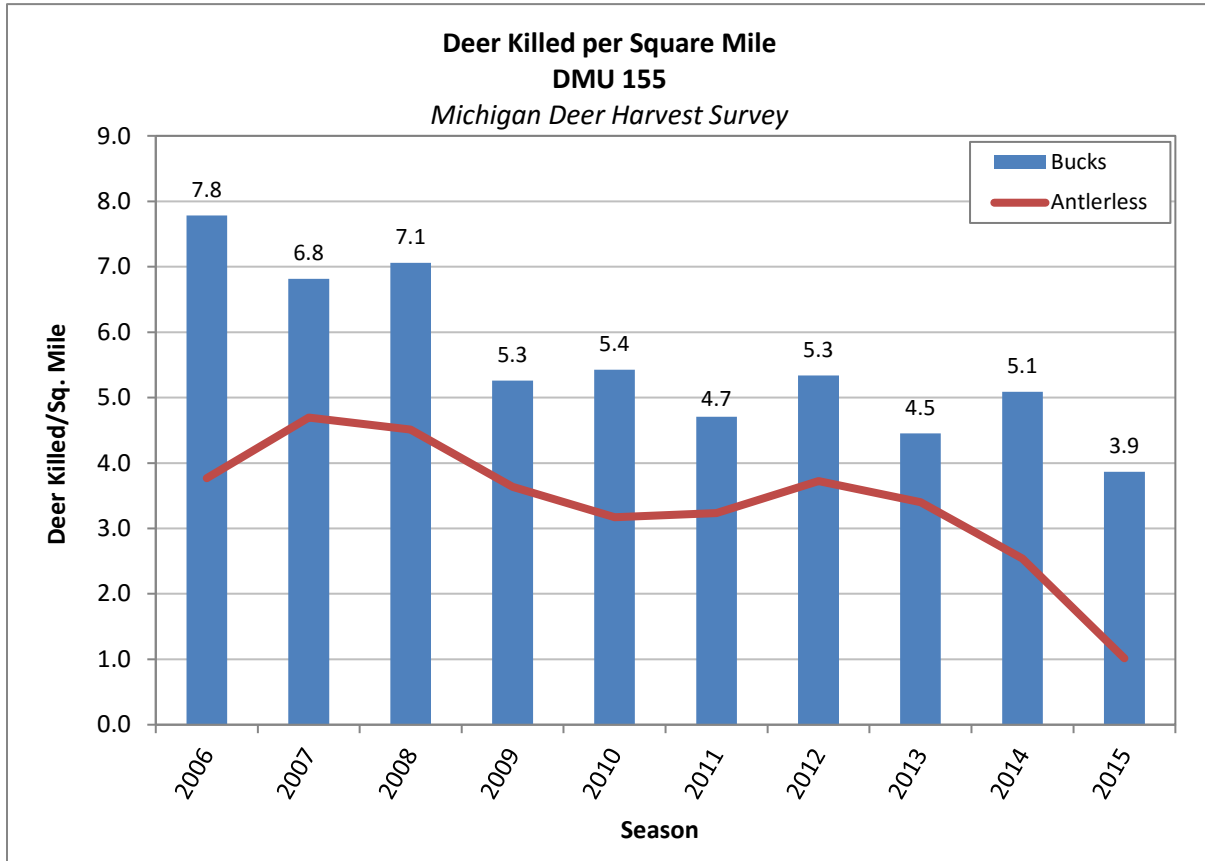


Figure 1. Deer killed per square mile in DMU 155.

Deer sightings and hunter success/satisfaction trends

Camps from DMU 155 that participate in the U.P. Deer Camp Survey (firearm season) typically observe 4 to 6 deer per hunter day. This deer sighting rate ranks among the highest for any unit in the U.P. region. Although buck kill success averages a moderate 22% (2006-2016), this unit is among the leaders for the statistic “bucks observed by hunters that did not result in a kill.” That is, hunters appear to demonstrate restraint in this DMU, electing to harvest a relatively low percentage of the bucks they observe. For example in 2016 hunters harvested only 7% of the bucks they observed despite having some of the highest buck sighting numbers in the U.P. region. The fawn- to-doe ratio observed by hunters is usually among the highest reported in the U.P. region, attesting to the quality of the habitat (mixed forest land and agriculture) and the relatively mild winters compared to other locations.

DEER MANAGEMENT UNIT 155											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Camps	16	17	23	21	18	16	19	17	14	16	16
Hunters	78	71	106	90	71	75	80	69	52	67	59
% killing a buck	22%	24%	29%	21%	20%	28%	24%	28%	17%	13%	19%
Deer seen per day	4.1	5.5	4.8	2.6	4.3	5	6	4.5	6.2	2.8	4.5
Fawns seen per 100 does	60	73	62	58	67	55	53	49	43	46	76
Does seen per buck	3	4	3	3	4	4	2	2	4	3	4
More deer than last year	19%	47%	14%	0%	29%	53%	55%	6%	14%	0%	25%
Same number deer	50%	41%	18%	10%	47%	7%	28%	13%	22%	0%	44%
Fewer deer	31%	12%	68%	90%	24%	40%	17%	81%	64%	100%	31%
Season good-to-excellent	44%	53%	26%	10%	18%	40%	64%	24%	21%	0%	20%
Season fair-to-poor	56%	47%	74%	90%	82%	60%	36%	76%	79%	100%	80%

Figure 2. Deer Camp Survey Data in DMU 155

Research Results

A research project focusing on the role of predators, winter weather, and habitat on deer fawn survival is being conducted in the western U.P. by Mississippi State University in cooperation with the DNR. Results of this research conducted in the low and moderate snowfall zones to date suggest the following:

- high pregnancy rate among adult females despite uneven buck to doe ratios
- low fawn annual survival following harsh winters
- under mild to moderate winter severity, the most important factor influencing the growth (positive or negative) of a deer population is the proportion of fawns surviving their first year and becoming potential breeders
- under severe winter conditions substantial mortality of adult females can occur, replacing recruitment of fawns as the most important factor effecting the growth of a deer population, until the adult female segment of the population recovers.
- severe winter weather can have multi-year effects on deer recruitment and population trends.
- annually, winter severity and habitat conditions influence the amount of predation, which overall was the dominant source of mortality of adult females and fawns. This illustrates the importance of considering all potential limiting factors and their interactions.
- These results support results of other surveys suggesting that consecutive harsh winters that have occurred since 2008 have caused a noticeable decline in the deer population within DMU 155.

Agricultural Crop Damage

During the past 5 years, an average of 7 farms has been issued Deer Damage Shooting Permits in DMU 155, resulting in a harvest of about 88 deer per year outside of the normal hunting seasons. Crop damage is not a widespread problem in this unit, but it is significant to the farming operations that experience it.

Forest Regeneration Concerns

Forestry professionals within the DNR’s Forest Resources Division have at times expressed concern over tree regeneration difficulties in this DMU, particularly related to northern hardwoods and cedar. Although concerns about deer impacts on trees are not as strong as during the mid-1990’s, foresters typically recommend at least a modest amount of antlerless deer harvesting in this unit on public lands when deer herd size warrants it.

Deer-Vehicle Collisions

The Michigan State Police tracks accident reports from deer-vehicle collisions that result in sufficient damage to warrant an insurance claim. Reported deer-vehicle accidents, adjusted for changes in traffic volume, have declined in the U.P. during the past decade.

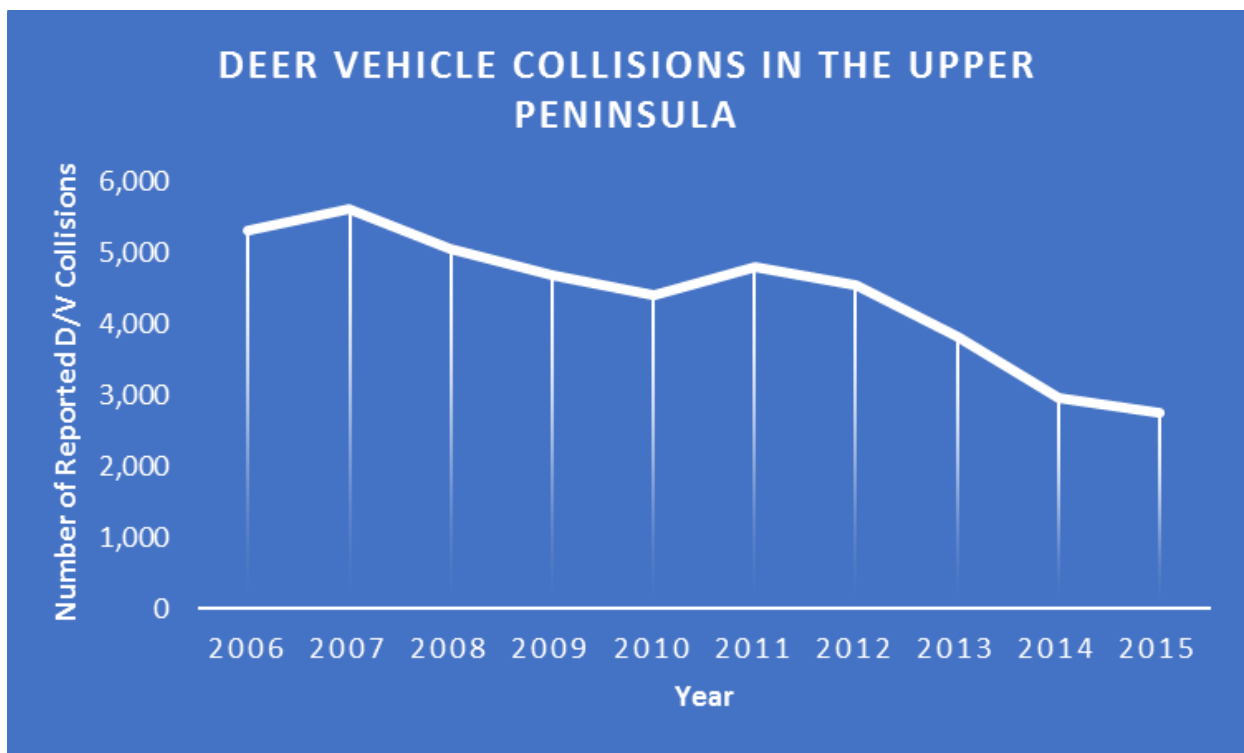


Figure 3. Deer/Vehicle Collisions in the Upper Peninsula Region.

Deer Condition Data

A sample of hunter-harvested deer is examined at DNR check stations each fall. The diameter of antler beams, measured 1 inch above the pedicel, is obtained from 1.5-year-old (yearling) bucks to index physical condition. Antler beam diameters have varied little in the U.P. region during the past decade. Low yearling beam diameters in any given year are likely attributable to physiological hardships suffered by bucks during their first winter.

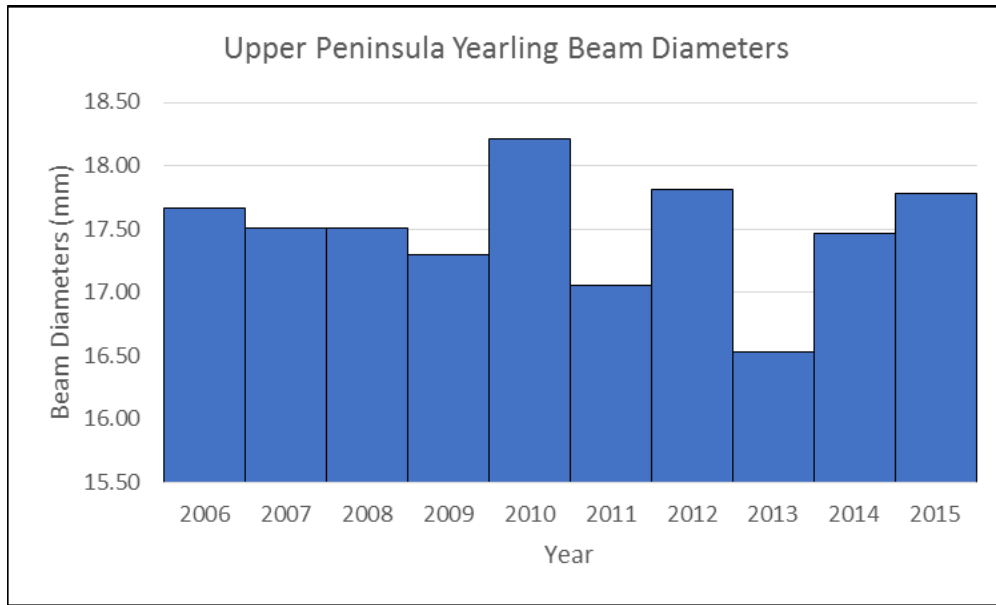


Figure 4. Upper Peninsula Yearling Beam Diameters.

Deer Management Recommendations

Deer population indicators for DMU 155, such as buck kill per sq. mile and deer observed per hunter day, are consistently among the highest in the U.P. region due to its southern geographic location and the interspersed agricultural land. There is a strong interest in this unit on the part of sportsmen to bypass small bucks to allow them to grow older while better balancing the sex ratio, and antlerless licenses aid that harvest philosophy. Antlerless licenses also help to address agricultural crop damage and forest regeneration concerns.

Despite some concerns that hunting “is not as good as it used to be,” we recommend Private Land Antlerless Licenses be issued in the unit, at the reduced 2014-16 level, as a tool to address agricultural crop damage and forest regeneration concerns. Antlerless licenses will also allow hunters to bypass young bucks, if they choose, while still procuring venison. This choice will help to advance bucks to an older age class while better balancing the adult sex ratio.

DMU 155 has a relatively small amount of publicly-accessible land (36 sq. miles of state forest and 36 sq. miles of commercial forest land) that can be subject to high hunter densities, as documented in mail survey results. Much of this publicly-accessible land lies in the northern portion of DMU 155 which experienced a significant decline in deer numbers during the winters of 2012-13 and 2013-14. Consequently, our quota recommendation for Public Land Antlerless Licenses will be conservative during this regulation cycle.

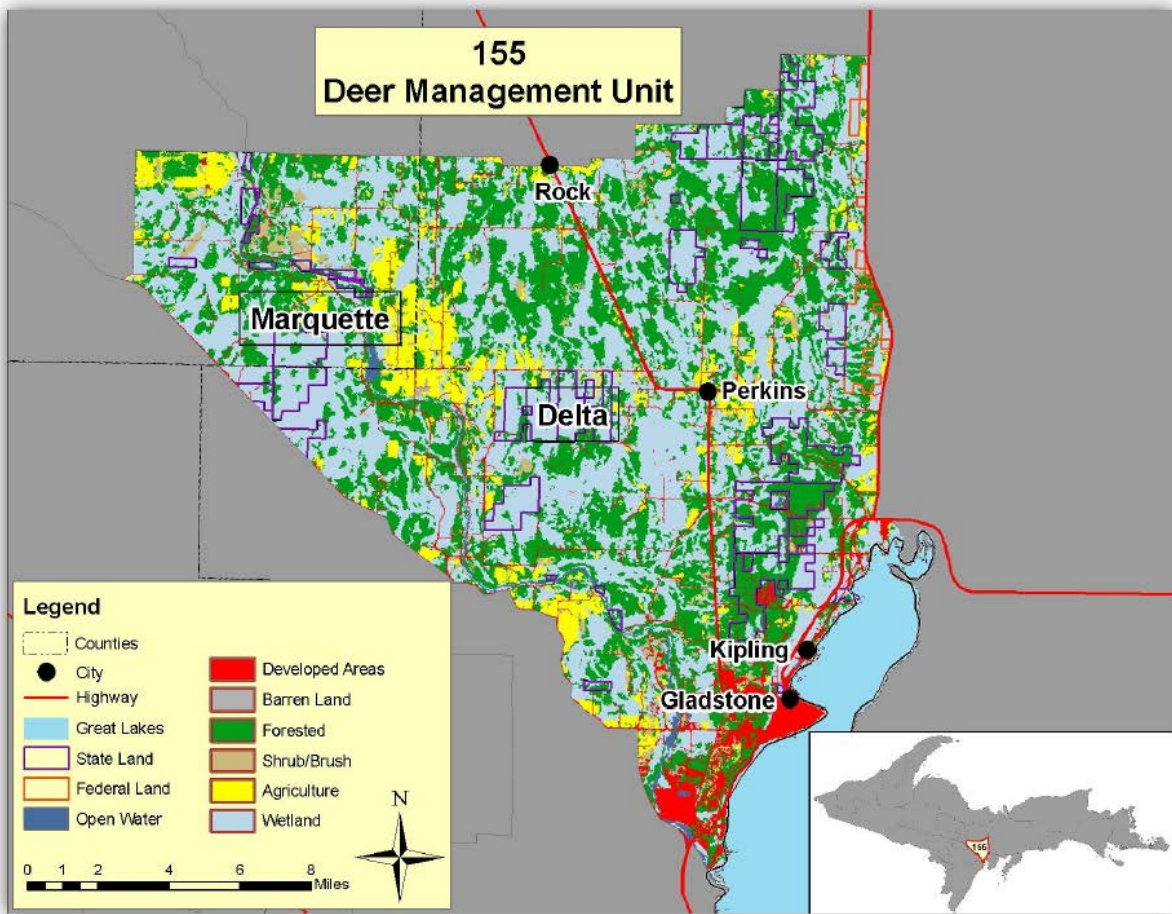


Figure 5. Deer Management Unit 349.