

## **2019 Deer Management Plan for the Village of Cayuga Heights**

The number of deer in the Village of Cayuga Heights has been an issue since the last years of the 20<sup>th</sup> century. In 1998 a deer committee was established to study this problem and to make recommendations to the Mayor and Board of Trustees. In addition, two surveys were conducted by the Human Dimensions Research Unit in the Department of Natural Resources at Cornell University in 1998 and 2001 to ascertain residents' attitudes toward deer and evaluate acceptance of various deer management options following an extensive education program.

The Deer Committee issued its report to the Board of Trustees in May 2001. They found there was strong support for reducing the deer population, but also strong disagreement as to the method. Their recommendation was sterilization. Their optimism that this method would be successful without incurring undue opposition was sadly misplaced. A research trial with Cornell using sterilization was employed in 2002-2004. Funding was discontinued in 2005 and a vaccine was employed, which proved faulty and ineffective. Cornell and the DEC counted 147 deer in the Village in 2006; residents continued to complain about damage to plantings and deer droppings in their yards; there were 29 deer/car accidents and 31 deer incidents between 2004 and 2006. An incident is defined as an investigation of some problem involving a deer. For example: an officer is called to the scene of an injured deer.

In August 2008 a new deer committee called the Deer Remediation Advisory Committee (DRAC) was formed. From the Fall of 2008 through the Winter of 2009 they held two public meetings a month to obtain residents' input and to discuss possible options for reducing the deer herd. In March 2009 they mailed information packets to all Cayuga Heights residents outlining the issues and inviting the public to two public forums that Spring to gauge public opinion about the extent of the problems and possible means of ameliorating them. Meanwhile, there was an explosion of the deer herd and 42 deer/car accidents between 2007 and 2009 and 60 incidents involving deer. In the Summer of 2009, the DRAC issued their report to the Board of Trustees. They recommended surgically sterilizing 60 does over a two-year period, followed by culling of the remainder of the herd in the following year with professional sharp shooters. They expected the deer herd would be reduced to approximately 60 deer and could be maintained through further sterilization and culling, as necessary.

The Board of Trustees accepted the DRAC plan in September 2009. A lengthy court battle ensued over the Environmental Impact Statement brought by several Village residents who did not want any lethal means adopted. The Village prevailed in April of 2012. There were 66 deer/car collisions during this period and 93 deer incidents. Letters were sent to residents to try to obtain written permission to use their property for sterilization or culling. It was proposed that the culling would be done by professionals with frangible bullets to prevent ricochet and fire downward to eliminate cross-horizon shots. There were enough responses to do the sterilization, but there were too many homeowners who refused permission to find any sites that satisfied the 500-foot radius requirement.

In December 2012 the Village of Cayuga Heights hired White Buffalo ([www.whitebuffaloinc.org](http://www.whitebuffaloinc.org)), a highly regarded non-profit wildlife management organization. They sterilized 137 does and tagged them and all males caught for a total of 171 deer.

The tagging of deer during December 2012 provided a known, marked population of deer necessary for an abundance estimate using mark-recapture analyses. We contracted with Paul Curtis from the Cornell Department of Natural Resources to conduct a photo survey with infrared triggered cameras soon after the deer tagging and sterilization were completed. They were able to estimate herd size with good confidence in the results. The analysis was run twice; once with all the possible live deer included in the total, and once without deer living near the edge of the community. A reasonable estimate of deer abundance in Cayuga Heights based on these two analyses is 225 deer, or a density of approximately 125 deer per square mile.

In December 2013 twelve does were sterilized and all deer captured were tagged. Paul Curtis repeated his camera survey and analysis. He estimated 160 deer, a density of approximately 89 deer per square mile remained in the Village.

During Fall of 2014 the NYS Legislature passed a law that reduced the discharge setback from occupied structures from 500 feet to 250 feet for crossbows, and 150 feet for archery equipment. Now we had 10 sites that could be baited with corn and deer taken from tree stands with cross-bows. Forty-eight deer were taken in the winter of 2014-2015; the venison was donated to the Venison Donation Coalition Program that year and in subsequent years. We again had Paul Curtis do a camera survey to determine the number of deer in the Village. He estimated 137 deer were left in the Village, a density of 76 deer per square mile. Thirty-nine were culled during the winter of 2015-2016. Curtis estimated 94 deer, or 52 deer per square mile after the cull. While the DEC concentrates on effects to measure culling success, residents and Board members wanted to know numbers of deer.

Only twelve were taken in 2016-2017; Curtis estimated 70 deer, or 38.9 deer per square mile. However, since there were fewer and fewer tagged deer each year, the confidence interval was 60-82. White Buffalo advised us that the deer were becoming wise to the bait sites and becoming much warier. Residents' complaints about deer damage to landscape plantings increased during the summer of 2017.

Last year we were in a quandary. The DEC began to enforce the law which restricts baiting within 300 feet of a road. Since the Village of Cayuga Heights is a residential community with few undeveloped areas, this eliminated all but one of the bait sites, which were growing less and less effective. Instead we applied for a new deer damage permit that would allow us to tranquilize the deer with darts, transport them to the DPW barns and euthanize them. Since they were darted with chemicals, they were not able to be used for human food and were land filled. White Buffalo culled 45 deer over a five-day period in the Spring of 2018 using this protocol. We are no longer doing camera surveys, since the number of tagged deer in Cayuga Heights is less than five.

Having professionals cull the deer is expensive. Since 2013, we have spent \$117,100 on camera surveys and \$304,616 on White Buffalo. Why have we done this and why are the residents in overwhelming support of using their tax money for this program? The major reason is the fear of running into a deer on our roads. Our goal when we started culling was to reduce deer/car accidents to zero; we achieved that goal in 2018 and hope to continue. Secondly it is the inability of residents to enjoy their yards. Piles of deer droppings and favored perennials nibbled to the ground, along with aggressive deer that stand their ground have been major deterrents.

Lyme disease is a constant worry for anyone that spends time outdoors and it has been steadily increasing in Tompkins County. There were two cases in 2006; by 2011 there were 107 cases

and 185 cases in 2017. Since the data is not specific to the municipality, we cannot ascertain the effects our deer culling has had on the incidence of Lyme disease in Cayuga Heights. Some studies in the peer-reviewed literature support deer reduction as an important way to control the spread of Lyme disease, but other studies dismiss deer as an important vector in the deer tick life cycle. While fewer deer will not eradicate Lyme disease, we think it plays at least a small role in controlling the spread of the disease.

While there was considerable opposition to the deer culling program at its inception, residents today compliment us on the lack of deer droppings in their yards and the ability to once again grow plants that are deer favorites. Tulips, Day Lilies, Hosta and Asters are a few perennials that can now be grown without weekly applications of deer repellants.

We do not keep logs of calls made to the Village Clerk, but we do preserve emails. In the past year, we have received one complaint that money spent on culling would be better spent on infrastructure. And one compliment:

**From:** Paul Ginsparg <[ginsparg@gmail.com](mailto:ginsparg@gmail.com)>  
**Sent:** Tuesday, February 20, 2018 12:40 PM  
**To:** Tayo Johnson; Jeff Walker; Joan M. Mangione; Linda Woodard  
**Subject:** deer video

here's the deer video i mentioned (from 2011)

<https://www.youtube.com/watch?v=kNmodjB2UCk>

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### [25 deer 24/7](#)

17 in the rear, another 8 in front, morning of 23 Feb 2011. now stripping bark from all the trees, having eaten everything else,

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but happily this never happens any more... have had only a handful of sightings in past two months, at most 3 deer at a time, and more importantly days without any tracks in the snow a couple weeks ago.

Last year when we didn't cull until early April, there were several residents who voiced their alarm. Since then the comments have been on how few deer have been observed in the Village. These mostly come to the Clerk when residents are paying their water and property tax bills or buying garbage tags.

From an ecological perspective, tree regeneration is an important goal, even if most residents are oblivious. As an ecologist and avid gardener, I am well aware of any "weeds" in my perennial beds, which now include oak seedlings that persist over winter. While this is totally antidotal, there is a study of red oak regeneration by Bernd Blossey, a professor in Natural Resources at Cornell University that includes several study sites in Cayuga Heights. From 2011 to 2013 he collected data on oak survival and deer browse at five locations in Cayuga Heights, two Cornell Natural Areas (Renwick Slope and Palmer Woods) and three private lots. At each location, 40 oak seedlings (20 protected by cages and 20 without protection) were planted. In 2014 and 2015, data were collected in the two Cornell Natural Areas only and only unprotected seedlings were planted. The mean incidence of deer browse (%) on oak seedlings over the years is as follows:

2011: 89%

2012: 85%

2013: 93%

2014: 100%

2015: 75%

No plantings or surveys were done in 2016 or 2017 due to lack of funding. A new cohort of oak seedlings were planted in spring 2018, a final tally will be conducted in May/June 2019.

We propose to employ White Buffalo again this year to take deer in the same manner as last year. While this is an expensive way to cull deer, we think it is worth it to ensure the safety of our residents and to provide the most humane way of killing the deer. The strategy is to do the culling in early April when there might still be snow in the woods, but the lawns and vegetation will be greening and therefore very enticing to the deer.

Both the Village of Lansing and Cornell have deer culling programs, which help cut down on migration into Cayuga Heights. This year for the first time, the Town of Ithaca is also culling deer. We expect immigration to our Village to be slowed significantly by their program, since they surround Cayuga Heights on three sides. We are hoping the City of Ithaca will adopt a similar program soon, but at this point it is only a hope. We realize that there will always be migration pressure given the large amount of forest and farm land in the area with few effective predators. We are committed to continue culling deer for the foreseeable future.