Deer Management Unit 031

Area Description

Deer Management Unit (DMU) 031 is 818 sq. miles in size and is primarily located in central Baraga, southeastern Houghton and Ontonagon Counties. While primarily an interior unit, deer in this DMU are still heavily influenced by Lake Superior weather. This unit is roughly equally divided between privately owned and public ownership.

Land use and habitat quality for deer

Industrial, private, and public land forest management emphasis is primarily focused on northern hardwood production in northern Houghton and Baraga Counties while aspen management is more important further west. Agricultural activity is centered near rural communities such as Bruce crossing and Baraga. Deer wintering habitat particularly north and south of Kenton has been reduced by as much as 75% since 1978 in this DMU. However, the wintering area southwest of L'anse, known as the Menge Creek area has fared much better over the years.

Typical winter weather, as related to deer

Winter weather is on the high side of moderate compared to other portions of the U.P. This area averages roughly 200-250 inches of snowfall each year with more falling in the northern portions of the DMU which is highly influenced by Lake Superior. The interior portions of this DMU can be extremely cold in the winter because it is located away from the warming influence of the Great Lakes. However areas near the shore along Keweenaw Bay tend to have less snow and moderate temperatures. Consequently, fawn recruitment and over-winter survival tends to be moderate in this DMU depending on winter severity.

Management Guidance

Deer densities across DMU 031 are lower in the continuous forest areas west and south in the unit, deer densities tend to be higher in the agricultural area in the eastern part of the DMU. However deer in the unit as a whole have not recovered from two consecutive bad winters in 2008 and 2009 and then again in 2013 and 2014. Because of these very low deer densities antlerless permits have not been available in DMU 031 since 2012. There is some agricultural activity in this area and the level of deer crop damage is moderate in those areas. Outside of the deer wintering complexes deer browse has not impacted tree regeneration.

Deer population indices have generally been low during this period across the region, although some indicators are suggesting numbers are starting to rebound. Deer damage complaints are low and state forest and commercial managers have expressed little concern about forest regeneration outside of deer wintering areas. There has been little support for antlerless harvest opportunities in recent years by local sportsmen's groups. In fact, many groups seemed to favor elimination of the ability to harvest an antlerless deer during archery season when that was implemented in 2015.

Deer Harvest Analysis

Buck harvest per square mile in DMU 031 has averaged 1.5 bucks from 2006-2015, and was lower during the 2014 and 2015 hunting seasons of 1.0 bucks per square mile (Fig.1). This harvest density is one of the lowest in the U.P. The average buck kill per square mile from 2013 – 2015 across the U.P. region is 1.5 per square mile. Relatively low buck kill rates have been experienced since 2009 when two consecutive harsh winters in 2008 and 2009 impacted the deer herd. Buck kill per square mile reached lows in 2014 and 2015 after another round of consecutive harsh winters with above-average snow depths from 2013 – 2015; the population has not recovered to pre-2009 densities.

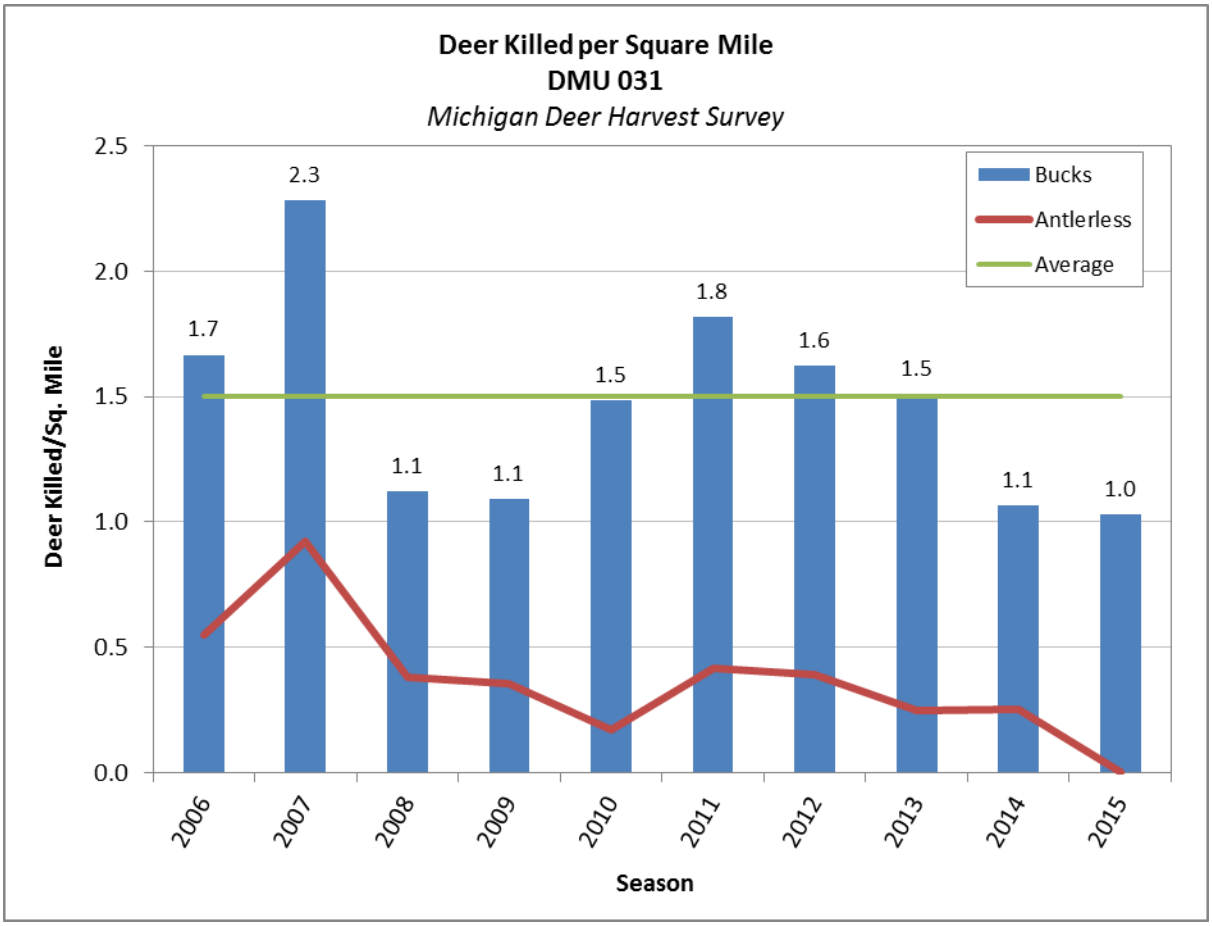

Figure 1: Graph of deer kill per square mile in DMU 031, 2006 – 2015, based on Michigan Deer Harvest Survey results.

Deer sightings and hunter success/satisfaction trends

Participation in the U.P. Camp Survey has remained relatively low in DMU 031 over the past few seasons (Table 1). The number of deer seen by hunters per day in DMU 031 was 2.2 deer in 2016 which is up from the previous year but below the 10 year average for DMU 031 of 3.7 deer/ day which is higher than the U.P. wide average for the same time period (2.2 deer/ day), indicating that this DMU has good habitat to support higher numbers of deer. The number of hunters that were successful at killing a buck in DMU 031 during the 2016 season was below average for both the Mail Survey and the Deer Camp

survey although the rates differ between the two surveys the declining trend is the same.

DEER MANAGEMENT UNIT 031											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Camps	7	8	7	12	6	16	16	13	12	14	14
Hunters	35	21	30	63	29	65	65	71	47	71	54
% killing a buck	46%	33%	27%	21%	24%	45%	32%	30%	28%	21%	24%
Deer seen per day	6.3	5.9	4.3	1.4	5	6	4.3	2.2	4.8	1.6	2.2
Fawns seen per 100 does	54	39	48	33	69	49	54	46	37	53	71
Does seen per buck	6	5	3	3	4	4	4	3	5	3	5
More deer than last year	43%	37%	17%	0%	50%	71%	38%	8%	20%	25%	31%
Same number deer	29%	63%	33%	0%	17%	22%	31%	8%	0%	25%	38%
Fewer deer	28%	0%	50%	100%	33%	7%	31%	84%	80%	50%	31%
Season good-to-excellent	57%	50%	50%	0%	33%	79%	40%	0%	8%	16%	15%
Season fair-to-poor	43%	50%	50%	100%	67%	21%	60%	100%	92%	84%	85%

Figure 2: Deer Camp Survey data in DMU 031 from 2006-2015.

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.

The Predator-Prey research 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 DMU 031.

Agricultural Crop Damage

Reported agricultural damage resulting from deer has been moderate, in DMU 031. The number of Deer Management Assistance Permits issued and used in 2014 and 2015 is down significantly from years prior.

Forest Regeneration Concerns

No issues have been raised by DNR Forest Resources Division or other agencies.

Deer-Vehicle Collisions

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

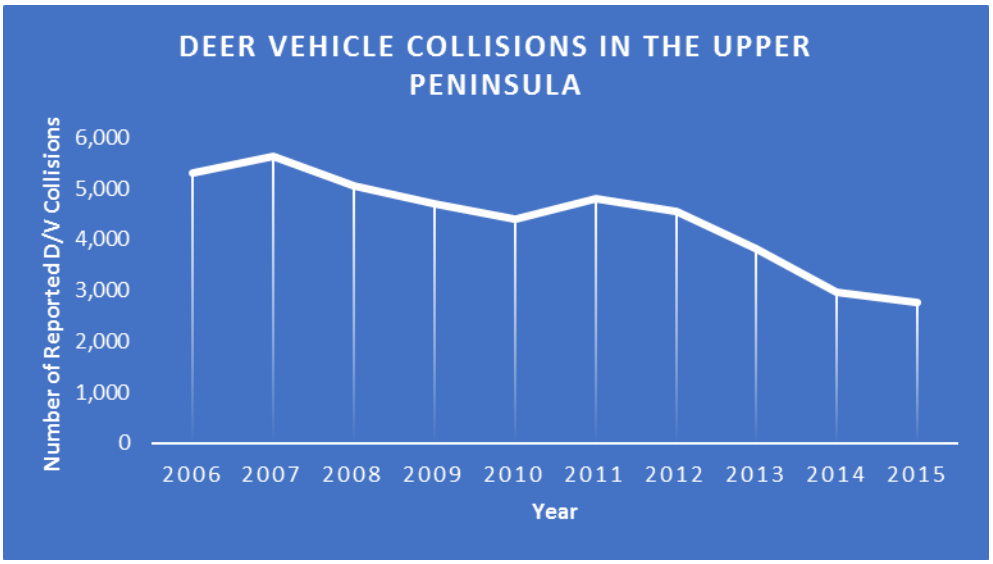

Figure 3: Deer-vehicle collisions in the U.P., 2006 – 2015.

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 measured 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.

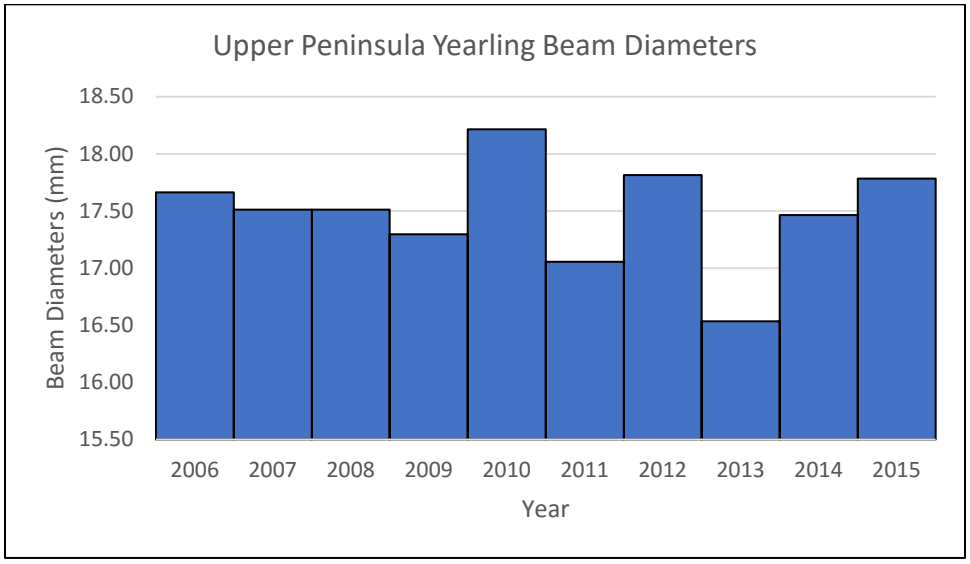

Figure 4: U.P. Yearling Beam Diameters, 2006 – 2015.

Deer Management Recommendations

We recommend DMU 031 be “closed” for the issuance of antlerless licenses. Deer population indicators, such as buck kill per square mile and deer observed per hunter day are very low. There is little support

for antlerless licenses from sportsmen's groups in the area. We anticipate that the impacts of the winters of 2013 – 2015 will continue to be seen in deer seasons over the next few years, and any increase in the herd will be influenced by current and future winters.

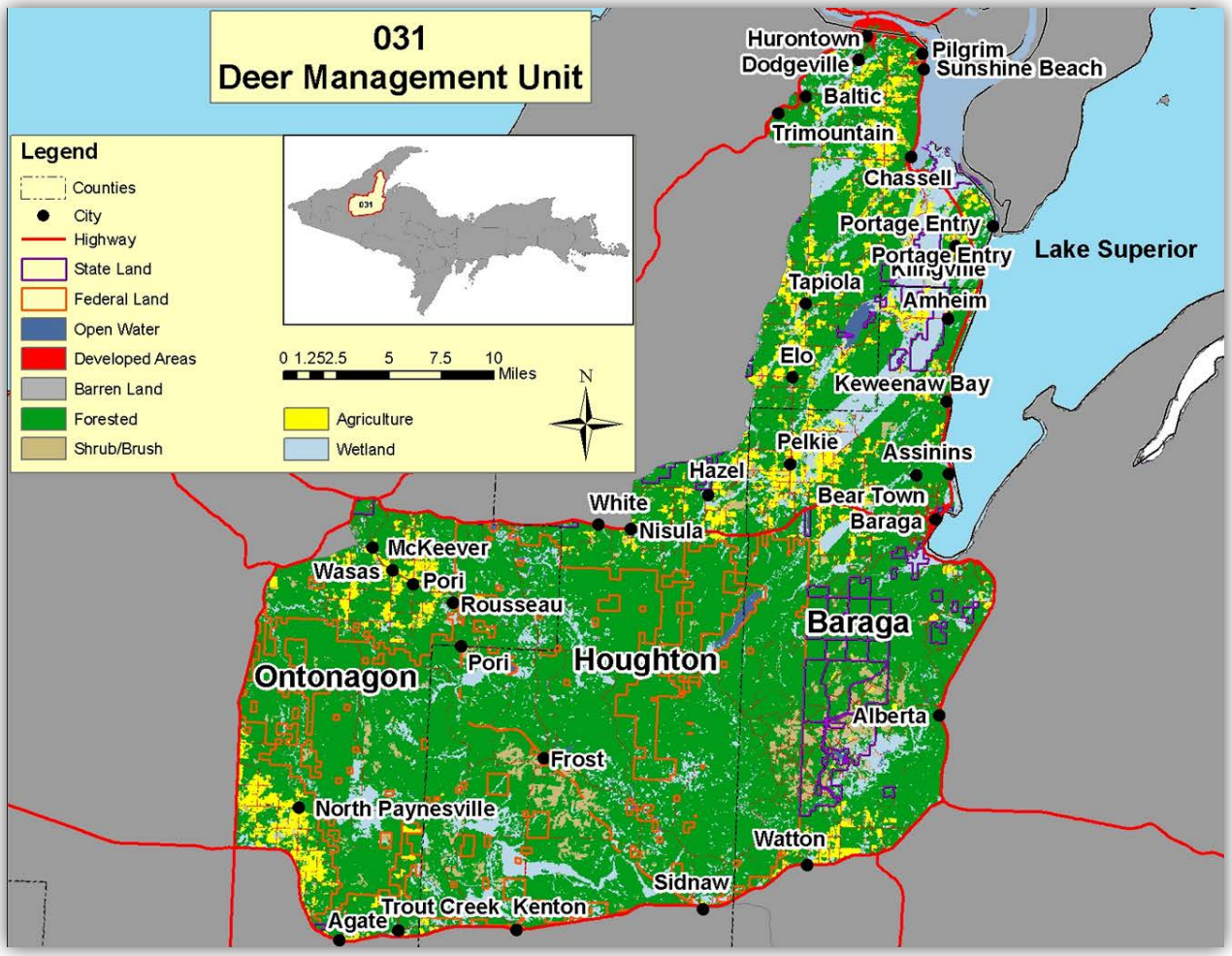

Figure 5: Cover types for DMU 031.