

# Deer Management Unit 255

## Area Description

DMU 255 is located primarily in northern Menominee County, but also extends into a small portion of Dickinson, Marquette, and Delta counties. It has totaled 463 sq. miles since 2003. About 90% of the unit is privately-owned land, roughly half of which is publicly-accessible corporate commercial forest land. Several blocks of state forest land are found throughout the unit, approximately 46 sq miles.

## Land use and habitat quality for deer

This is a forested landscape exhibiting glacial “drumlin topography.” Much of the unit is covered by forested upland ridges, oriented northeast-southwest, interspersed with lowland conifer forest. Corporate ownerships have been intensively managed for timber production, including conversions to forest types that are not high quality for deer. Agriculture is largely restricted to the southeast portion of the unit (see cover type map at the end of document).

## 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. However, during winter 2012-13 and 2013-14 snow depths were above average and had negative impacts on deer survival and productivity. Winter of 2014-15 was typical for DMU255, and winter 2016-17 included two lengthy thaws during January and February affording deer higher mobility in their search for food. These recent winter conditions have been favorable for winter survival and fawn recruitment.

## Management Guidance

Provision of modest antlerless harvesting opportunity is normally desirable in this unit. Hunters in DMU 255 show a strong tendency to bypass young bucks so they grow older, and the availability of antlerless licenses aids this effort. Furthermore, about 8 farms report crop damage each year, and antlerless licenses are a tool to address this problem. Importantly, corporate and state and forest managers support some antlerless harvesting to limit deer browse impacts on forest regeneration.

## Deer Harvest Analysis

During the period 2006-2015, hunters in DMU 255 harvested an average of 2.0 bucks per sq. mile. Compared to other units in the U.P., this is a medium buck kill density. The unit is not among the elite deer producers (i.e., DMU’s 055, 122, 155), nor is the buck kill excessively low. Buck kill density in recent years (2013-2015) dropped below average following consecutive winters of above-average snow depths.

A modest level of antlerless harvesting has historically been implemented here; however, antlerless harvest was not permitted during recent years (2014-2016) following the negative impacts of consecutive harsh winters. Most years the antlerless license quota has been set to meet demand for licenses among private land applicants who may wish to pass up young bucks while still

procuring venison. Antlerless licenses for public lands have been provided in at least small numbers to address concerns of corporate and state forest managers regarding deer browse impacts.

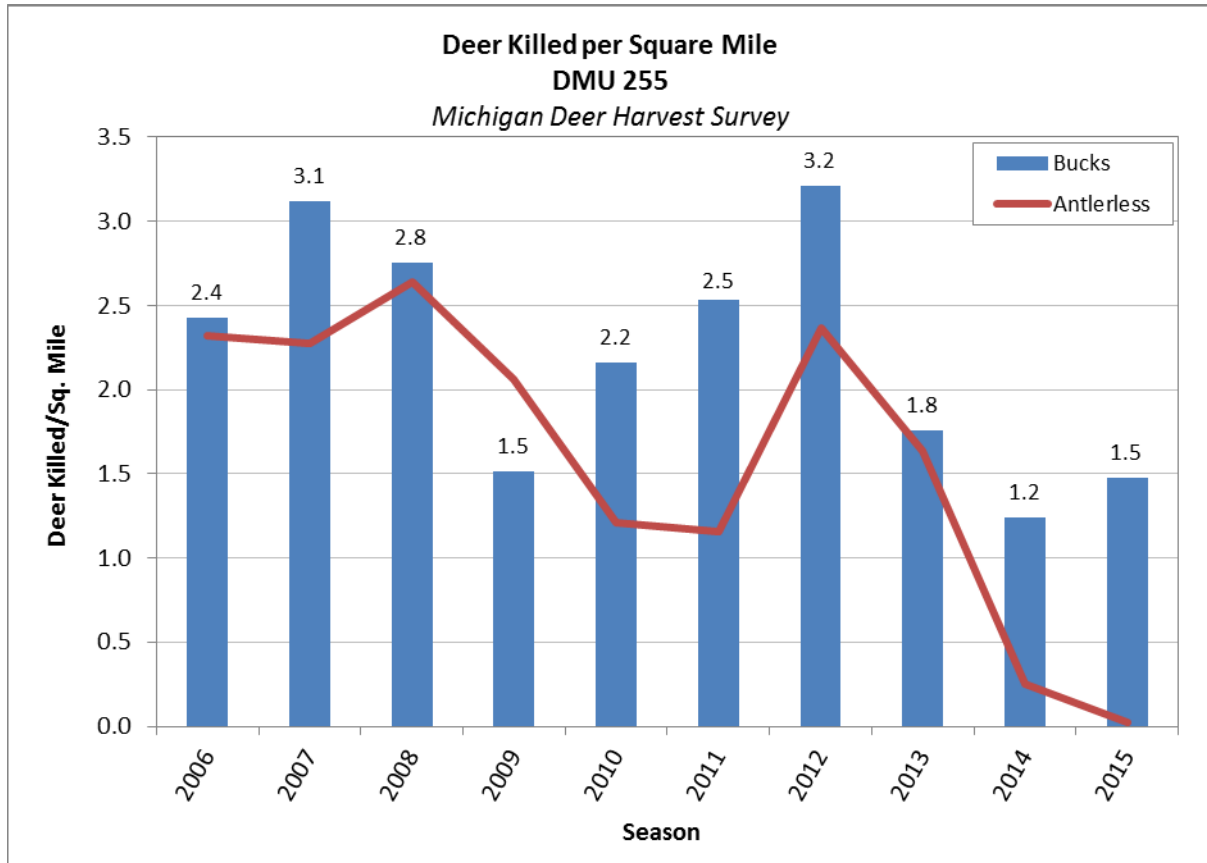


Figure 1. Deer killed per square mile in DMU 255.

### Deer sightings and hunter success/satisfaction trends

Firearm deer hunters in DMU 255 have shown a high rate of participation in the U.P. Deer Camp Survey, a cooperative effort by hunters to track deer sightings, harvest, and impressions during the firearm season. During 2016, camp cooperators reported increases in deer sightings and buck kill success compared to the previous year, and the ratio of fawns observed per doe was the highest in the U.P. This unit appears to be experiencing a rebound in deer numbers which could be aided by good fawn production in 2016. The winter of 2016-17 has become favorable for deer survival and productivity due to significant periods of warm weather and modest snow depths.

DEER MANAGEMENT UNIT 255											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Camps	36	36	35	34	33	32	32	33	31	35	31
Hunters	182	196	172	173	159	160	163	161	156	178	144
% killing a buck	34%	40%	34%	24%	30%	31%	24%	29%	25%	16%	20%
Deer seen per day	4.2	5.3	4.6	2.9	4	4.8	5.1	3.1	5.1	2.4	4.1
Fawns seen per 100 does	73	65	62	50	75	68	67	49	49	52	82
Does seen per buck	3	3	3	3	3	3	3	3	7	4	3
More deer than last year	17%	33%	9%	0%	24%	34%	26%	10%	23%	0%	48%
Same number deer	47%	53%	31%	15%	33%	44%	35%	13%	20%	23%	26%
Fewer deer	36%	14%	60%	85%	42%	22%	39%	77%	57%	77%	26%
Season good-to-excellent	44%	61%	38%	20%	27%	37%	33%	19%	29%	6%	19%
Season fair-to-poor	56%	39%	62%	80%	73%	63%	67%	81%	71%	94%	81%

Figure 2. Deer Camp Survey Data in DMU 255

## 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 8 farms has been issued Deer Damage Shooting Permits in DMU 255, resulting in a harvest of about 44 deer per year outside of the normal hunting season. Crop damage is not a widespread problem in this unit, but it is significant to the farming operations that experience it.

## Forest Regeneration Concerns

There is a high interest in timber production in DMU 255. A large amount of land is owned by corporations whose missions are commercial timber production and regeneration. The state forest

system also has compartments of land within this unit. Both corporate and state forest managers ask that deer impacts to forest regeneration be considered when managing deer populations.

### 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.

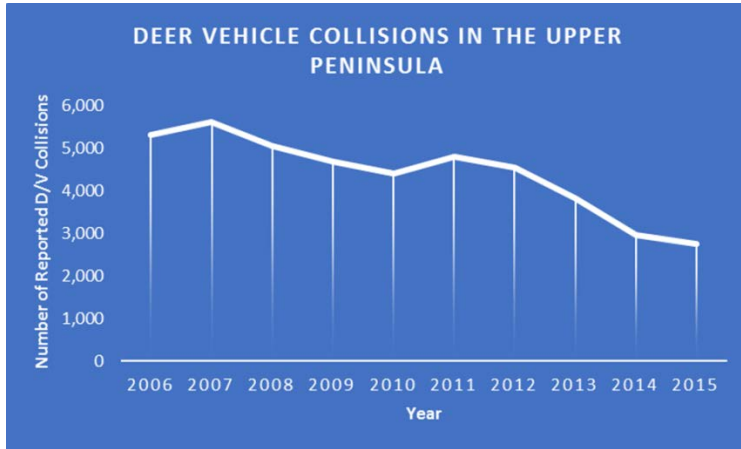


Figure 3. Deer/Vehicle Collisions in the Upper Peninsula Region.

### 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.

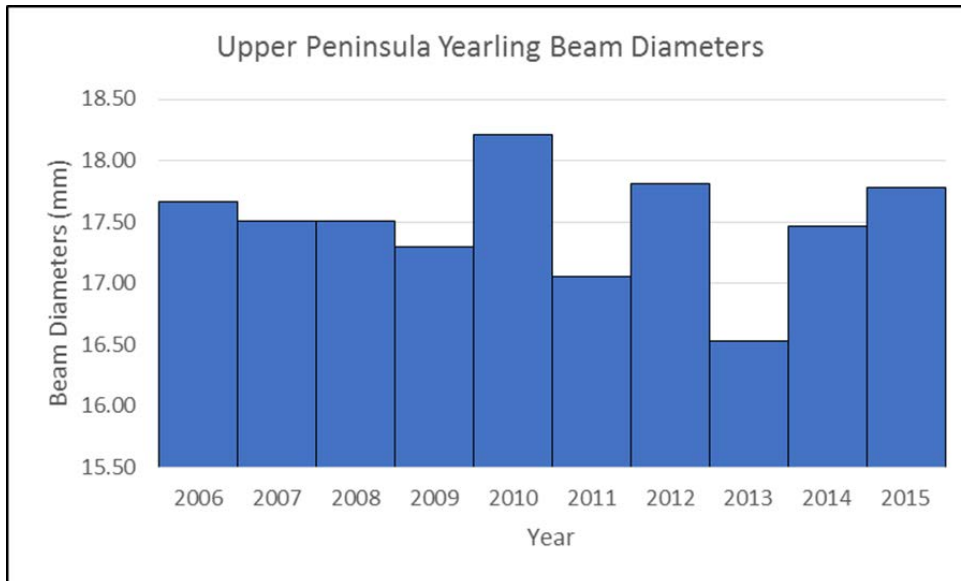


Figure 4. Upper Peninsula Yearling Beam Diameters.

## Deer Management Recommendations

Long-term indicators for DMU 255 describe a deer population that is of medium size compared to other units in the U.P. Deer hunting camps report reasonably good deer sighting rates, buck kill success, and fawn-to-doe ratios relative to other DMU's. The unit produces a moderate buck kill per sq. mile.

This unit experienced a down-turn due to consecutive severe winter conditions, consequently antlerless tags were prohibited for 3 consecutive years. Recent camp reports indicate the unit appears to be experiencing a rebound in deer numbers and the winter of 2016-17 appears to be favorable for survival and fawn recruitment. A modest level of antlerless harvesting has been prescribed in the past, mainly to provide hunters with alternatives to shooting small bucks and to address forestry objectives. 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. We propose to re-open the unit to a conservative level of antlerless tags on public and private lands during the 2017-2019 regulation cycle.

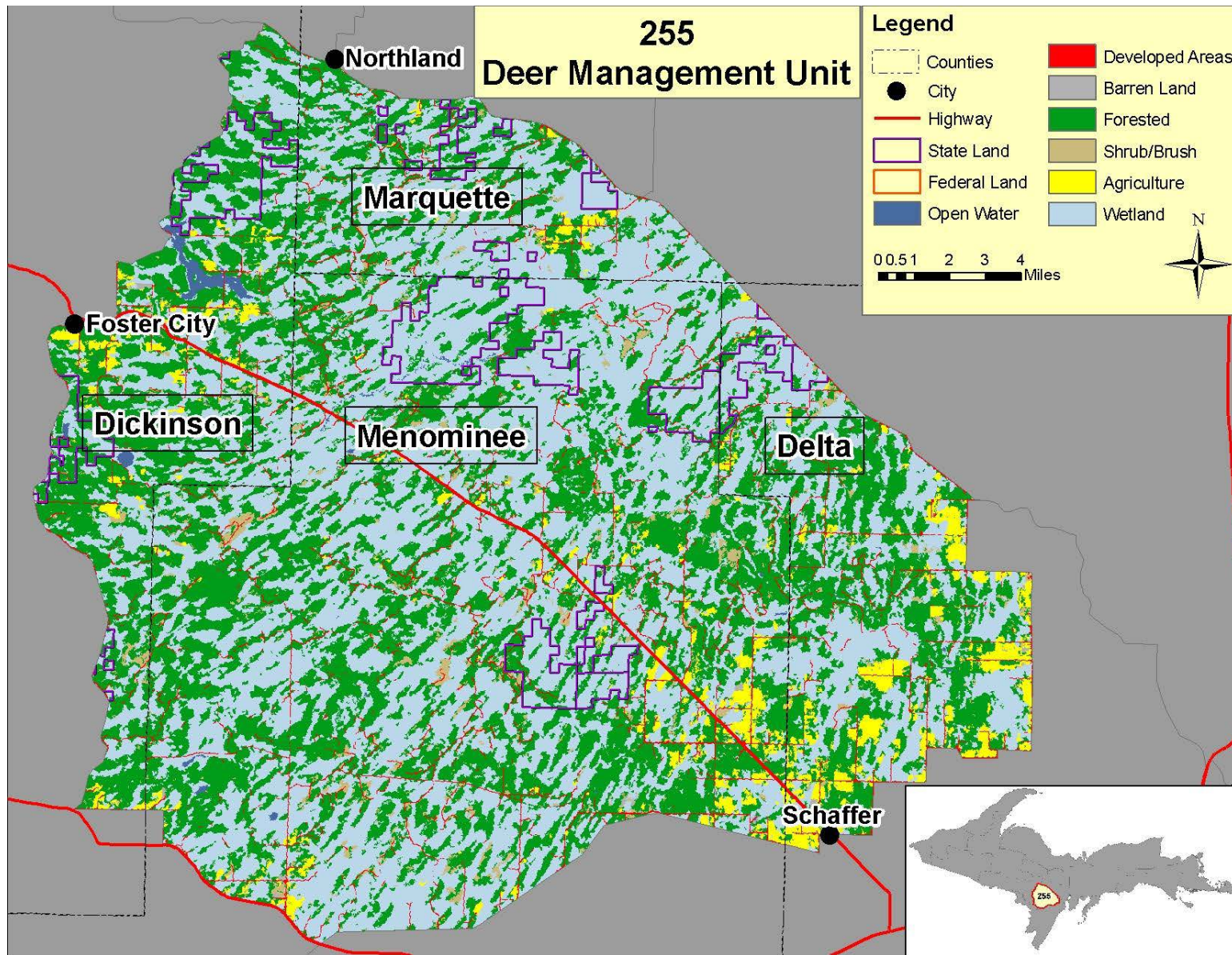


Figure 5. Deer Management Unit 255.