

The Truth about Nonlethal Methods of Deer Management

Animal welfare groups in Ann Arbor still insist that nonlethal methods are adequate to meet any challenges presented by overabundant and rapidly reproducing deer populations. They propose nonlethal methods both for herd size control and for prevention of specific deer-caused damage.

The truth is that nonlethal fertility control for deer, surgical or chemical, is not legal in Michigan now, banned by the State Legislature until April 2022 and never previously accepted by the DNR for general use. Ann Arbor's sterilization effort was a special research study.

And the truth is that damage mitigation without herd reduction has serious flaws.

Deer cull opponents claim that preventing deer-produced harm to people, vegetation and vehicles can allow us to "live with the deer," even though an unchecked deer population doubles in size every two years.

The vegetation protection measures they propose include planting "deer resistant" plants or using chemical repellents. Other methods are harassing deer with water sprays, noise, dogs or erecting a barrier such as a fence or plant netting to exclude deer. All of these "keep them away" strategies for protecting private landscapes suffer from a major flaw: My fence or repellent or my dog keeps deer off my grounds, but merely **diverts** them to dine on the plants on my neighbor's property or the plants in the public natural areas.

The above nonlethal methods, proposed for private yards, are also clearly not applicable to preserving our park woodlands. There are no fences or "tastes-bad-to-deer" plantings that can prevent hungry deer from halting forest regeneration. The Deer Doctor does not have them. The Natural Areas Preservation program is not about to replace diverse native species with "deer resistant" plantings; and while deer fencing is used for prized specimens in the Arb or Matthaei Gardens it is not a practical way to save our park woodlands.

In Michigan, the city of Rochester Hills has been publicized as a deer-friendly place where the nonlethal methods of public education and movable traffic signs solve the **deer-vehicle collision** problem without culling. Unfortunately, that city is consistently at or near the top of Michigan municipalities in car-deer crashes, more than three times as many as Ann Arbor's 50 per year in 2019. Not a model to emulate.

The truth is that municipalities and park systems must control their deer populations to prevent important harms from overabundant deer. At this time that control needs to be done with lethal methods.

<https://wc4eb.wordpress.com/deer-impacts-on-ann-arbor-natural-areas/>

<https://wc4eb.wordpress.com/methods-of-urban-deer-management/> bbanet

Deer Impacts on Safety and Health

Councilmembers, the opponents of deer management work hard to minimize the **health and safety threat from an overabundance of deer** and the dangers of tick-borne diseases facilitated by deer. Consider their claims:

Claim: - *Growing deer populations don't cause an increasing number of **deer-vehicle collisions (DVC's)**.*

False: It has been [well documented that DVC's](#) are correspondingly reduced when the deer population is reduced. In the study, in three cities, "local deer herds were reduced by 54%, 72%, and 76%, with resulting reductions in DVCs of 49%, 75%, and 78%, respectively."

Claim: - *as a percentage of overall collisions, deer/vehicle collisions (DVC) were on the decline BEFORE the cull began so neither the spike nor the post-cull DVC drop had anything to do with the number of deer in town.*

False: Proven false by HSHV's own data. The peak percentage of DVC's in Ann Arbor was 2.55% in 2015. It has decreased every year since culling began in 2016. The actual number of DVC's (vs. the percentage) tells the same story - reported DVC's in 2015 had risen to 90, before the culls started, and was down to 50 by 2019.

The City of Ann Arbor's [official goal](#) for reducing deer crashes is 40 DVC's per year, and reduce the percent of vehicle crashes involving deer to 1.3%. Ann Arbor has made progress but we aren't quite there yet and won't get there without ongoing herd management.

Claim: - *Deer did not produce a fatality in Ann Arbor in 2019, therefore deer are not a serious safety threat.*

False: There have been several serious deer/bicycle accidents in the City. DVC's can send passengers to the hospital. And consider the two unfortunate people who were killed on motorcycles in deer encounters beyond the city's boundaries: 1) Ypsilanti Township in 2017: [Motorcycle crash with deer ...](#) and 2) Northfield Township [Motorcyclist dies](#)

Claim: - *Deer have no role in the transmission or spread of **Lyme disease**. Ticks carry Lyme disease, not deer.*

False: This is a truly terrible and inexcusable half-truth. The true story is that a deer tick needs to draw a blood meal from (typically) a deer to allow the adult female tick to lay eggs and make more ticks. And deer transport ticks far and wide. Mice are involved in the cycle, harboring the bacteria that cause Lyme and then infecting the deer tick nymphs that then bite people. Deer don't get infected and don't directly transmit the disease, but they have crucial roles in perpetuating and spreading tick-borne illnesses.

The fact is that Lyme disease is here now, knocking on the door. Washtenaw is red on the Lyme map.

The [New York State Community Deer Management Handbook](#) says "Reducing deer populations to very low levels can reduce tick densities and probably Lyme disease rates, because deer are the primary food source for adult female black-legged ticks."

The [latest research](#) provides some additional precision. It appears that If the number of deer per square mile is above 13 there is indeed no relation between the density of deer and number of deer ticks. But if deer density is 13 per square mile or less, every deer you remove from that square can potentially reduce the presence of deer ticks and of Lyme disease. Reduction to or maintenance at such densities is a practical strategy for Ann Arbor, completely consistent with protecting ecosystems and preventing DVC's.

For more on health and safety, see <https://wc4eb.wordpress.com/deer-impacts-on-safety-and-health/>

Countering Misstatements About Deer Impacts on the Environment

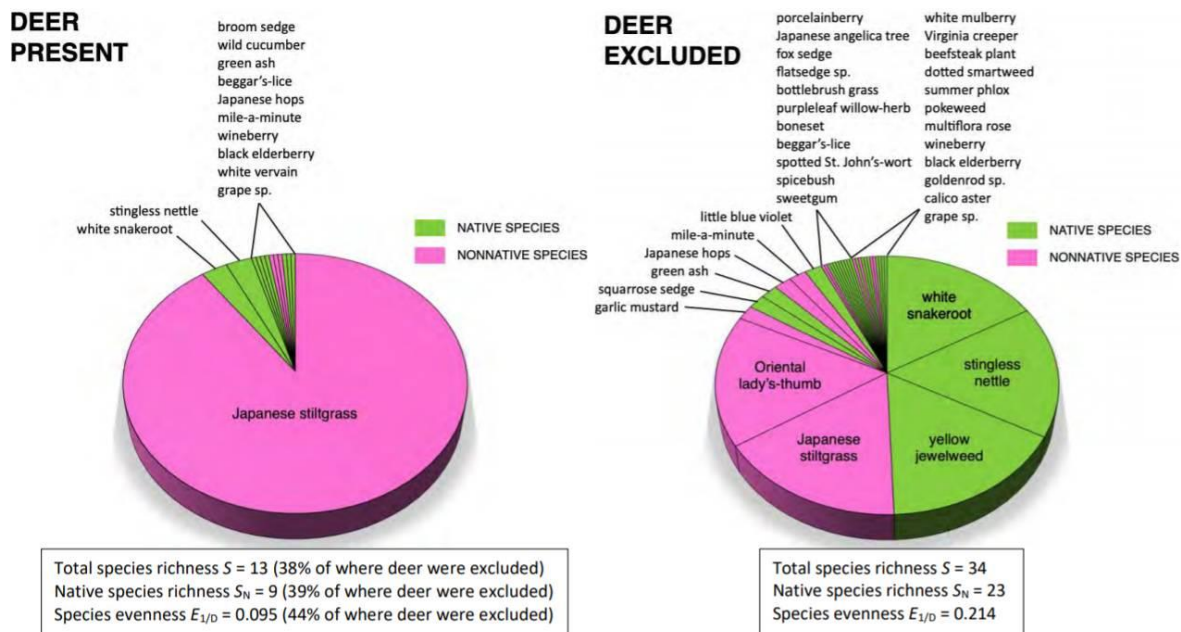
Opponents of Ann Arbor's deer management program are telling Council once again that a growing deer population poses no threat to our natural environment, including to the highly valued natural areas in our parks.

Claim: - A dense deer presence does not threaten the seedlings and saplings on the forest understory that grow into tomorrow's trees. Abundant deer might even do the forest some good.

False: We can't find a single study that supports this claim. Quite the opposite. The scientific literature is rife with research that clearly demonstrates the damage that occurs when there are too many deer. Aldo Leopold documented overbrowsing effects back in 1949, as did Ann Arbor's deer consultant, Dr. William Porter of MSU, throughout his decades of research.

It is also an issue at statewide levels. Audubon Pennsylvania wrote a 340 page report in 2005 on the far-ranging impacts of deer on the Pennsylvania ecosystem. [This is the executive summary \(PDF\)](#). Or take a look at pages 4 & 5 of the [New York State Community Deer Management Guide \(PDF\)](#) from 2018.

Here's a simple graphic from a study on the [deer impacts on the Rose Valley PA ecosystem \(PDF\)](#). It shows native species vs. nonnative species where deer are present vs. absent. Deer not only prevent regeneration of the canopy's tall oaks in forests, they also tend to restrict the biodiversity of the plant and animal species at lower levels wherever they browse, and often pave the way for invasive nonnative species such as the Japanese stiltgrass that has taken over in Rose Valley.



Our WC4EB website has additional [documentation about deer effects on the environment](#).

The threat to the ecological sustainability of the City of Ann Arbor's public natural areas is not merely theoretical. Dr. Jacqueline Courteau has extensively quantified the level of deer browsing pressure, and trends over time, in her reports to the City, [Deer impacts on Ann Arbor Natural Areas](#).

The University of Michigan's natural areas stewards defend the ecosystems of the Arb and North Campus natural areas by collaborating with Ann Arbor's deer management effort. They, also, are paying attention to what is happening on the ground and certainly understand the relevant biosciences.

Preventing Deer Damage to Private Gardens and Landscapes

Claim: - If Ann Arbor landscapes and gardens feature plantings that deer don't like to eat, residents won't have conflicts with deer. A related claim is:

Claim: - Where the deer are perceived as too numerous, the City could cope with the issue simply by encouraging homeowners to invest in tall fences, repellents, and startle devices so the deer go away.

Both are False. These are displacement techniques, perhaps useful, though expensive, to individual gardeners. They are poor city policy since they just shift the deer to other locations for food. Deer still have to eat. If every area with vegetation (including natural areas) has fences and/or deer-resistant plants, there still will be deer damage. Some of deer's least favorite plants such as peonies become palatable when there is no other food.

Preventing Deer Impacts on Ann Arbor's Natural Areas

Claim: - Techniques used by gardeners to discourage deer from eating valued plantings would work well in Ann Arbor's natural areas. There are inexpensive exclusions (fences) that can preserve natural areas from deer damage. Or rotating different brands of aromatic soap might work. Startle devices and "alternate plantings" can prevent deer harm.

False. It is completely impractical to put up deer fence around our 1400 acres of natural areas. If not all of it, how would NAP decide what areas get decimated and what areas get fenced? Deer fence is not described as inexpensive. It needs regular maintenance and gates. The cost would certainly dwarf deer management costs.

Startle devices can't protect whole parks, nor can the City and its NAP volunteers be expected to reapply repellents widely after a rain. Natural area stewards have volunteered their time to remove invasives and improve degraded natural areas by allowing natives to thrive. Suggestions of "alternate plantings" most often refer to non-

native plant species that the deer haven't yet developed a taste for. This is completely opposed to the goals of Natural Areas Preservation. Deer are a real threat to one of Ann Arbor's most treasured assets, the woods and prairies of our extensive parkland.

Deer are a real threat to one of Ann Arbor's most treasured assets, our green and wooded parkland and the prairies. Denial of this danger and wishful thinking about damage mitigation won't remove the threat.

Stay the course. Please continue deer management as budgeted, an ongoing City responsibility and a recurring expense.

Bernie Banet, 838 Heather Way, 48104, Ward 2 734 665 7842

For Washtenaw Citizens for Ecological Balance

wc4eb.wordpress.com

Deer Biology Facts

Opponents of the deer cull are in denial about the basic facts of deer biology and are misinforming you and the public of the danger to our natural assets.

Claim: - The deer population automatically stabilizes itself in an optimal way, even without predators or hunters. "Animals in nature typically find balance all on their own."

This is False. Nature does not balance itself when predators are removed. In a recent example, [Deer Continue to Die on Fenced Private Property](#), WXYZ News reported on deer starvation on a fenced Detroit area property. With no natural predators, the deer exceeded the preserve's biological carrying capacity. This was not new news. Aldo Leopold, whom many consider the father of wildlife ecology, [documented several similar starvation events](#) in his 1949 book.

Claim: Hunting or culling can't really reduce the size of a deer herd because the deer just make more fawns to replace any deer that have been removed, or more deer are drawn in from surrounding areas.

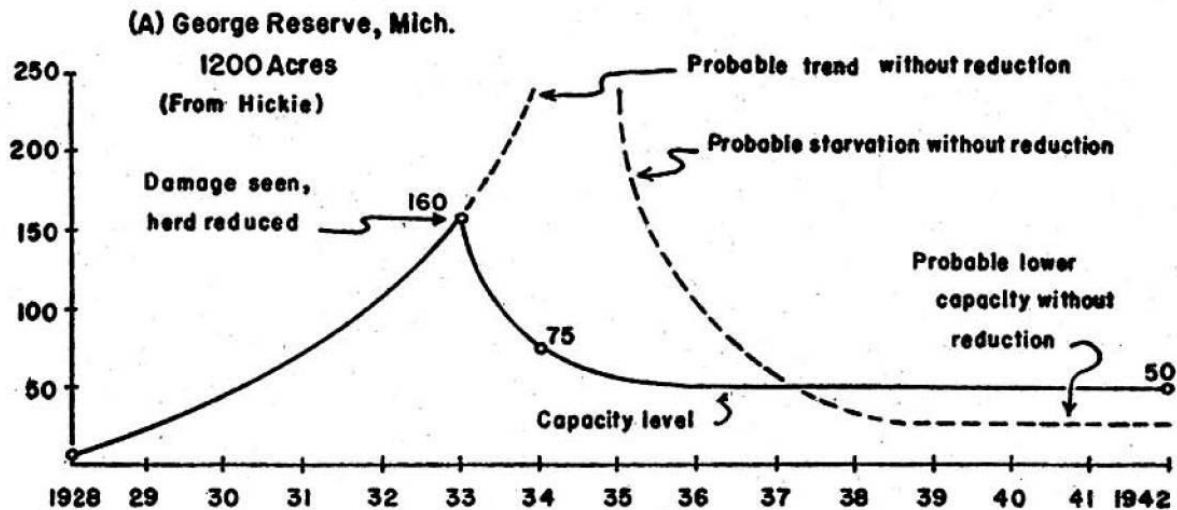
These both have been proven False. The rebound effect doesn't happen in a deer population with adequate nutrition. And deer do not disperse to 'even out' the population. The does stay in a home range that they learned from their mother. See: [False claims – the myths perpetuated about deer management](#) for more information and documentation about both claims.

Claim: Deer populations can't grow "exponentially" because the results if extended over enough years would be unimaginable.

This is silly. Biologists do not claim that deer populations grow forever. They eventually reach the biological carrying capacity of their habitat, where their nutrition diminishes to the level of starvation and death. Since Ann Arbor did not have a deer herd for most of the 20th century, the curve presented by HSHV isn't even relevant. Deer were rarely seen here until the early 2000's.

Here's a real population growth curve, created by [Aldo Leopold](#) from data from a landmark University of Michigan study done near Ann Arbor. The title of the paper is concise: *Four deer produce 160 in six seasons.*

(A) *George Reserve*. This enclosed range, owned and operated by the University of Michigan, was stocked with four does



and two bucks in 1928. In 1933 overbrowsing became visible. A census showed 160 deer present. This is the maximum possible increase from four does in six years. (12) There is no doubt, therefore, that this herd had actually started to irrupt.

The herd was immediately shot down to 75 head, and later to 50 head, and is now being held at the 50 level by annual removals. The evidence of overbrowsing has disappeared. The reduced herd is in equilibrium with its range.

Please find more information about the real facts of deer biology, not fantasy biology, here on our site [WC4EB - Deer Biology](#).

Kurt Sonen for Washtenaw Citizens for Ecological Balance
Ward 2

Deer Management Best Practices

The HSHV deer bulletin, 'Deer in Ann Arbor', is filled with undocumented claims that are misleading and false. Most have no research or scientific basis or are distortions of fact. The document's links are not active so it is impossible to review the citations relevant to their claims.

Some of the inaccurate HSHV claims include:

- *Reducing the deer population in Ann Arbor isn't responsible for the decline in deer-vehicle collisions*
- *Deer abundance helps diversity.*
- *Animals in nature typically find balance all on their own*
- *Ann Arbor's natural areas should be fenced and planted with deer-resistant plants*
- *Rochester Hills, MI, New York City, and the state of Massachusetts present good examples of solving deer conflicts without killing deer or trying to control deer populations.*

All of the above are fantasies and join a disturbing trend of the day--instead of withdrawing debunked assertions, double down on them with repetition and brazen restatement. Washtenaw Citizens for Ecological Balance documents the reality, supported by the science (with references), at our new website wc4eb.wordpress.com.

Best practices should always be of interest to legislators and public administrators. So let's look at the programs HSHV has recommended to Council.

Rochester Hills:

Here's a nice local example, cited as a successful example of nonlethal methods. Except that with only 70,000 citizens, Rochester Hills had 166 deer-vehicle crashes, fifth in the state (vs. Ann Arbor's 50). Furthermore, Rochester Hills naturalist Lance DeVoe told an Ann Arbor audience that deer had devastated the natural areas of Rochester Hills to the point of permitting Japanese barberry, an invasive shrub, to completely dominate. Rochester Hills is culling with cars and giving up on natural areas preservation. Are those Ann Arbor values?

New York City:

New York City has an acute deer overabundance problem in its Borough of Staten Island along with deer crashes, Lyme disease, and plant destruction. With a \$6.6 million buck vasectomy project underway to actively reduce the size of the deer population, NYC is not an example of solving deer problems with just "social tolerance". And they still currently have a deer overpopulation problem. See: [Staten Island Deer - NYT](#) and [Vasectomy Program Data](#)

Massachusetts:

Conveniently overlooked is that Massachusetts is not urging nonlethal deer management. From their wildlife site is the following:

Hunting: Removing deer using safe, legal, regulated hunting is the best large-scale option to reduce deer numbers and reduce property damage.

If there are examples of municipalities that have turned themselves into deer sanctuaries and this works well for them, HSHV has not supplied these examples. Nor do we know of any. Whereas here are some [successful deer management programs in MI and nationally](#).

All US states use sport hunting for the deer herd control method. None are planning to stop that, nor are any state wildlife agencies giving up on population control stewardship and letting the herd magically "balance" itself.

Council should, of course, base its decisions about deer management, as with everything else, on facts and not fantasy or wishful thinking.

Deer management is a recurring budget expenditure and an ongoing obligation of city government. The City's Deer Management Program has brought the problem to a point where ongoing maintenance is achievable, a circumstance far superior to returning to the clearly overabundant population five years ago and returning to the costly need to redo what the City has accomplished.

Washtenaw Citizens for Ecological Balance
wc4eb.wordpress.com

Kurt Sonen
Ward 2

The Trees We Don't See

I put out a challenge over five years ago and it still has been unfulfilled - **find an unprotected three to eight foot tall oak sapling in Ann Arbor's natural areas.**

That's the next generation of oak trees. There should be quite a few, but they aren't there. Yes, there are oak seedlings but they never get above one to two feet before the deer browse them. And though oaks are hardy trees, the seedlings cannot withstand the constant deer browsing and they die. Due to the failure of native tree regeneration, the natural areas of Ann Arbor currently are not sustainable as an oak forest.

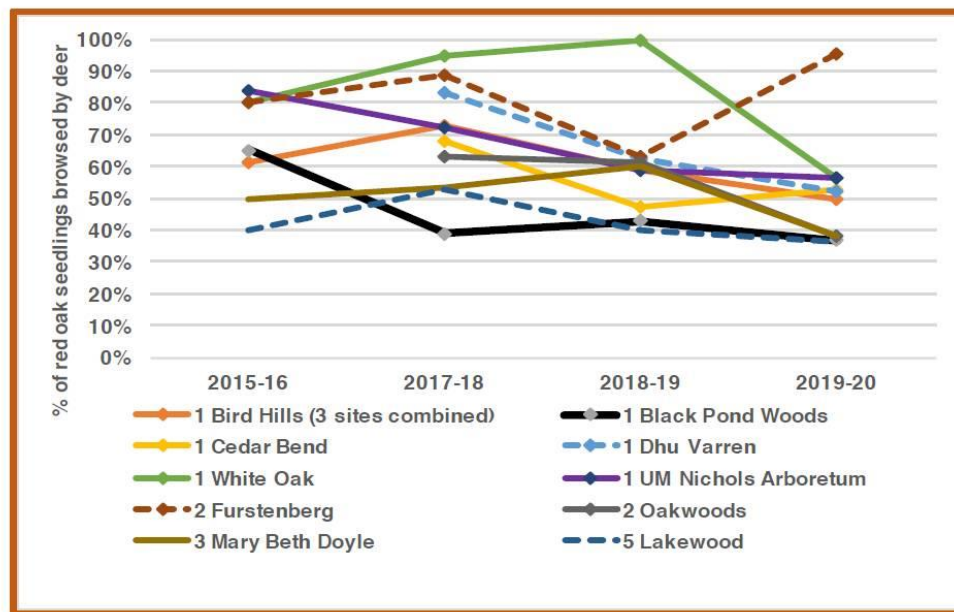
As a steward in Ann Arbor's natural areas, I'm offended by the HSHV's suggestion that stewards should apply 'deer deterrents' and fences to all the plants that they think are worthy. I think the whole ecosystem is worthy so I don't have enough fence. And I won't plant non-natives as they suggest. As it is, I have over 60 cages to protect plants from deer browse, and mine is a small preserve. But experience has shown me that if I don't make a plant zoo (with the plants inside instead of the animals), the plants will get browsed. It's worked - I've successfully gotten several oaks well past 8 feet tall. But the oaks in the rest of the City's natural areas are not so lucky...

Please continue the city's deer management program. We are on the right track.

Thank you.
Kurt Sonen
Ward 2

Good Governance & Deer

Good government should be based on good data. We paid for and have good data about deer management and our natural areas. It shows that while vegetative damage is improving, the damage due to deer on our oak forests is still not at a sustainable (15%) level.



Trends in Ann Arbor deer impacts, 2016–20. Nature Areas shown with solid lines are sites where oak seedlings were planted within the effective distance (3/8 mile) of deer management; dashed lines indicate that seedlings are >3/8 mile from deer management areas.

The deer management program was put in the budget for good reason. We've already paused deer management for one year. Another year of inactivity will put the deer population back where we started. Remember, the program includes money for deer browsing studies (so we have data to make informed decisions), education, and deer removal.

It's your fiduciary duty to protect the City's assets, including our parks. Keep deer management in the City's budget. Remember those 3 to 8 foot tall oak seedlings - you won't find them in the parks but you can help let today's baby oak seedlings grow through that stage and grow into tomorrow's giant canopy oaks.

Kurt Sonen
Ward 2