

# Deer Management Unit 055

## Area Description

DMU 055 is located in southern Menominee and southwestern Delta counties and has totaled 917 sq. miles since 2003. Eighty-three percent of the unit is privately-owned land. State Forest land comprises about 17% (159 sq. miles) of the unit. Significant blocks of state forest land are located on both the west and east sides of this unit, but the west side has much better habitat for deer due to the forest types present.

## Land use and habitat quality for deer

DMU 055 encompasses a major “farm belt” in the south-central U.P. The interspersed farm fields and forest cover provides excellent habitat for deer in the central portion of the unit (see cover type map at the end of this document). The presence of oak (acorns) along the west boundary of DMU 055 raises habitat quality for deer in that location relative to state forest land on the east side of the unit which tends to be more lowland forest.

## 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. Compared to areas influenced by Lake Superior, which may receive 200-300 inches of snow annually, DMU 055 experiences a shorter period of snow cover with lower weekly depths. Consequently, deer enjoy higher mobility in their search for food resulting in relatively high over-winter survival and fawn recruitment most years.

## Management Guidance

Provision of antlerless harvest opportunity is normally desirable in this unit to address agricultural crop damage and forest regeneration concerns attributed to deer. Antlerless harvesting also provides recreational opportunity and an alternative for hunters who wish to pass up young bucks while still procuring venison.

## Deer Harvest Analysis

DMU 055 consistently records the U.P. region’s highest or near-highest buck kill per sq. mile. The 10 year average kill of 5.6 bucks per sq. mile signifies a sizeable deer population and outstanding buck harvest opportunity compared to most other locations in the U.P.-- even compared to the state as a whole. Buck kill per sq. mile in recent years (2013-2015) dropped below 5.0 following consecutive winters of above-average snow depths. Antlerless deer harvest opportunity has historically been liberal; however, antlerless license quotas were decreased in recent years (2014-2016) concurrent with lower deer population indices following consecutive harsh winters. Private land quotas were reduced by approximately half allowing hunters to address agricultural crop damage concerns, while also recognizing hunters have begun to express concern over lower deer numbers in some localities. Public land antlerless license quotas were not available during 2014-2016.

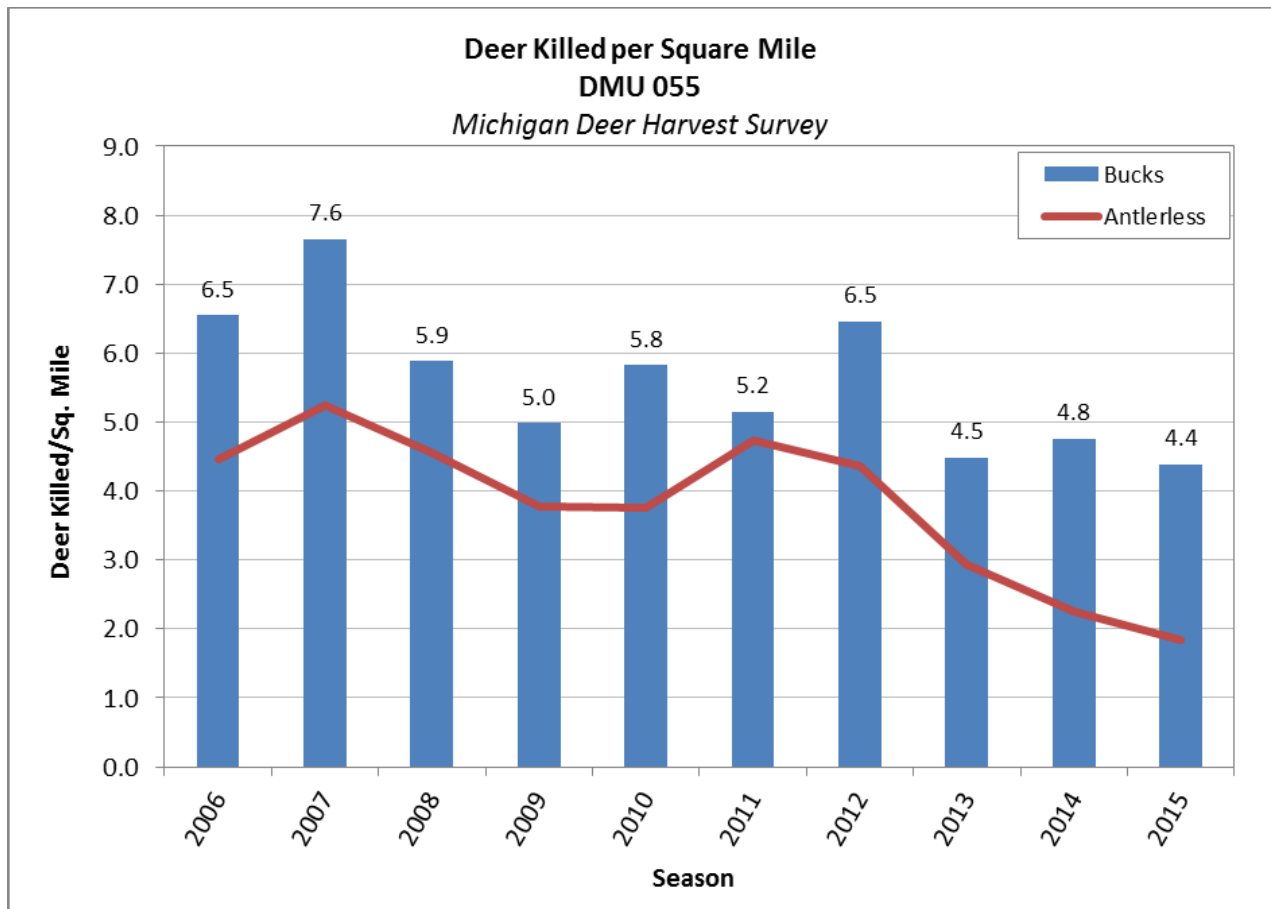


Figure 1. Deer kill success rate in DMU 055 within the Upper Peninsula Region.

### Deer sightings and hunter success/satisfaction trends

DMU 055 has high participation in the U.P. Deer Camp Survey, a cooperative effort by hunters to track their deer sightings, harvest, and impressions during the firearm season. Deer numbers clearly declined in this unit (and most other U.P. units) following the harsh winters of 2012-13 and 2013-14. However, during the past 15 years, camp cooperators in DMU 055 have regularly reported observing 3-4 deer per day, and about 30% of hunters have been successful in taking a buck. These are among the highest deer observation and buck kill success rates reported in the U.P. region. Likewise, the fawn-to-doe ratio observed by hunters in this DMU is typically among the best in the entire survey, as is the season rating reported by hunters.

DEER MANAGEMENT UNIT 055											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Camps	58	55	57	54	56	57	54	52	46	52	52
Hunters	307	288	286	281	273	289	284	262	240	249	241
% killing a buck	38%	37%	34%	28%	31%	29%	40%	34%	30%	29%	29%
Deer seen per day	3.8	3.9	3.6	2.8	3.4	3.5	4.5	3.2	3	2.6	3.6
Fawns seen per 100 does	63	60	49	48	63	64	61	59	50	62	67
Does seen per buck	3	3	2	2	2	2	3	4	3	2	3
More deer than last year	27%	22%	2%	4%	27%	27%	29%	6%	2%	8%	39%
Same number deer	37%	41%	28%	7%	31%	39%	44%	14%	33%	25%	30%
Fewer deer	36%	37%	70%	89%	42%	34%	27%	80%	65%	67%	31%
Season good-to-excellent	48%	48%	30%	17%	33%	41%	52%	24%	20%	23%	37%
Season fair-to-poor	52%	52%	70%	83%	67%	59%	48%	76%	80%	77%	63%

Table 1. Deer Camp Survey data in DMU 055 within the Upper Peninsula Region.

## 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 slightly lowered deer populations in the region, including in this DMU.

## Agricultural Crop Damage

Agricultural crop damage is a significant deer management issue in this unit due to the large number of farming operations present and the sizeable deer population. In recent years (2014-2016) about 50 farms requested Deer Damage Shooting Permits and harvested around 500 deer outside of the regular hunting seasons. Impacts of crop damage are related to deer density; consequently farmers tend to harvest less deer on crop damage permits during periods when deer

densities are locally lower.

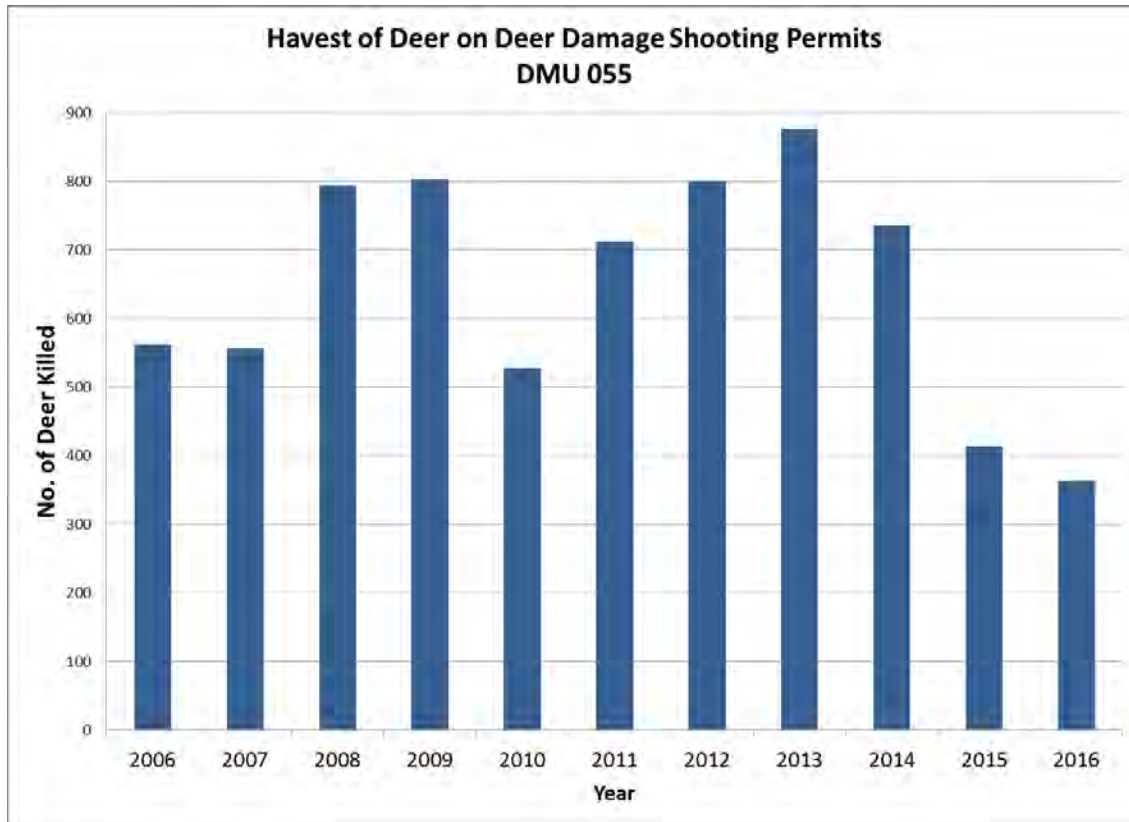


Figure 2. Harvest of Deer on Deer Damage Shooting Permits in DMU 055

### Forest Regeneration Concerns

Forestry professionals within the DNR's Forest Resources Division have at times expressed concern over tree regeneration difficulties in this DMU. The tree species involved include northern hardwoods, oak, hemlock, 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.

### 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.

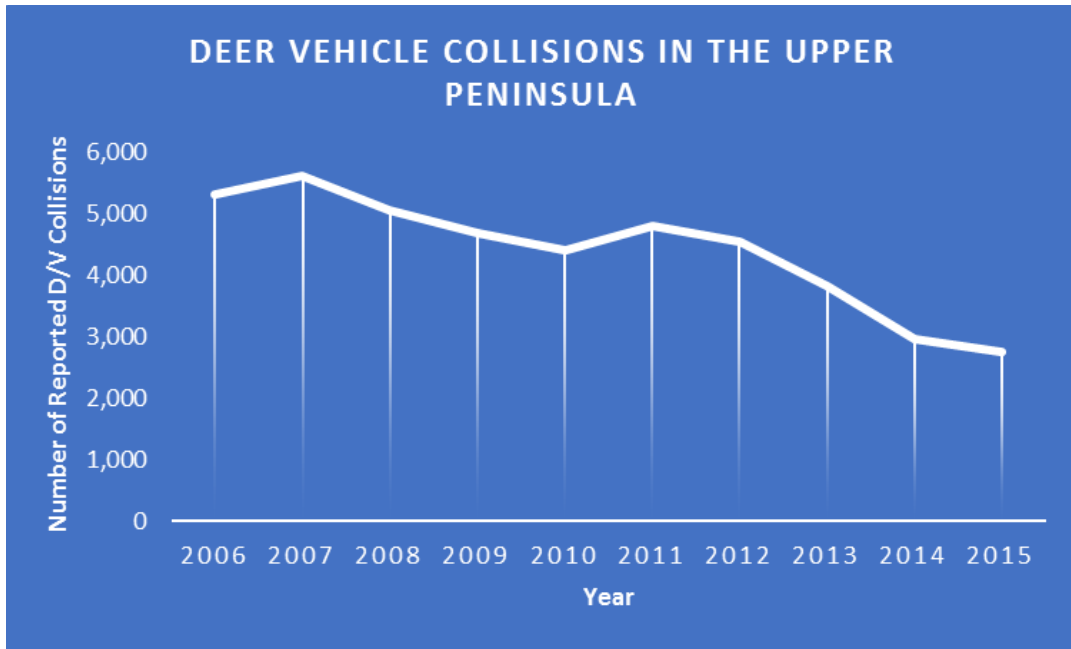


Figure 3. Deer vehicle collisions in the Upper Peninsula Region.

### 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.

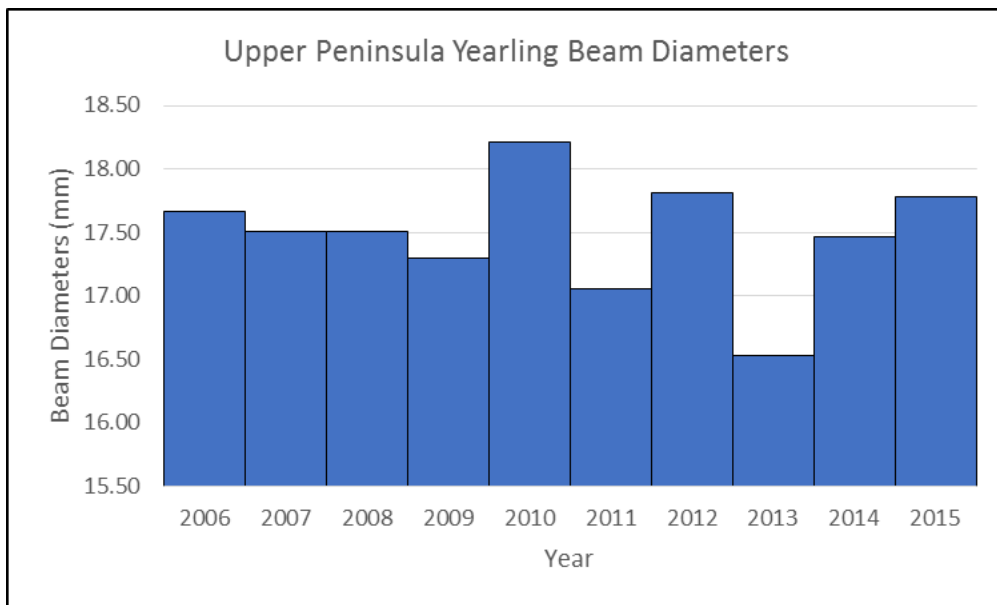


Figure 4. Yearling beam diameters in the Upper Peninsula Region.

## Deer Management Recommendations

The deer population in DMU 055 is typically among the highest in the U.P. due to its southern geographic location and the interspersed agricultural land. Winters are relatively mild and habitat conditions for deer in much of the unit are quite good. 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. We propose to re-open the unit to a conservative number of Public Land Antlerless Licenses to afford hunter opportunity on state forest lands, some of which is quite productive for deer.

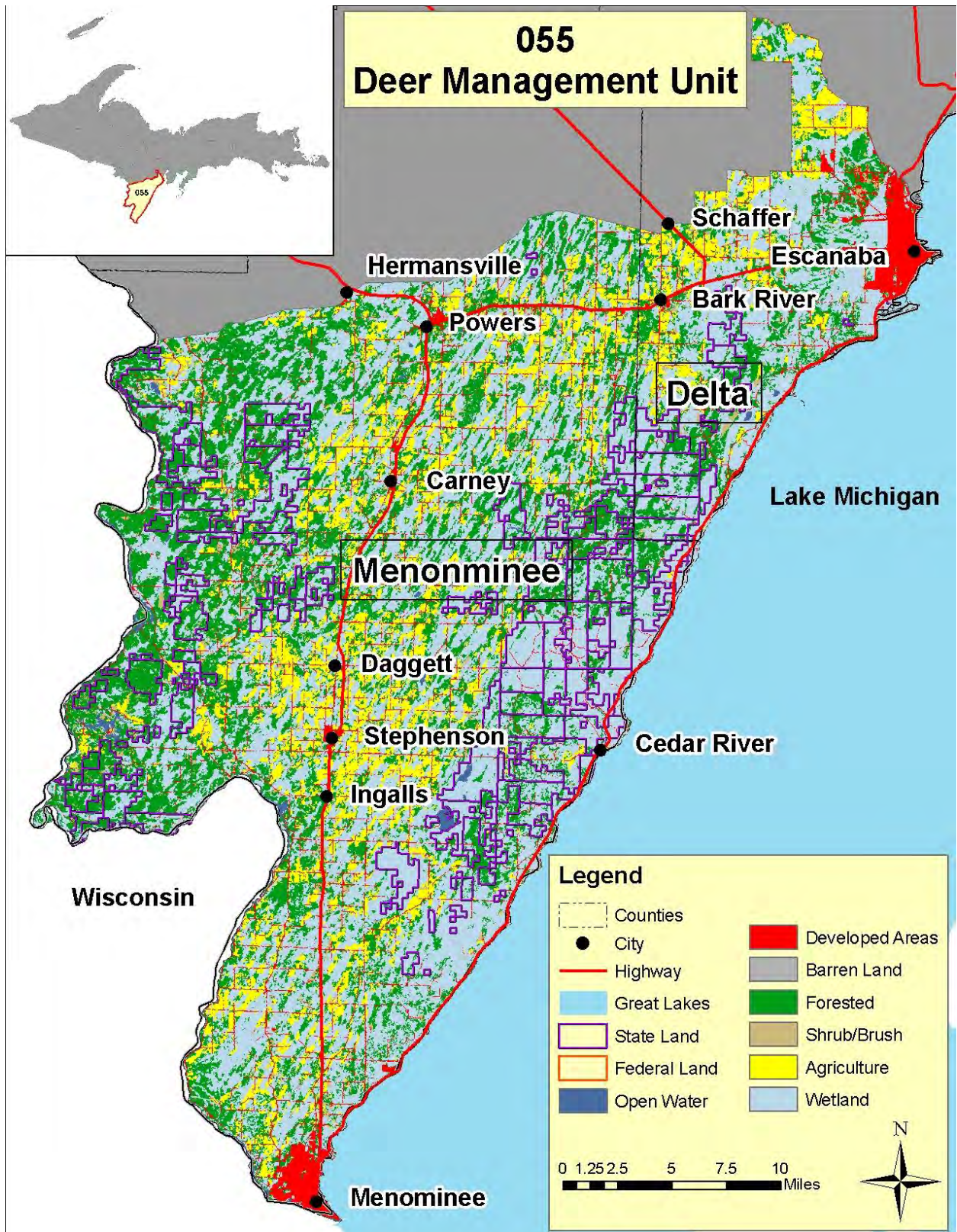


Figure 5. Cover type map of DMU 055 in the Upper Peninsula Region.