

Deer Management Unit 249

Geographic Location:

DMU 249 lies along the Lake Michigan shoreline and is comprised largely of Mackinac and Chippewa counties with a small portion of southeastern Luce County in the northwestern portion of the DMU. The unit was once part of DMU 049 and was split out eight years ago due to differing levels of deer abundance and harvest rates between eastern and western portions of the old DMU. The DMU size has been 859 square miles since the split in 2009. The DMU consists of 27% state land, 51% federal land and 22% private land.

Land use and habitat quality for deer

DMU 249 is dominated by forested types that are typically less productive for deer with only a small amount (~5%) of agricultural land in the unit on the eastern border. Hunting camps are less common in this unit due to the large amount of public ownership which is predominantly US Forest Service.

Typical winter weather, as related to deer

This DMU is in the moderate and high snowfall zone of the eastern Upper Peninsula. Much of the southern portion of the DMU is in deer wintering complexes where deer concentrate from northern regions of the eastern U.P. during winter months. Periodically snowfall levels are substantial enough to reach target depths that indicate severe conditions for wintering deer and during those winters, over-winter mortality of deer can be substantial.

Management Guidance:

The poor quality, unproductive habitat in the unit is an important limitation to increasing deer abundance in DMU 249. It is unlikely that the unit will ever attain sufficient deer numbers to support a routine antlerless harvest. It is possible that changes in landscape patterns or use, or in forest regeneration concerns may afford an opportunity to increase deer abundance in the future. Additionally, an extended period of mild winters may also result in higher deer densities that would allow for a limited antlerless harvest opportunity. However, the recent three consecutive severe winters (2012-2013, 2013-2014 and 2014-2015) had a substantial enough negative impact on deer abundance to warrant changing hunting regulations to not allow antlerless harvest during archery season in the U.P. This change has been in effect for the last two hunting seasons.

Deer Harvest Analysis:

DMU 249 typically has a very low buck kill per square mile (0.90 bucks/sq. mile, 3 year average) with two thirds of U.P. DMU's having a higher buck kill per sq. mile. This unit has been impacted by recent winter severity and therefore, with two of the last three winters being severe, buck kill has declined. In addition, antlerless tags have not been available in this unit since the split in 2009 due to the impact of several severe winters (2007-2008, 2008-2009, 2012-2013, 2013-2014, and 2014-2015) on deer abundance. Hence, previous antlerless harvest in the unit has been very minimal due primarily to archery season hunters.

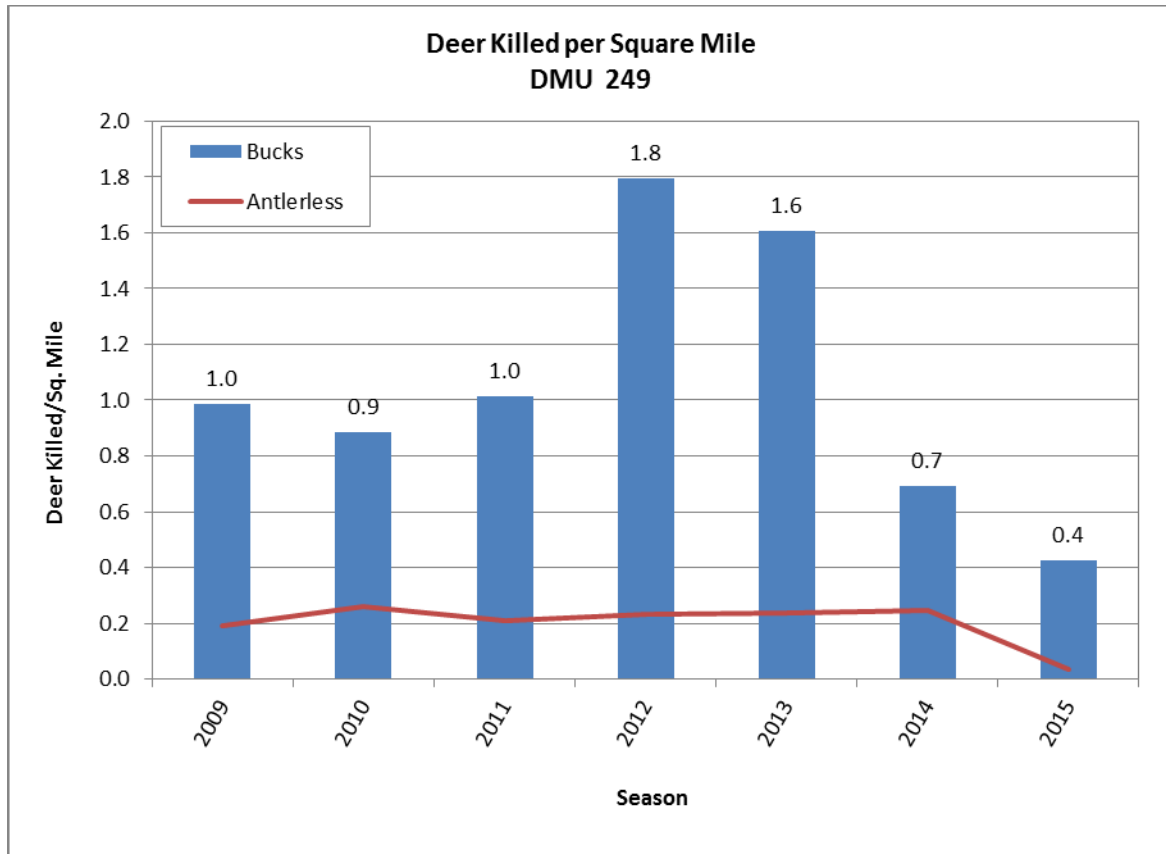


Figure 1. Deer Killed/ Square Mile in DMU 249.

Deer sightings and hunter success/satisfaction trends

DMU 249 has the second lowest deer sighting rate in the U.P. according to camp survey data (firearm season data only) and routinely holds this spot compared to other units in the region. Buck hunter success is also typically quite low (average of 18% since 2009) and the unit routinely ranks among the lowest of all U.P. DMU's in this statistic. Camp survey data indicated a relatively high buck hunter success (26%) for this unit in 2016, however, hunters in the DMU have demonstrated a reduced willingness to pass on harvesting bucks (due to very low sighting rates) and consequently, they harvest a relatively high percentage of bucks that they observe compared to other DMU's in the region. As a result hunter satisfaction in the unit is dismal with the large majority (75%) of hunters rating the firearm deer season as fair to poor both in 2016 and as a long term trend. The fawn to doe ratio in the unit averages 53 fawns per 100 does (since 2009) which is fairly average in the region.

	2009	2010	2011	2012	2013	2014	2015	2016
Camps	10	14	17	18	16	20	22	21
Hunters	68	72	73	86	85	65	76	81
% Killing a buck	10%	10%	22%	22%	20%	20%	12%	26%
Deer seen per day	0.5	0.7	1.6	1.6	0.8	1.3	0.4	1
Fawns seen per 100 does	47	80	65	55	22	45	68	44
Does seen per buck	3	2	3	3	4	5	5	4
More deer than last year	0%	14%	29%	44%	0%	7%	5%	37%
Same number of deer	0%	15%	30%	50%	25%	20%	0%	47%
Fewer deer than last year	100%	71%	41%	6%	75%	73%	95%	16%
Season good-to-excellent	0%	7%	12%	28%	13%	12%	0%	25%
Season fair-to-poor	100%	9%	88%	72%	88%	88%	100%	75%

Figure 2. Deer Camp Survey Data in DMU 249.

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

Landowner complaints of crop damage and requests for deer management assistance permits are non-existent in this unit due to the relatively low deer densities and near lack of agricultural land in the unit.

Forest Regeneration Concerns

Forest regeneration issues in this DMU are minimal and have not been a reported concern from landowners. DNR FRD forest managers and USFS staff did not indicate any concerns with forest regeneration issues.

Deer-Vehicle Collisions

Reported deer-vehicle accidents, adjusted for traffic volume, have declined in the U.P. during the past decade.

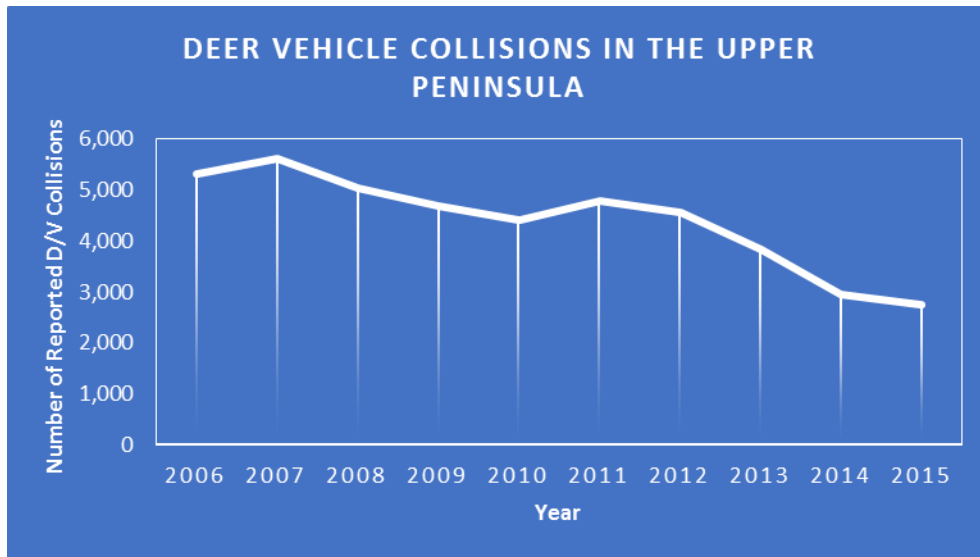


Figure 3. Deer/Vehicle Collisions in the Upper Peninsula Region.

Deer Condition Data

A sample of hunter harvested deer is examined at check stations each fall. The diameter of antler beams, measured 1 inch above the pedicle, is measured on 1.5 year old bucks as a potential index of condition. Antler beam diameters have varied little in the U.P. region during the past decade and therefore their use as a statistic in assessing deer populations in the U.P. is of minimal value.

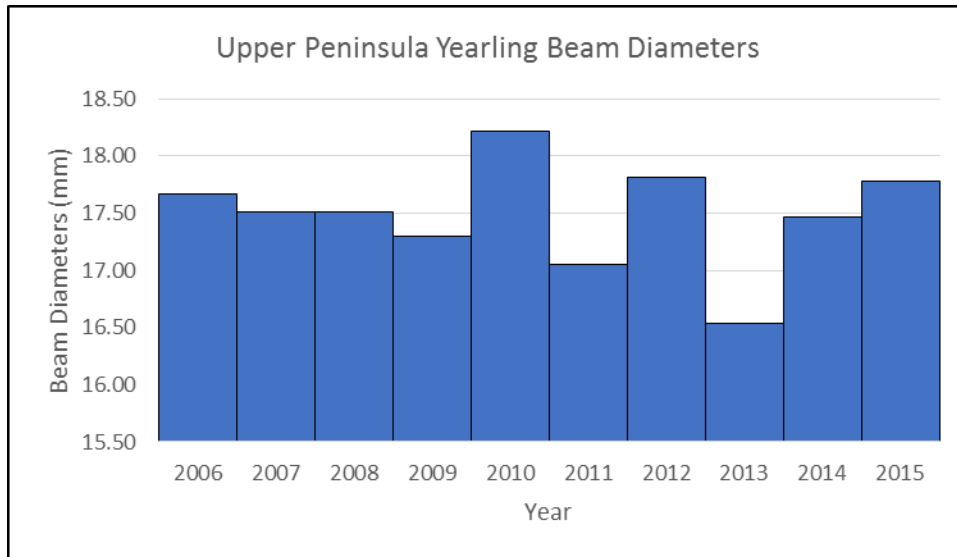


Figure 4. Upper Peninsula Yearling Beam Diameters.

Deer Management Recommendations

We recommend that DMU 249 be closed for the issuance of antlerless licenses for the next 3 year regulation cycle. Population indicators such as buck kill per square mile and deer sighting rates are among the lowest for DMU's in the U.P. region. Due to hunters being less selective, the unit had a higher buck harvest success than usual but hunter dissatisfaction is still very high and historically has been. There is neither a crop damage nor widespread forest regeneration issue in the DMU that warrants the issuance of antlerless licenses and other division staffs support this recommendation. Lastly, severe winters in two of the last three years have had, and will have, a drastic impact on deer abundance, fawn to doe ratios, buck harvest success, and deer sighting rates in the unit for several years into the future. In addition, the change in hunting regulations to not allow antlerless harvest during archery season in the U.P. will continue for the next regulation cycle. Lastly, sportsmen's groups in the area do not support antlerless harvest in this unit.

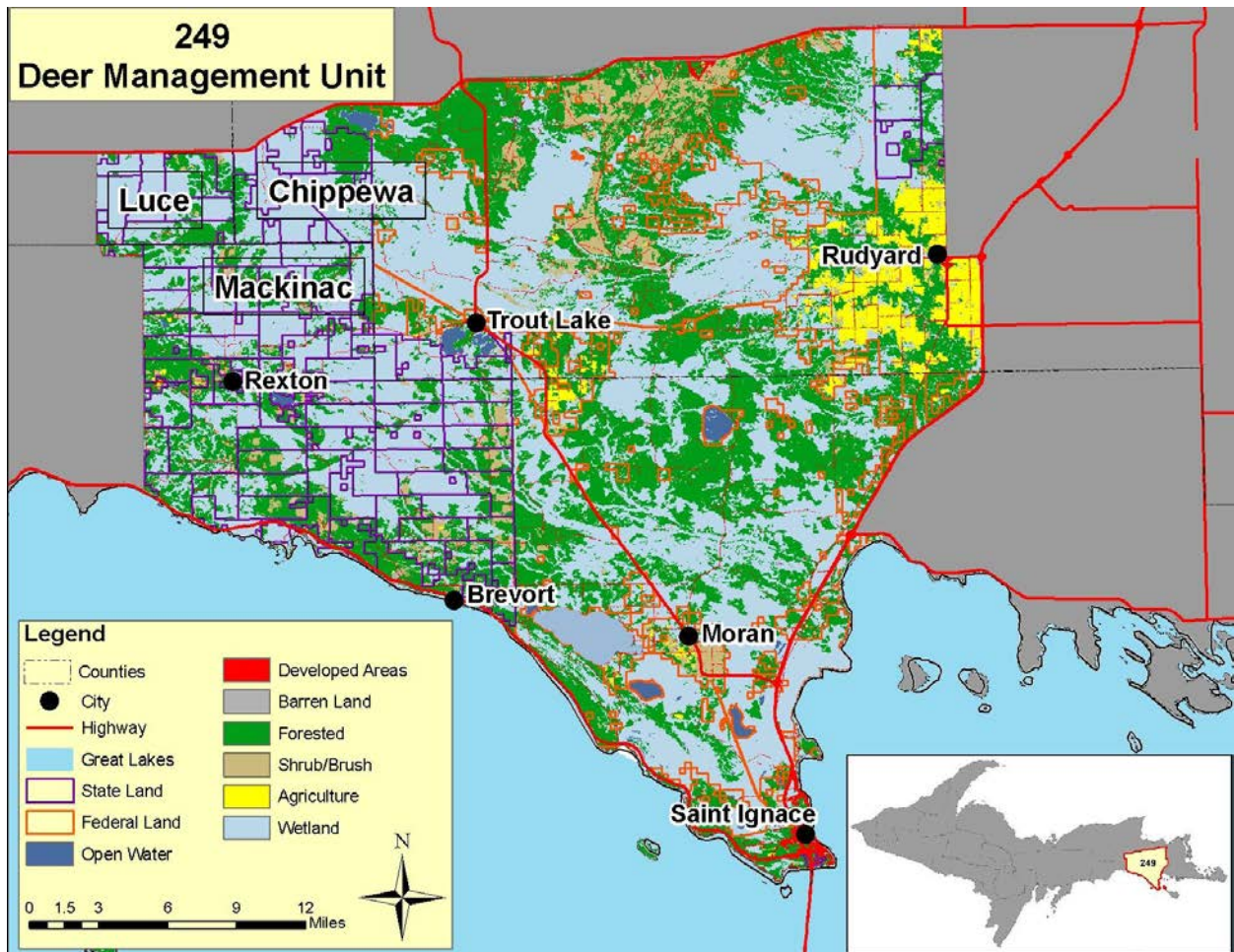


Figure 5. Deer Management Unit 249.