

# Status Report: Deer Population Trends and Impacts in County Parks

February 2014

## I. INTRODUCTION

Deer are a normal part of the forests and fields of Michigan, but their numbers have grown to unnaturally high levels due to lack of predators. Scientists have shown that habitats and deer are most healthy when deer density ranges between 15-20 deer per square mile.<sup>1</sup> Deer are herbivores, and when they exceed this level the plants they depend on begin to disappear. Diverse habitats are resilient. Deer, a successful generalist, pose a direct threat to the diversity and sustainability of wildlife habitat within WCPARC natural areas.

## II. QUICK FACTS

*The deer population in Washtenaw County is elevated and increasing* - The proposed DNR goal for Washtenaw County is 28 deer per square mile. Washtenaw County as a whole is currently 25% over the goal at 35 deer per square mile. The deer population in Washtenaw County has been steadily increasing over the last 15 years.<sup>2</sup> Washtenaw County seems to be a magnet for deer due to a higher percentage of forested land than many of the adjacent Counties.

*The deer population in Leonard Preserve (Manchester Twp) is significantly elevated* - In 2009, an aerial survey conducted at the Leonard Preserve counted 248 deer/sq mi. A second survey in 2013 found a somewhat decreased but still elevated deer population at 76 deer/sq mi. Leonard Preserve contains legally protected species and critically imperiled habitats, including prairie and oak savanna.

*A second deer survey site also showed an elevated deer population* - In 2013, an aerial survey of Goodrich/Horner Woods/Arbor Vistas/Marshall Woods showed 64 deer/sq mi.

*Deer exclosures at Leonard Preserve suggest significant impact* - Four deer can produce 160 deer in six seasons.<sup>3</sup> An average deer can eat 1-1.5 tons of food per year.<sup>4</sup> Deer prefer to eat wildflowers, acorns, mushrooms and tree buds - grasses comprise a very small part of the white-tail deer diet. The prairie deer exclosure shows the difference after 3 growing seasons.



**Inside the Prairie Deer Exclosure (2013)**



**Outside the Prairie Deer Exclosure (2013)**

*Current impacts of high deer populations to residents* – Deer damage is a major issue for farmers in Washtenaw County. Washtenaw County is within the top ten counties in the state for the number of permits issued to farmers to control crop damage.<sup>8</sup> There were approximately 925 Deer-Car crashes in Washtenaw County in 2012.<sup>6</sup> There is currently no evidence of Chronic Wasting Disease or Bovine Tuberculosis in the Southern Lower Peninsula.

*Michigan residents are generally supportive of hunting* - Michigan has more hunters than any other state save Texas. Nearly one million Michigan residents go to the woods and fields every fall to hunt and otherwise experience our abundance of wildlife and open lands.

*Hunting is currently the only way to control deer populations* – The Wildlife Division of the Michigan DNR is opposed to trapping, moving and releasing animals into the wild. In other nearby parks they have refused relocation requests. While there may be a perception that relocation is more humane than hunting, published mortality rates show that 25%-85% of relocated deer die within a year. This is thought to be due to stress myopathy, a condition related to stress from handling which results in muscular degeneration. Deer management through contraception remains experimental. After four decades of research, effective anti-fertility programs for reducing populations of free ranging wildlife simply do not exist, and the MDNR does not approve them for use in Michigan.

### **III. SUMMARY OF OTHER ORGANIZATIONS OFFERING HUNTING OPPORTUNITIES (in the Southern Lower Peninsula)<sup>9</sup>**

**Genesee County Parks & Recreation Commission** - Genesee County Parks Commission agreed unanimously in September 2008 to start training staff members to operate a managed archery hunt for selected parks. Prior to going forward, they commissioned a Michigan Natural Features Inventory environmental study to confirm that deer were causing heavy damage to the trees, seedlings, wildflowers, shrubs and soil. They also conducted aerial counts in 2007, 2008 & 2009. Two hunts have been conducted in 2010 and 2011. Local hunters applied, were given a proficiency test, and hunted under their own licenses. The hunt is approved by the Commissioners on an annual basis.

**Oakland County Parks** - Oakland County Parks has conducted deer hunts since 1990. Members of the public are allowed to bow hunt during the regular season, following DNR rules. They establish safety zones of 450' from any occupied structure and define shooting lanes. They install safety zone signs. Hunters are required to tag their stands, and have staff designated to do stand checks and bait checks. Hikers and hunters share the park during the hunt. In some parks they allow muzzle loaders and shot guns, and in these instances the parks are closed completely to the public.

**Huron Clinton Metropolitan Authority** – Deer management through hunting has been ongoing since 1999. Volunteers from Safari Club International provide assistance in organizing the hunts, and the deer were distributed by Sportsmen Against Hunger to the Southeast Michigan Food Bank. All costs to process deer are donated. Hunts were conducted by

Metropark rangers trained as sharpshooters as well as local volunteer hunters. 2010 was the first year they have observed Michigan Lily and Trout Lily in bloom since 1993.

***The Nature Conservancy of Michigan*** - TNC allows bow hunting during the regular season on seven preserves in the Lower Peninsula with a fee of \$70.00/adults and \$60.00/minor per season. The number of hunters allowed follows state guidelines of 20 acres/hunter. Hunters are selected from a pool of applicants with priority being given to TNC members and neighbors of the preserve. Most Lower Peninsula preserves are currently at capacity. TNC has a stringent set of rules that are above and beyond the state, local and federal laws.

***Land Conservancy of West Michigan*** - At this time, hunting by permit is only used on one of the Land Conservancy's nature preserves as a management tool to protect the natural ecosystem of the preserve. The majority of our preserves are not suited for hunting because they are surrounded by residential development, they are small in size, and/or they are used by educational and recreational groups during the hunting season. Please contact our Stewardship Coordinator for more information.

***Chippewa Nature Center, Midland, MI*** - October 1 through January 1, Chippewa Nature Center will again be harvesting deer within its property to help maintain a balanced deer population. This deer harvest is biologically determined, and is not a hunt open to the public. The harvest team has been carefully selected and trained and will harvest using archer methods only. Venison will continue to be donated to needy families in the area.

***Michigan Wildlife Conservancy, Bengel Nature Center*** – They employ the principles of low hunter density and an emphasis on harvesting antlerless deer. About one hunter per 40 acres over the course of Michigan's three-month deer season results in 6 to 13 deer taken each year.

***Ella Sharp Park, Summit Township*** - From 2008-2013, sharpshooters have harvested 400 deer and more than 20,000 pounds of venison have been donated to local food banks.

***Ingham County Parks*** - In 2012, the Ingham County Board of Commissioners passed a resolution approving the Lake Lansing Park-North Deer Management Plan. Before the hunt was approved, park staff built four deer enclosures in the park to determine the impact deer have on the local vegetation and compiled data in support of the hunt.

***Meridian Township*** - Managed hunts began in 2011 and have continued through 2013. The hunt is approved on an annual basis. In 2012, 90 deer were taken and in 2013, 127 deer were taken.

***Ottawa County Parks*** - Ottawa County Parks & Recreation offers hunting on over 3,340 acres of selected properties with some restrictions intended to protect hunters and park visitors alike.

## **IV. ONGOING EFFORTS**

### **I. Research population trends.**

Local measurement is necessary. The population estimate at Leonard Preserve varies widely from the population estimate for Washtenaw County as a whole. Are the DNR population estimates accurate for this area? Many vocal stakeholders questioned the accuracy of DNR population estimates and there was significant controversy over the proposed 2006 - 2010 deer management goals.

#### *Proposed actions:*

- Fly additional aerial counts over Leonard Preserve and Goodrich/Horner Woods/Arbor Vistas/Marshall Woods to establish a baseline population trend on these sites.
- Consider recruiting a group of volunteers to conduct other types of deer abundance surveys, such as deer pellet surveys.

### **2. Identify partnerships and resources to quantify deer impacts.**

Deer hunting and deer management options often elicit strong emotions among stakeholder groups and individuals. The presentation of accurate, unbiased information based on sound science is essential when difficult or controversial ideas are being communicated.

#### *Proposed actions:*

- Secure grant funding to obtain a detailed botanical survey within the deer exclosures at Leonard Preserve to validate and quantify changes observed through photomonitoring.
- Partner with researchers at University of Michigan to investigate deer impacts on wild turkey, ruffed grouse, and other birds for acorns, fruits, and other mast.
- Partner with researchers at University of Michigan to investigate the effect of deer over-browsing on forest regeneration.

### **3. Determine appropriate deer population goals.**

In the Southern Lower Peninsula, deer populations are over MDNR goals in nearly every Deer Management Unit. By tracking local deer populations and correlating this to changes in the vegetation, we can accurately assess if deer populations are sustainable.

#### *Proposed actions:*

- Obtain technical assistance from the DNR Wildlife Division in developing a deer management goals and strategies. (Before any special deer hunt can occur, the Michigan Department of Natural Resources requires a deer management plan.)
- Consider meeting with neighbors about forming a Quality Deer Management Cooperative. This effort would not involve hunting on County Land, but increase hunting pressure on private land around the perimeter.

### **4. Offer educational opportunities about deer impacts to wildlife habitat.**

Deer attitudes appear to be mixed in Washtenaw County.<sup>7</sup> According to the MDNR, people in Washtenaw County generally feel that there are a lot of deer; however, they often like to have the luxury of seeing several deer when hunting or for recreational viewing. This mentality often holds true until they are directly negatively affected in some way such as crop damage,

landscape damage, or a deer-vehicle accident. It may be even harder for the public to connect with the idea that deer overpopulation may be having a significant negative impact on the viability of other wildlife.

*Proposed actions:*

- Lead public interpretive walks with deer and wildlife experts to discuss changes seen in the deer exclosures.

**Resources:**

1. Michigan Natural Features Inventory Biologists. [www.mnfi.org](http://www.mnfi.org)
2. 2006- 2010 Worksheet for Establishing Deer Population Goals DMU 081 – 2006-2010  
[http://www.dnr.state.mi.us/publications/pdfs/wildlife/Draft\\_Deer\\_Goals06\\_PDFs/DMU081.pdf](http://www.dnr.state.mi.us/publications/pdfs/wildlife/Draft_Deer_Goals06_PDFs/DMU081.pdf)
3. Hickie, P. 1937. Four deer produce 160 in six seasons. Mich. Conserv. 7:6-7, 11
4. Assuming 7 lbs per day, or 1-2% of body weight.
5. Michigan DNR Deer Management Plan  
[http://michigan.gov/dnr/0,1607,7-153-10363\\_41153---,00.html](http://michigan.gov/dnr/0,1607,7-153-10363_41153---,00.html)
6. <http://www.semcog.org/deercrashes.aspx>
7. Living with White-Tailed Deer in Southern Michigan: A Survey of Your Opinions  
<http://www.fw.msu.edu/~pusater3/deer/Living%20with%20Deer%20in%20S%20MI%20results.pdf>
8. A Comparison of Deer Hunter and Farmer Attitudes about Crop Damage Abatement in Michigan: Messages for Hunters Farmers and Managers  
<http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1011&context=ewdcc7&sei-redir=1&referer=http%3A%2F%2Fwww.bing.com%2Fsearch%3Fq%3Dopinions%2Bof%2Bfarmers%2B&and%2Bhunters%2Babout%2Bdeer%2Bmichigan%2Bstate%2Buniversity%26FORM%3DAWRE#search=%22opinions%20farmers%20hunters%20about%20deer%20michigan%20state%20university%22>
9. Organizations allowing deer control  
<http://www.geneseecountyparks.org/pages/GeneseeCountyParksWildflifeManagement>  
[http://www.mlive.com/news/flint/index.ssf/2013/09/want\\_a\\_big\\_buck\\_hunters\\_on\\_gen.html](http://www.mlive.com/news/flint/index.ssf/2013/09/want_a_big_buck_hunters_on_gen.html)  
<http://www.destinationoakland.com/thingstodo/hunt/pages/default.aspx>  
<http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/michigan/explore/deer-hunting-in-michigan.xml>  
<http://miwildlife.org/bwchunting.asp>  
<http://miwildlife.org/controlling-deer.asp>  
[http://www.meridian.mi.us/index.asp?Type=B\\_BASIC&SEC=%7B92211642-71E6-4B76-B022-B213E0F935B6%7D](http://www.meridian.mi.us/index.asp?Type=B_BASIC&SEC=%7B92211642-71E6-4B76-B022-B213E0F935B6%7D)  
<http://www.miottawa.org/Parks/hunting.htm>  
[http://www.mlive.com/news/jackson/index.ssf/2009/01/venison\\_from\\_hunt\\_in\\_park\\_help.html](http://www.mlive.com/news/jackson/index.ssf/2009/01/venison_from_hunt_in_park_help.html)  
[http://www.mlive.com/news/jackson/index.ssf/2013/01/fifth\\_annual\\_deer\\_cull\\_to\\_take.html](http://www.mlive.com/news/jackson/index.ssf/2013/01/fifth_annual_deer_cull_to_take.html)  
<http://pk.ingham.org/LakeLansingParkNorthDeerHunt.aspx>