

Deer Management Unit

036

Area Description

DMU 036 is located in north Iron and Dickinson Counties, and includes portions of south Baraga and southwest Marquette Counties. It encompasses 987 sq. miles and has remained unchanged since 2006. Public land comprises 29% (286 sq. miles) of the unit and is almost entirely state owned with a small percentage federal forest along its western edge. Private lands make up 71% of this unit. CFR lands comprise 45% (316 sq. miles) of the private ownership.

Land use and habitat quality for deer

This DMU is comprised primarily of state and corporate forest ownership, with some federal forest land and scattered private parcels. Hunting camps are common. Agricultural lands are primarily located along the southern fringe of this unit. This DMU has a history of boom and bust deer population cycles. Summer range and winter browse resources are largely dependent on the spatial and temporal characteristics of timber harvest activities. The quality and quantity of the deer wintering complexes determine the unit's ability to carry deer through winter.

Typical winter weather, as related to deer

This DMU receives medium to high snowfall and record setting cold winter temperatures compared to the rest of the U.P. During most winters, deer will be confined to deer wintering complexes comprised of a high proportion of conifer cover. Over winter losses of deer can be significant during winters that are long-lasting, snowy and extremely cold. Deer require a series of mild winters to rebound from difficult winters.

Management Guidance

Antlerless harvest has received limited support since deer numbers dropped by more than 80% following the severe winters of 1995 and 1996. The unit was opened and permits issued after a series of mild winters allowed growth in the deer herd, particularly along its southern agricultural fringe. DMAPs have been utilized to address limited agricultural and herbivory issues. The recent severe winters of 2013 and 2014 and moderately difficult winter of 2015 have limited deer survival and significantly reduced fawn recruitment, further reducing the deer population in the unit. The mild winter of 2016 has allowed the deer herd to begin to rebound with significant fawn recruitment observed.

Deer Harvest Analysis

The buck kill per sq. mile in DMU 036 is typically low compared to other units in the region. It has averaged 1.1 bucks killed per sq. mile during the period 2006-15, dropping significantly between 2012 and 2015. Antlerless deer licenses have only been offered once in the past 10 years. A very light take, averaging 0.1 antlerless deer per sq. mile (primarily archery hunters), has occurred since 2006 with essentially zero harvest (youth, independence and liberty harvest) during 2015 and 2016 due to elimination of harvest by archery hunters.

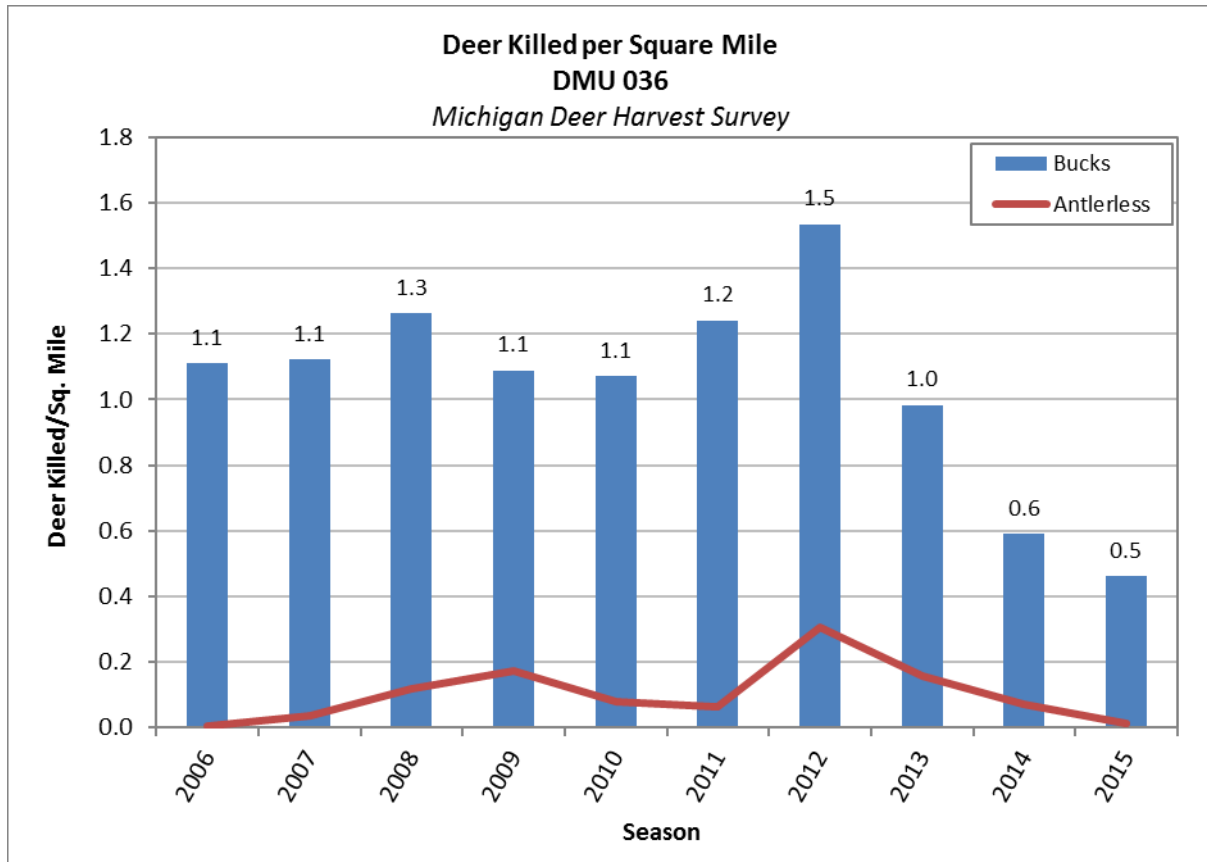


Figure 1: Graph of deer kill per square mile in DMU 036, 2006 – 2015, based on Michigan Deer Harvest Survey results.

Deer sightings and hunter success/satisfaction trends

During the 2014-2016 firearm seasons, DMU 036 participants in the U.P. Deer Camp Survey (average of 28 camps, 119 hunters) observed 1.9 deer per hunter day, and 11% were successful in harvesting a buck. Hunters reported low fawn to doe ratios during that same period (48 fawns per 100 does) compared to southern U.P. units, where winters are typically mild. After the mild winter of 2016 the reported fawn to doe ratio was 70 fawns per 100 does, indicating exceptionally good recruitment. Hunters reported 0.7 bucks killed per sq. mile over this 3-year period, which is one of the lowest harvest rates in the region.

DEER MANAGEMENT UNIT 036											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Camps	26	30	32	31	33	35	32	33	25	32	26
Hunters	125	132	144	137	137	139	140	147	124	139	93
% killing a buck	31%	35%	29%	20%	33%	25%	38%	22%	15%	9%	8%
Deer seen per day	2.5	3.8	3.4	1.5	3.1	3.9	3.3	3	2.6	1.2	1.8
Fawns seen per 100 does	47	53	42	34	61	52	38	36	30	43	70
Does seen per buck	3	2	3	3	2	3	3	3	6	13	3
More deer than last year	11%	52%	3%	3%	27%	36%	22%	6%	4%	0%	35%
Same number deer	35%	31%	45%	19%	46%	49%	56%	25%	8%	13%	35%
Fewer deer	54%	17%	52%	78%	27%	15%	22%	69%	88%	87%	30%
Season good-to-excellent	36%	52%	29%	10%	21%	42%	53%	19%	0%	0%	4%
Season fair-to-poor	64%	48%	71%	90%	79%	58%	47%	81%	100%	100%	96%

Figure 2: Deer Camp Survey data in DMU 036.

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 resulted in low deer populations in the region, including in this DMU.

Agricultural Crop Damage

Deer Damage Shooting Permit and Deer Management Assistance Permit issuance has dropped to 1-2 permits annually, in recent years. DMAPs were issued to address forest regeneration concerns in this DMU. Agricultural crop damage is not a significant issue here.

Forest Regeneration Concerns

Forest managers have expressed concerns about tree regeneration problems at times in this DMU. Negative impacts on forest regeneration have dropped off significantly since the mid-1990s. Areas of

suppressed tree regeneration are typically adjacent to or within deer wintering complexes. Little can be done to alleviate these concerns from a deer population management perspective.

Deer-Vehicle Collisions

Reported deer-vehicle accidents, adjusted for traffic volumes, have declined in the U.P. over the last decade.

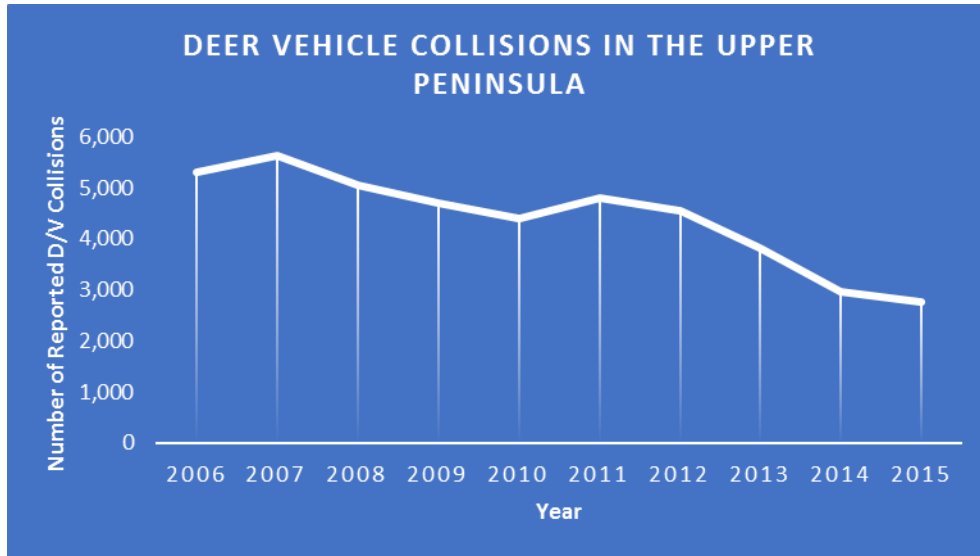


Figure 3: Deer-vehicle collisions in the U.P., 2006 – 2015.

Deer Condition Data

A sample of hunter-harvested deer is examined at check stations each fall. The diameter of antler beams, measured 1 inch above the pedicel, is recorded on 1.5-year-old bucks as an index of physical condition. Antler beam diameters have varied little in the U.P. region during the past decade.

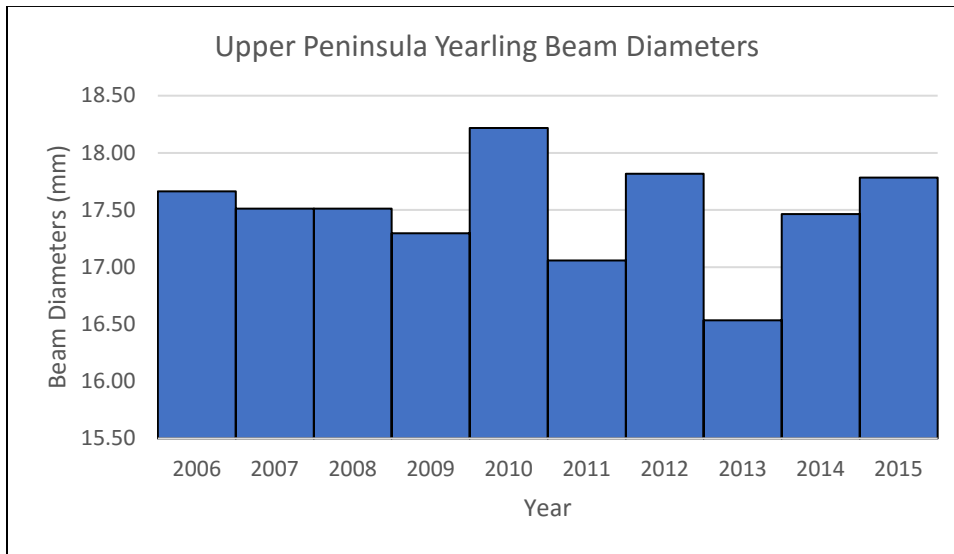


Figure 4: U.P. Yearling Beam Diameters, 2006 – 2015.

Deer Management Recommendations

We recommend DMU 036 remain “closed” to the issuance of antlerless licenses. Deer sighting rates and hunter success remain low in this DMU. Deer numbers in this unit are already medium to low compared to other units in the U.P. region, and there are no large deer impact issues to address. The winters of 2013, 2014 and 2015 were difficult for deer, in this unit. Negative impacts on fawn production and deer survival were evident which has and will continue to influence deer herd recovery for several hunting seasons. The mild winter of 2016 resulted in a significant increase in fawn recruitment and survival of yearlings. Should the winter of 2017 continue to be mild, deer numbers should continue to rebound.

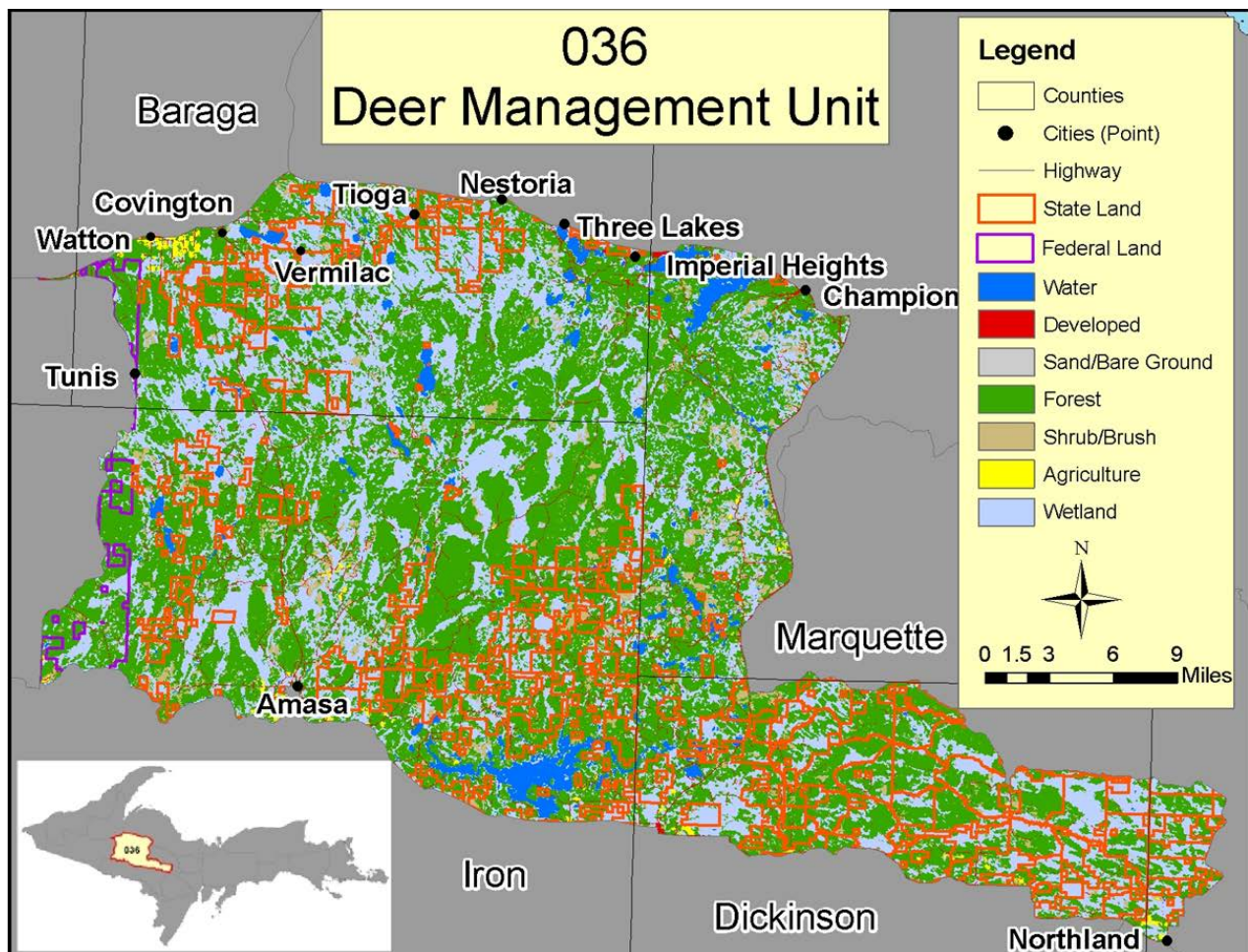


Figure 5: Cover types for DMU 036