FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS)

DEER MANAGEMENT PLAN

VILLAGE OF CAYUGA HEIGHTS, TOMPKINS COUNTY, NEW YORK

Lead Agency:

Village of Cayuga Heights Board of Trustees
Marcham Hall
836 Hanshaw Road
Ithaca, New York 14850

Technical Support Provided by:

Tim Miller Associates, Inc.
10 North Street
Cold Spring, New York 10516
in Consultation with
Village of Cayuga Heights Board of Trustees

March 14, 2011

FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS)

CAYUGA HEIGHTS DEER MANAGEMENT PLAN

VILLAGE OF CAYUGA HEIGHTS,
TOMPKINS COUNTY,
NEW YORK

Lead Agency: VILLAGE OF CAYAGA HEIGHTS BOARD OF TRUSTEES

Marcham Hall
836 Hanshaw Road
Ithaca, New York 14850

info@cayuga-heights.ny.us

Contact Person: Ms. Kate Supron, Mayor

(607) 257-1238

Prepared By: Cayuga Heights Board of Trustees

Technical Support Provided By:
TIM MILLER ASSOCIATES, INC.
10 North Street
Cold Spring, New York, 10516
Attention: Tim Miller, AICP
(845) 265-4400

Lead Agency Acceptance of FEIS Date: March 14, 2011

March 14, 2011

Cayuga Heights Deer Management Plan

Final Environmental Impact Statement (FEIS)

Table of Contents

	Page
1.0 INTRODUCTION AND SUMMARY	**1-1**
2.0 COMMENTS AND RESPONSES ON THE DRAFT EIS	**2-1**

APPENDICES

Appendix A Public Hearing Transcript and Comment Letters
Appendix B Deer Culling Activities
Appendix C Update Deer / Vehicle Accident Data
Appendix D Deer Ticks and Deer Density
Appendix E Deer Overpopulation and Residential Landscapes
Appendix F Draft Fencing Ordinance

1.0 INTRODUCTION

This Final Environmental Impact Statement (FEIS) has been prepared in accordance with the New York State Environmental Quality Review Act (SEQRA) and its implementing regulations, 6 NYCRR Part 617. The FEIS provides responses to public comments received by the lead agency on the Draft Environmental Impact Statement (DEIS). The lead agency for this action pursuant to SEQRA is the Village of Cayuga Heights. The Village Board of Trustees is the decision-maker regarding the implementation of the Village's Deer Management Plan. SEQRA prescribes that the lead agency is responsible for the adequacy and accuracy of this FEIS.

The FEIS consists of this volume -- and its appendices, and referenced technical data -- and the DEIS, which is hereby incorporated by reference into this FEIS.

SEQRA Background

The Project Sponsor prepared a DEIS in response to a Positive Declaration issued by the Village of Cayuga Heights Board of Trustees. The Village Board issued a Notice of Completion of the DEIS on November 8, 2010 and opened and closed a public hearing on the DEIS on December 6, 2010. Written comments were received until December 16, 2010.

In accordance with SEQRA, this FEIS provides written responses to substantive and relevant comments on the DEIS received by the lead agency during the public review period. Complete copies of all written agency comments received on the DEIS are included in Appendix A of this FEIS. A transcript of the public hearing is also provided in Appendix A.

In responding to comments, the lead agency notes that there may be conflicting scientific opinions on a particular issue. When conflicting opinions have arisen, the Village recognized the existence of the different views and has provided a good-faith,reasoned evaluation in response thereto. However, it is noted that a final environmental impact statement need not achieve scientific unanimity on the desirability of proceeding with the proposed action.

It has consistently been the intention of the Village of Cayuga Heights Board of Trustees to take a hard look at this deer management plan and its implications and apply a rule of reason thereto.

Summary of Proposed Action

The Mayor and the Board of Trustees of the Village of Cayuga Heights ("VCH") established a Deer Remediation Advisory Committee (the "DRAC") and requested that it research options for deer management in the VCH.

A proposal for deer management was developed based on the information gathered by the DRAC from experts in the field of deer management, plus feedback from open

committee meetings and two public forums. The DRAC shared this data with the community via the website www.vchdeercommittee.com, and an 8-page information sheet delivered to residents in early March 2009. A copy of this material was provided in Appendix E of the Draft EIS.

The Proposal:

Acknowledging the need to reduce the number of deer in the Village of Cayuga Heights, the Village Board of Trustees put forth a proposal consistent with the recommendations of the DRAC to implement a Phased Options Approach ("POA") to deer management. The DRAC recommended that the Village begin the POA with the surgical sterilization of approximately 20-60 does (female deer) within a two-year period, followed by culling of the remainder of the herd in the year subsequent to completion of the sterilization program, followed by a program of ongoing maintenance of the herd size as necessary through further sterilization and culling. It is expected that this program will, once implemented, result in a reduced and stable deer herd in approximately three to five years.

Specific Recommendations:

The recommendations of the DRAC are detailed below.

1. The VCH should hire a part-time Deer Management Director (DMD).

2. The VCH should adopt the goal of the cultural carrying capacity of 15 deer/square mile, which would result in a total deer population in the Village of Cayuga Heights of approximately 30 deer for the Village's approximate 1.85 square miles.

3. The VCH should establish guidelines for confirming that the POA is reaching its goal of managing the VCH's deer herd to reduce ecological damage, traffic accidents, incidents of Lyme Disease, and other unwanted deer-human interactions.

4. The VCH should implement the POA as soon as VCH has made its final determination that the community is supportive of the POA.

5. The VCH should recognize that any approach to deer management must be implemented without fail for each of the initial five years of the program, and the VCH Board of Trustees and its constituents must recognize that otherwise the program will fail.

The VCH acknowledges that long term monitoring and management will be likely.

The following additional details expand upon the specific recommendations listed above.

The VCH can begin working toward implementation of the POA by hiring a part time DMD who will report administratively to the Village Board of Trustees, while accomplishing the following:

- apply for grant monies on the basis that the VCH's deer population problem is part of a larger concern for ecosystem health;
- identify the number of properties needed for culling;
- work with the VCH treasurer and attorney to bid out and write contracts for all contractors hired;
- work with Cornell University personnel, especially Paul Curtis, a wildlife biologist familiar with the VCH deer situation, regarding capture and sterilization procedures; staff and facilities; and identifying the number of VCH sites to be used for trapping and sterilization.
- work with contractors to coordinate and implement timing, safety concerns, impact guidelines, etc.
- work with the NYS Department of Environmental Conservation and Cornell University personnel to file permits and other paperwork as required.

It was recommended that the VCH Board make a long-term commitment to the POA. It will take three to five years to see the results of sterilization and culling of the VCH deer population, but the maintenance phase (periodic culling and/or sterilization) will be ongoing. The Board may also consider the use of additional methods to reduce deer-human conflict, such as roadway reflectors, and a re-examination of the VCH Fencing Ordinance *(see below regarding Lyme Disease and fencing).*

Under the POA, the sterilization will be implemented first, allowing for the capture of the "easy" or less wary does which is more efficient in time and costs. These are the does and families who would continue to live in the community and whose monitoring and maintenance would be ongoing. Paul Curtis' experience both in the VCH and at Cornell indicates that this first phase would take approximately two years at an average cost of approximately $ 1,200/doe.

Once the core population of does is sterilized and tagged, the DMD would oversee the hiring of professional sharpshooters to shoot unsterilized deer at bait sites. It is estimated that approximately 6 to 10 sites will be required to complete the culling.

The DMD will work with the VCH Police Chief and the NYS Department of Environmental Conservation (the "DEC") officer to develop and oversee the culling protocol and hiring of professional sharpshooters. It is anticipated that the initial culling of the herd will be completed within the year after sterilization has been completed. The cost estimate for a bait and shoot method is approximately $400 - $500/deer.

It was estimated that an area of 18 acres will be necessary for each culling site. Permission will be needed from landowners to allow hunting within 500 feet of their

businesses and homes to assemble the required area. While some Village residents have expressed their view that safety would be enhanced by publicizing the sites and times, for safety reasons, the DEC and the DRAC recommend against publicizing culling sites and times. The VCH Board may wish to consider enacting a local law making it illegal, and punishable by fine, to interfere in any portion of a culling operation.

A more detailed description of the protocols for sterilization and culling is provided in Chapter 4 of the DEIS.

Interim Action:

Given the length of time that will be required for the POA to effectively reduce the number of deer in the VCH, the DRAC recommends that the VCH Board of Trustees immediately focus attention on two specific matters.

Education Concerning the Transmission of Lyme Disease

Two species of ticks are responsible for transmitting Lyme Disease and conditions such as ehrlichiosis. Their larvae and nymphs pick up the bacteria when they feed on any small rodents whose blood has already been infected, and whose preferred cover is long grasses and shrubs. The white-footed mouse is the most common rodent carrier. Adult ticks move on to feed on a variety of larger mammals including humans and deer which are their preferred hosts.

Studies also show that the number of ticks in a local area is generally linearly correlated with the number of deer present. Recommended mitigation of deer-borne diseases includes fencing, reducing tick habitats (especially where properties are bounded by heavy vegetation), and the possible treatment of white-footed mice. Educating the public includes practicing "due diligence" in clothing for outdoor wear and learning to check for ticks after being outdoors.

Review of VCH Fence Ordinance

Because the results of the POA will take several years to achieve, an interim means to reduce human/deer interaction could result from reviewing and amending the VCH ordinance concerning fence heights. Currently, property owners are allowed to erect a fence of up to 4' high at the boundary line of their properties, or erect a higher fence the same distance from the property boundary as required for a building, that is, 25' from the front boundary line of the property and 15' from the side or rear property line.

The Village Board is currently considering a proposed local law that would expand the options for additional fencing, a copy of which is provided in Appendix F of this Final EIS.

Format

This FEIS is arranged in sections, with comment summaries and responses arranged by subject area similar to the DEIS. The format of the comments and responses is as follows:

Comment # (Source): Comment summary text.

Response #: *Response text.*

Listing of Permits and Approvals Required

As the Lead Agency, the Village of Cayuga Heights Board of Trustees has primary responsibility for review of this matter. The only other involved agency who would have decision making authority over this matter is the New York State Department of Environmental Conservation, who issues deer management permits.

2.0 COMMENTS AND RESPONSES ON THE DRAFT EIS

Introduction

The readers are referred to the Village's website, http://www.cayuga-heights.ny.us/deer.html, where substantial information is available regarding the history and background associated with the proposed program. The following documents can be reviewed on the Village's website and that information may be helpful in connection with some of the comments and questions raised during the SEQRA review proceedings as set forth herein:

TIMELINE OF DEER CONTROL EFFORTS (1998-PRESENT)

FAQ's

STATE ENVIRONMENTAL QUALITY REVIEW PROCESS

- Draft Plan, adopted by Board for SEQR process (9/09)
- SEQR Long Enviro. Assess. Form, conducted by Board (11/09 3/11)
    - Food Bank Letter
    - Cayuga Heights Police Dept Deer Accident Statistics
- Draft Environmental Impact Statement, completed by TMA and accepted by Board as complete for public review and comment (11/10)

DEER COMMITTEE WORK

- Deer Committee (DRAC) Recommendation to Trustees (May 2009)
- Deer Committee (DRAC) Information Packet (March 2009)
- Deer Management Options Chart (March 2009)
- Fertility Control in VCH 2002-2005 (tba)
- Deer Committee Report, 2001
- Empowering Communities, 2001
- HDRU Survey (tba)

EDUCATION

- **Lyme Disease**
    - Tompkins County Health Department website

    - Tompkins County Health Department Lyme Disease History
    - NYS Department of Environmental Conservation on Lyme Disease
    - CDC - Tick Management Handbook
    - CDC - Lyme Disease Information
- **Deer Resistant Plants**
    - Dr. Bridgen
    - Plant List
- **Other Communities**
- Cornell University Deer Management Plan
- Vassar College
- Nature Conservancy
- Irondequoit, NY
- NYT article
- Massachusetts Wildlife
- Lansing, NY
    - Village Hunting Law Passed *Lansing Star: 10/18/2007*
    - Village Evaluates Deer Population Control *Lansing Star: 3/4/2007*
    - Village Amend. to Expand Hunting Rules *Lansing Star: 9/24/2010*
    - Two Village of Lansing Laws Passed *Lansing Star: 10/22/2010*

BACKGROUND RESEARCH/ADDITIONAL READING

- Citizens Guide
- Evaluation of Deer Management Options
- Edible Hudson (tba)
- Dr. Curtis Sterilization Graphs (tba)

All comment letters and the transcript from the public hearing are included in Appendix A of this Final EIS.

SEQRA requires that substantive comments are to be responded to in the Final EIS. Many comments made during the public hearing on the Draft EIS were statements that objected to some aspect of the deer management program and did not specifically address potential environmental impacts as set forth in the Draft EIS.

While all comments are included in this document, unless the comment specifically addressed a topic discussed in the Draft EIS in a substantive fashion, it is not responded to further in this chapter.

Many of the comments made during the DEIS process either supported the proposed action or were opposed to it, without offering commentary on the contents of the Draft EIS. Comments only in support or opposition are provided in Appendix A and those comments are not responded to herein.

Other comments made during the review expressed concern that the DEIS did not justify the need for the proposed action sufficiently. In this regard, it is noted that the Village has been reviewing and evaluating the desirability of carrying out the deer management program for many years (beginning in 1998). This background information was provided in Appendix B, D and E of the DEIS and included citizen surveys, a review of many alternatives for deer management and recommendations from the Deer Remediation Advisory Committee (DRAC) for a phased program, that includes ongoing monitoring of the operation.

The purpose of SEQRA is to review a proposal or plan and ascertain if potential adverse environmental impacts might occur upon its implementation. The Trustees are satisfied that the circumstances leading up to the DRAC recommendations have been soundly evaluated. For example, there is no need to do extensive biodiversity surveys on the Village's ecosystem. The implications of such high density deer populations have long been studied by others. There is a substantial overpopulation of deer in the Village and the repercussions of that on Village plants and habitat is obvious.

The Trustees acknowledge that in dealing with a biological system, it is difficult to know with certainty the outcome of a management plan. The Village is not a closed system, as noted by many of the comments, and wildlife moves in and out of the Village daily. It is for this reason (among others) that the DRAC recommended a Phased Option Approach (POA).

The Trustees have reviewed the actions of other communities that have carried out deer management and have consulted with experts that have been involved in such programs. The Trustees are confident that the program proposed, if implemented, will be done safely and will achieve some or all of the goals set forth by the DRAC.

Positive outcomes have been achieved in other communities where such management programs have been implemented. Reports from several of those communities are provided in Appendix B of this Final EIS.

Appendix C provides a summary of updated deer/motor vehicle accidents from the Cayuga Heights Police Department.

Appendix D is a recent report from the Dover, Massachusetts Board of Health concerning Lyme Disease and its relationship to deer ticks and deer density.

Appendix E is a report on deer populations in New Jersey and approaches to residential landscaping.

Appendix F contains a draft currently being considered by the Village Board of Trustees of a proposed local law that would expand options for fencing in the Village.

Comments and Responses

Comment 1-1 (David Barr, 12/7/10): Asks about the possibility of getting a special dispensation from the Conservation Department to Bait/Net and transport our deer by cattle truck, to the Adirondacks, Catskills, or elsewhere.

Response 1-1: *This option was previously explored by the former Mayor, Jim Gilmore, and was determined not to be a legal option.*

Deer numbers at a given location could be reduced by capturing deer and taking them elsewhere. At the present time, the Environmental Conservation Law §11-0505 (3) prohibits the trapping of deer except under special permit issued by the DEC for scientific purposes.

The following discussion of trapping techniques is for informational purposes only.

Methods to capture deer include the use of drive nets, drop nets, rocket nets, corral traps, clover traps, box traps, and remote chemical immobilization using dart syringes. Capturing and relocating deer is difficult and expensive. Costs range from $110 to $800 per deer captured, depending on the method used. Efforts become less efficient as deer numbers decline and deer become more wary. Capture and relocation is also stressful to the animal. Injury and loss of some deer during capture and relocation efforts are common and can be significant, and the long term survival of relocated deer is often low. Personnel handling deer are exposed to potential physical injury from the deer and to accidental exposure to the immobilization drugs.

Another serious constraint on capture and relocation programs is the availability of release sites to receive the captured deer. Release sites commonly proposed include:

***(1) Release to the wild**: Few, if any, areas within the range of the white-tailed deer could benefit from deer releases. Many areas are already occupied by deer, and residents of the receiving area may oppose a release. In addition, moving deer can spread disease and parasites to the local wild deer population.*

Relocated deer are vulnerable since they are unfamiliar with their new range, and deer coming from overpopulated areas are often at a disadvantage due to their poor physical condition. Survival of relocated deer has proven to be poor, with up to three-quarters of relocated deer commonly succumbing to malnutrition, vehicle collisions, or predation within one year.

A DEC permit is required to capture and relocate deer. Permits are not issued to relocate deer to the wild because acceptable release sites are not available and because the poor chances for deer survival do not warrant the risks. (from: http://www.dec.ny.gov/docs/wildlife_pdf/ctguide07.pdf)

Comment 9-1 (Eric Huang, 12/6/10, See also Page 98 of Public Hearing Transcript, 12/6/10): Research shows reducing deer can lead to a reduction in reptiles, amphibians and invertebrates, members crucial to the health of the ecosystem. The DEIS show that no consideration has been given to these species.

***Response 9-1:** The predominant research reviewed by the Trustees confirms that overpopulation of deer causes a loss of understory and reduces biodiversity. The deer management program is intended to reduce the intense feeding on ground level plants favored by deer and therefore promote the growth of understory in the Village. This may benefit other species who rely on that understory for food or cover.*

It is simply counterintuitive that loss of habitat due to the overpopulation of one species would be supportive of the species that depend on that habitat. A healthy understory provides far more habitat than a denuded one, and therefore greater biodiversity. The Trustees acknowledges alternative research conclusions and nonetheless view the return of biodiversity associated with a smaller herd as being beneficial to other species such as reptiles, amphibians and invertebrates that would inhabit that otherwise lost habitat.

Comment 9-2 (Eric Huang, 12/6/1, See also Page 98 of Public Hearing Transcript, 12/6/10): Even if for the moment we just considered birds, research has shown that reducing deer can lead to a reduction in ground nesting birds. Other research has shown significant decreases in bark foraging birds such as woodpeckers. Yet another study has shown decreases in species such as Blue Jays, Northern Cardinal, and Carolina wren when deer are reduced. The point is, as one researcher concluded:

"*management actions taken to regulate deer densities could have the unintended effect of **reducing** local animal diversity*."

Response 9-2: *A review of the references provided by the commentator in the subject letter supports the position that the Board of Trustees has taken. An excerpt from the reference provided by Mr. Huang is as follows (from Casey D., Hein D., 1983 Effects of heavy browsing on a bird community in a deciduous Forest, Journal of Wildlife Management, 47*):

> *"Deer overabundance can affect native vegetation and natural ecosystems in addition to private property and ornamental plantings. Numerous studies have shown that over browsing by deer can decrease tree reproduction, understory vegetation cover, plant density, and plant diversity (Warren 1991). For example, in the Great Smoky Mountains National Park in Tennessee, an area heavily populated by deer had a reduction in the number of plant species, a loss of hardwood species and a predominance of conifer species compared to an ecologically similar control area with fewer deer (Bratton 1979). This alteration and degradation of habitat from over browsing by deer can have a detrimental effect on deer herd health and may displace other wildlife communities (e.g., neotropical migrant songbirds and small mammals) that depend upon the understory vegetative habitat destroyed by deer browsing (VDGIF 1999). For example, deer browsing may affect vegetation that songbirds need for foraging surfaces, escape cover, and nesting (DeCalesta 1997). DeCalesta (1994) found that the species richness and abundance of intermediate canopy nesting songbirds was reduced in areas with higher deer densities. Casey and Hein (1983) found that 3 species of birds were lost in a research preserve stocked with high densities of ungulates and that the densities of several other species of birds were lower than in an adjacent area with lower deer density. The deer density in Lake Monticello was estimated at 130 deer/sq. mile or 50 deer/sq. kilometer. Deer densities of 10 deer/sq. kilometer and greater have been found to hinder the regeneration and maintenance of oak forest habitats (Healy 1997). Additionally, research has shown that deer densities above 7.9 deer/sq. kilometer may have significant negative effects on bird populations which rely on the habitat understory (DeCalesta 1994)."*

The aforementioned excerpt supports the Trustees position on this matter. Loss of understory and reduction in biodiversity adversely impacts the environment and other species dependent on that environment.

Comment 9-3 (Eric Huang, 12/6/10, See also Page 99 of Public Hearing Transcript, 12/6/10): Therefore, if biodiversity is indeed a sincere concern for the Trustees, I call on them to perform the necessary field studies to measure and quantify biodiversity in the village before proceeding with this environmentally impacting plan.

Response 9-3: *See Responses to 9-1 and 9-2. It is not necessary to carry out a biodiversity study in the Village to ascertain the effects of heavy deer browsing. Much of the Village has been denuded by the deer browsing. This fact is obvious to any observer. The very few places in the Village where that has not occurred is only because the deer have been kept from feeding in those areas by fences, plant cages or other forms of protection.*

There are many reports, studies and articles that support the experience of the Village of Cayuga Heights with respect to deer impacting the ecosystem.

Articles in "Wildlife", the magazine of the National Wildlife Federation, describe the impact of whitetail deer on Rock Creek Park, a site near Washington DC, targeted by the Federal government for deer management. Rock Creek Park has a deer density estimated to be 67 deer per square mile, slightly lower than the estimated deer density of Cayuga Heights.

An excerpt from that article:

"The week before the November 2009 census, Ferebee leads a visitor on a short walk from his park office and into the woods. Autumn leaves crunch under his boots. He stops at a small study plot, one of several set up in 2000. It's really two plots, side-by-side, each 15 feet long and 4 feet wide. One plot is surrounded by deer-proof fencing that stands 8 feet high. The other is unfenced. That's not the only difference between them.

In the fenced plot, even in November, waist-high green plants grow—mapleleaf viburnum, euonymus (an invasive species), spicebush, a tulip tree seedling and others. Next door, the unfenced plot contains leaf litter and a solitary spicebush. "They've munched this pretty good," Ferebee says.

"Munched" describes much of Rock Creek Park—a deer-manicured landscape of towering oaks, hickories and other trees, but far less in the way of shrubs or other vegetation. Any palatable plant under 4 feet tall is fair game for whitetails. Monitoring at Rock Creek indicates that as the deer population has grown, shrub cover has declined by roughly 40 percent. Under such conditions, there is less habitat for a range of wildlife, whether small mammals or shrub-nesting birds like Kentucky warblers. "A lot of these smaller critters that live on the forest floor—chipmunks, shrews, even mice—some of the cover that they would naturally have is gone," Ferebee says. That leaves the micro mammals more at risk of predation by the park's owls, hawks and foxes.

Even Rock Creek's trees—composing the largest unbroken forest in the Washington area—may be vulnerable to deer. By counting the dwindling number of tree seedlings in unfenced study plots, park staff have shown that tree regeneration rates are declining and are well below the level considered necessary for forest regeneration. Yet if park habitat is ailing, the deer themselves seem in good health. Deer killed by cars—the only whitetail predator in Washington—and examined by park staff show no sign of malnutrition. Another indicator of good condition, says Ferebee, is that most does have twin fawns. "It doesn't take long to increase the population that way."

http://www.nwf.org/News-and-Magazines/National-Wildlife/Animals/Archives/2010/Deer-in-Rock-Creek-Park.aspx

The New Jersey Audubon Society has published a Policy White Paper on Forest Health and Ecological Integrity (see http://www.njaudubon.org/Portals/10/Conservation/PDF/ForestHealthWhitePaper.pdf*. The paper discusses the impacts of overabundant deer. It presents the implications of taking no action on deer populations, and it discusses potential solutions and the success of deer management in parks and suburban locations. The Audubon Society now advocates for state policies to manage deer herds.*

While most studies have been done on forest landscapes, it is clear that the ecological impacts of overabundant deer occur in all but the most urbanized landscapes.

Comment 13-1 (Tamara Awerbuch, 12/14/10): After reading your DEIS pertaining to potential outcomes of management programs to reduce tick populations by deer, I was surprised at the lack of a scientific basis, moreover at the incorrect assumptions about the relationship between deer and the so called "deer tick". The lifecycle of the tick is quite complex, it is only the adult tick that takes a blood meal from deer, lays eggs and then dies. Deer do not carry the agent of Lyme disease, the white footed mice do.

In Crane Beach, where I conducted my study, people thought if they killed deer they would reduce the number of ticks, and therefore control lime disease. Deer were reduced (from around 400 in 1983 to just over 100 in 1991), but Lyme disease kept growing. The question was why? We killed deer but people still got Lyme disease.

So I did a study using a mathematical model to capture the lifecycle of the tick. Because the ecology of Lyme disease is so complex, it is very hard to look at deer and tick, mouse and tick, one by one. You have to link all the factors together in a way that lends itself to mathematical analysis. (refer to chart that is in Appendix).

So there is no linear correlation between killing deer in the tick population.

On Monhegan Island it was possible to get totally rid of the tick population because all deer were killed and no other animals were there to take over the empty niche left by the deer to support the adult tick.

So in summary, there is no scientific justification for a deer killing program in your community of Cayuga Heights, New York. There are certainly alternative ways for reducing the risk of Lyme disease. As we saw using data from Ipswich, Massachusetts, where there was an attempt to reduce the risk of Lyme disease by killing deer over about 10 years, I was able to show with a mathematical model why this intervention did not work.

> ***Response 13-1:*** *As indicated in the Draft EIS and as set forth by the State of Connecticut in their studies "the incremental removal, reduction or elimination of deer has clearly been shown to substantially reduce tick abundance in many studies." Appendix D contains a recent report from the Board of Health in Dover, Massachusetts. That report recommends responsible management of the deer population via progressive reduction of deer density with regulated and monitored hunting to manage the health threat of Lyme's disease and ensure the present and future well being of the species and of the habitat.*
>
> *While Dr. Awerbuch's research is interesting it does not appear to be conclusive and her letter does not definitively refute the studies carried out by public health officials on this matter. She forthrightly points out the complexity of the analysis.*
>
> *The Board of Trustees acknowledges that there may be research that does not support the findings of the state of Connecticut and other government agencies in connection with this subject area. Nonetheless, many public health agencies*

do take the view that there is a connection between deer densities and the incidence of Lyme disease. The Board of Trustees has chosen to support that position.

The Trustees also acknowledge that the lowering of deer population to reduce the incidences of tick numbers is only one of a number of reasons that this project is being considered.

Comment 14-1 (Kristina M. Baier, 12/13/10): This comment states that net and bolt as a means of controlling the deer population is inhumane and illegal. Believes it will have a negative impact on Cayuga Heights and the greater Ithaca/Tompkins County community and will degrade traditions of rational public policy and nonviolent conflict resolution.

Response 14-1: *One alternative to culling deer, as set forth on page 6-2 of the Draft EIS was to trap deer and use a captive bolt gun to euthanize the animal. No decision has yet been made as to whether or not this alternative would be employed. However, the Board of Trustees believes that this device which has long been reviewed, evaluated and utilized in the cattle industry, is a humane method for euthanizing deer. The animal is killed immediately by the use of this device. It is potentially safer than a firearm. It is considered to be an effective form of euthanasia by the American Veterinary Medical Association.*

With respect to the tradition of rational public policy, the Board of Trustees has sought input and discussion for many years regarding its deer management program, including the establishment of a citizen's committee to make recommendations regarding the deer population in the Village. Any public policy established as a result of these proceedings will have been vetted amongst local citizens, outside parties, involved agencies, Village department heads and members of the Board of Trustees.

With respect to the potential degradation of non-violent conflict resolution, the Board of Trustees does not share the view that its deer management program is in opposition to nonviolent conflict resolution. The culling of deer by firearms or a captive bolt gun is far more humane and less violent than the conflicts that occur when vehicles hit deer on local streets and highways. A deer/vehicle collision (DVC or DVA) conflict oftentimes leaves the passengers in the car emotionally shaken, the damage to the car substantial, and the damage to the animal (when not fatal), distressing, not only to the animal but to the citizens who see the evidence of the physical harm to the deer, long afterwards.

Comment 15-1 (Angie Baker, Ithaca, 12/6/10): Requested data behind the DEIS statement that there are too many deer. Indicates that there is no data but only a supposition put forth by Paul Curtis who stands to benefit financially by enactment of this remediation plan.

Response 15-1: *The Board of Trustees acknowledges that the estimates of deer population are estimates. The estimates have been arrived at, however, by field reviews by Dr. Curtis and his colleagues in the Department of Natural Resources at Cornell over many days of observation and study, the most recent being made in a letter from Dr. Curtis dated 9 December 2009 as was provided in Appendix A of the Draft EIS.*

The Village of Cayuga Heights is more than 1000 acres in area and is not fenced. That means that wildlife move in and out of the Village boundaries continually. Given this fact, the Board of Trustees is satisfied with an estimate.

Moreover, given the heavily browsed landscape understory in the Village, which can be readily observed throughout the Village, and an undesirable and increasing number of annual deer/vehicle collisions, and data collected by Cornell University in areas proximate to the Village, there is substantial evidence that the deer population is very high.

Tagging and collaring deer, which is proposed as part of the POA, will assist in future monitoring activities.

Comment 15-2 (Angie Baker, Ithaca 12/6/10): Paul Curtis has also co-authored with White Buffalo, a company whose sole service is the slaughter of wildlife, and who the Cayuga Heights Trustees are looking to execute their plan, a publication entitled "Managing White-Tailed Deer in Suburban Environments -- A Technical Guide". In this guide, DeNicola, the owner of White Buffalo, and Paul Curtis, et al, in effect, disparage all but execution of deer as the most optimal means of control.

There are many non-lethal, cost-effective, and successful options the Trustees refuse to consider, implement or allow.

Response 15-2: *The Trustees and the DRAC have considered alternatives and those alternatives were so noted in the Draft EIS (See Chapter 6 and Appendix E of the DEIS). The no action alternative was considered and sterilization with no culling was also considered. The option of trapping and relocation has been discussed at public hearings.*

Comment 16-1 (Edita Burnkrant, 12/15/10): The estimated 160-200 white-tailed deer in Cayuga Heights belong to an indigenous species with whom the human community can and should coexist. It is ecologically irresponsible for leaders of the community of 3,273 people to claim that only 30 deer or less should be allowed to live in their native habitat.

The possible unnatural social and biological effects of the sterilization scheme are unknown. If nature allows for the presence of 160-200 deer in Cayuga Heights, then that is the number of deer the terrain can suitably sustain. That deer thrive in Cayuga Heights is a benefit not a problem.

Response 16-1: *It's the Village's view that it is ecologically irresponsible to allow an animal population to reach a size that begins to overwhelm other populations in the community and adversely affect natural and landscaped plant species, and potentially, public health. Deer management has taken place in many other communities using management techniques similar to those being considered by the Village of Cayuga Heights. There have been no reported unnatural social and biological effects associated with those programs that the Village is aware of.*

Comment 16-2 (Edita Burnkrant, 12/15/10): There is, however, a problem involving suburban development. The impulse to blame other species for problems they didn't create should be challenged, for the real problem in Cayuga Heights, as in many communities, is one of her own making as we usurp more natural spaces to residential, recreational, and commercial development, causing animals to concentrate into increasingly smaller areas.

Response 16-2: *The overall density of deer in New York State is far lower than the density of deer in the Village of Cayuga Heights according to Cornell University studies. Further, there has been exceedingly little development of any kind, whether residential or commercial, in the Village for over fifty years. There is ample natural space around Cayuga Heights for deer to live. The space has not been usurped by human activities. Rather the white-tailed deer, opportunistically move into habitat that provides plenty of food and no predation.*

Comment 16-3 (Edita Burnkrant, 12/15/10): The Draft Environmental Impact Statement cites a lack of hunting in residential areas as a contributory factor to a thriving deer population. The reframing of the issue is necessary. We urge you to implement changes in the community that would inform residents and lessen any perceived conflicts with deer. Educating landowners as to some simple tips is sensible and can have long-term positive results. Examples: planting daffodils rather than azaleas; planting high bushes to decrease visibility into gardens.

Response 16-3: *There is ample information available via public sources that would allow residents to minimize deer conflicts and carry out landscape planting that does not exacerbate the population problem. See, for example*

http://www.deerresistantplants.com, or

http://www.deer-departed.com/deer-resistant-landscaping.html

Such matters will not address the overpopulation of deer in the Village, however.

Appendix E has an article on deer resistance landscaped plants and as noted in the Introduction of this FEIS. Such information is also provided on the Village's web site.

Comment 16-4 (Edita Burnkrant, 12/15/10): Helpful changes might also include revisions to the current fencing ordinance so that residents can protect their gardens from deer if desired. By restricting residents in connecting itself with a plan that would allot substantial payments to animal-control firm, Cayuga Heights would continue to exaggerate the perception of a conflict in need of buying a solution.

> ***Response 16-4:*** *The current Village Zoning Ordinance allows for fences over 4 feet with a 25 foot setback in the front yard and a 15 foot setback in the side and rear yards. At those distances or more, a property owner can construct a fence without limitations on height or material.*
>
> *In August 2010, the Board conducted a public hearing on a proposed local law that would have allowed temporary deer fencing at the property line in the side and rear yards for 5 years. This proposed local law did not pass when the Board's votes split 3-3.*
>
> *The Board is currently considering a new proposed local law which the Board will discuss further in March. This proposed local law (a copy of which is available on the Village web site) would allow the same options for fences as are allowed under the current Ordinance, and would also allow for 8 foot fencing at the property line in the rear and side yards, with some restrictions. Additionally, this proposed local law would allow exclosure fencing within the 25 foot front yard setback area, with stated conditions.*
>
> *The Board does not consider fencing an alternative to deer population reduction, as fencing simply relocates deer onto unfenced areas. However, a majority of the Board feels that residents should be given enhanced options for symptomatic relief through a modification of the fence regulations in the Village's Zoning Ordinance.*

Comment 16-5 (Edita Burnkrant, 12/15/10): Anthony DeNicola, the president of a firm that carries out deer culling activities, downplays the safety issues surrounding a deer control plans.

> ***Response 16-5:*** *The Village is open to receiving data with valid statistics regarding public safety mishaps connected with deer culling. The Village has not encountered any such evidence. If there is a basis for the above comment, the Village welcomes it so that it may review and validate it.*

Comment 16-6 (Edita Burnkrant, 12/15/10): The DEIS outlines a morally and ecologically unjustifiable course of action, one that undermines the enlightened reputation of Cayuga Heights. This plan for aggressive domination of the deer has a degrading effect upon the entire community, as both a practical matter in terms of physical safety for children others, and psychologically.

> ***Response 16-6:*** *Comment noted.*

Comment 18-1 (Colb, Dorf, Hockett, Shiffrin, Underkuffler, 12/13/10): The DEIS parades assertions but does not provide adequate support on such vital matters as the determination of the current deer population of Cayuga Heights based on a reliable field study, the acquisition of community specific biodiversity data, the analysis of the likelihood that deer will migrate into Cayuga Heights from surrounding areas, or the likely impact of contraception with vaccine or surgical sterilization, relaxing the fence ordinance, or the combination of these and other non-lethal methods of reducing the level deer human impact.

Response 18-1: *The New York State Environmental Quality review act requires that "EISs should address only those potential significant adverse impacts that can be reasonably anticipated..." And, "EISs should not contain more detail that is appropriate considering the nature and magnitude of the proposed action and the significance of its potential impacts" (see 6 NYCRR Part 617(b)(2)).*

Reducing the deer population is expected to have generally positive impacts on biodiversity. It would not be of value to examine biodiversity in great detail, given the mandate of SEQRA and the likelihood of minimal adverse impact on biodiversity as a result of the deer management program.

It is the Village's view that the DEIS provided ample information regarding the deer population, based on input from nationally recognized experts (See letter from Paul Curtis in DEIS appendix A.)

Regarding biodiversity, see response to comments 9-1 to 9-3. With respect to deer migration, the Village acknowledges that deer move in and out of the Village boundaries.

With respect to contraception, in order to use contraceptive methods, a deer must be darted and tagged and treated. The same deer must be treated again in two years. At present there is no commercially available contraceptive drug for wild deer. The process is unwieldy, and time consuming. The Village's view is that if a deer is darted or trapped and tagged, the permanent method of sterilization makes more sense. Tagging does will also make it easier to survey the deer population in the future.

With respect to other comments, see Response to Comment 16-4, and other responses herein.

Comment 18-2 (Colb, Dorf, Hockett, Shiffrin, Underkuffler, 12/13/10): The EIS thus lists alternatives, but in violation of State law, it fails seriously to consider those alternatives. Further, the very choice to define the goal the action itself as being to reduce the deer population, rather than to reduce the impact of deer-human conflict, appears to be a device used to avoid responsibility for taking a "hard look" at the numerous non-lethal alternatives, some of which, such as a more flexible fencing ordinance, are being successfully used in neighboring municipalities.

Response 18-2: *The Draft EIS identified a large number of alternatives, including those considered by the DRAC in its deliberations as it developed the concept for the management plan. The DRAC seriously considered all alternatives and presented the advantages and disadvantages of each one considered (see DEIS Appendix E). It is the Village's view that the population of deer in the Village is excessively high and that density has had and continues to have undesirable repercussions. Thus, the goal of reducing the population of deer, as a means of reducing the impact of deer-human conflict is valid.*

Comment 18-3 (Cobb, Dorf, Hockett, Shiffrin, Underkuffler, 12/13/10): In the Environmental Assessment Form (Appendix A of the DEIS), the examination of viable alternatives with demonstrably lower negative impacts is repeatedly circumvented by the circular declaration that "any modification of the plan would result in not lowering the deer population, which is the goal of the action". With due respect, the issue at hand is not a widespread objection amongst the citizenry to the very existence of the deer, but to the impact caused by conflicts with the deer. By reducing the alleged problem to too many deer, the DEIS opens the door to sidestepping the need to analyze and quantify the various dimensions of deer-human conflict and the proposed solutions. Doing so would lead to a more holistic understanding of the issue, a more meaningful evaluation of alternatives, and a more effective of valuation of the success or failure of the program, all of which would serve the underlying purpose of our state's environmental laws in the best interests of the community.

Response 18-3: *The DEIS is not intended to serve as a justification for a project, but rather to assess the potential adverse environmental impacts of a proposed project. The Village has studied the need for the deer management program for many years. The DEIS presented those findings and recommendations and went on to assess the potential environmental impacts.*

Comment 18-4 (Cobb, Dorf, Hockett, Shiffrin, Underkuffler, 12/13/10): The DEIS nowhere considers the impact on the deer themselves. It calls the "net and bolt" method of slaughter a form of "euthanasia" a particularly odd term to describe killing of healthy animals. As for the method itself, even those who practice it admit that causes great suffering and therefore cannot plausibly be termed "humane".

Response 18-4: *As taken from the AVMA Guidelines on Euthanasia (see http://icwdm.org/Publications/pdf/ControlMethods/Euthanasia/AVMA2007report.pdf, "the term euthanasia is derived from the Greek terms eu meaning good and thanatos meaning death. A "good death" would be one that occurs with minimal pain and distress. In the context of these guidelines, euthanasia is the act of inducing humane death in an animal. It is our responsibility as veterinarians and human beings to ensure that if an animal' life is to be taken, it is done with the highest degree of respect, and with an emphasis on making the death as painless and distress free as possible. Euthanasia techniques should result in rapid loss of consciousness followed by cardiac or respiratory arrest and the ultimate loss of brain function. In addition, the technique should minimize distress and anxiety*

experienced by the animal prior to loss of consciousness. The panel recognizes that the absence of pain and distress cannot always be achieved. These guidelines attempt to balance the ideal of minimal pain and distress with the reality of the many environments in which euthanasia is performed. A veterinarian with appropriate training and expertise for the species involved should be consulted to ensure that proper procedures are used".

The AVMA uses the term euthanasia in a way that is different than its common application to humans.

Euthanasia as defined by the AVMA, when properly carried out on an animal, is far more humane than the pain and suffering and potentially slow death that can accompany a deer/vehicle accident, or an insufficient or improper food supply.

Comment 18-5 (Cobb, Dorf, Hockett, Shiffrin, Underkuffler, 12/13/10): The DEIS does not consider the evidence that captive bolts fired at netted deer frequently missed their target, causing prolonged deaths. Moreover, the plan is inherently cruel, both of those animals targeted for unnecessary slaughter and to those marked for survival will be forced to watch their herd mates systematically massacred in front of them, whether the killing is carried out with firearms or captive-bolt devices. Exacerbating this cruelty is the fact that it will be repeated, year after year, and will subject large numbers of gentle living beings to terrible physical pain, emotional agony, and death.

Response 18-5: *These matters were not presented in the DEIS, as they are not known to frequently occur. SEQRA calls for a discussion of likely effects of an action. Based on discussions with people that have carried out net and bolt procedures on deer, "missing the target" is quite rare. The captive bolt device has been developed to take an animal's life rapidly, with minimal pain and suffering. There is no evidence of "emotional agony" in the animal, although the likelihood that the animal experiences fear is acknowledged. Fear in animals is simply a survival instinct that directs an animal to flee or hide through biochemical triggers.*

Comment 18-6 (Cobb, Dorf, Hockett, Shiffrin, Underkuffler, 12/13/10): Numerous people in our community have publicly expressed the pain and anxiety they feel at the prospect of individual deer whom they have come to know being violently killed. Some of the people likely to be traumatized by the violent plan will be children. Others may be those with pre-existing mental health conditions connected to previous exposure to violence that could be exacerbated through inadvertent witnessing the sights or sounds of the killing process or even by knowledge of being in close proximity to locations where mass killing is being carried out. The DEIS callously dismisses such actual traumatization as mere "community controversy", which, it states "is not a criteria for determining significance". Yet the emotional well-being of community residents is an aspect of "human health" that must be specifically and objectively assessed in the DEIS. "Human health" is expressly included in SEQRA's definition of "environment" [See 6NYCRR 617.2(1).] Additionally, "the creation of a hazard to human health" is

listed in the SEQRA regulations as an "indicator of significant adverse impacts on the environment". (See 6NYCRR 617/7(c)(1)(vii).]

Response 18-6: *It is the intention of the Village to carry out deer management activities as discretely as possible to protect public safety and minimize the type of experience described in the above comment. The Village has been deliberating deer management for many years and has invited people to participate in the review in multiple ways, also as a means of addressing people's beliefs and emotional reactions. This history was clearly set forth in the DEIS.*

However, if "emotional health" were used as the measure of a significant environmental impact, any project opposed by another would have "an adverse impact on the environment." When people believe something should not happen and it appears likely that it will, emotions are likely to arise that can range from annoyance or frustration to "trauma". There is no practical and objective way to measure such reactions, nor is emotional opposition a legal basis to define a potential adverse impact, nor is emotional opposition an environmental impact in any respect, much less an impact that is required to be evaluated under the SEQRA regulations.

Comment 18-7 (Cobb, Dorf, Hockett, Shiffrin, Underkuffler, 12/13/10): Discharging deadly weapons in close proximity to homes and roadways as the deer killing plan entails-poses danger to the people of our community. It is impossible to illuminate this danger completely, and it will affect more people than those who reside in the village, including those who live in neighboring municipalities as well as those who drive through the village's many roadways. The precise location of killing will apparently remain undisclosed; the DEIS lists it as the entire Village of Cayuga Heights. Thus, people in the vicinity will be unable to protect themselves and their loved ones both human and nonhuman from potential harm.

Response 18-7: *Comment noted. Any time an action or project is implemented there is the potential for mishaps. These can occur during a construction program, a community event, a large gathering of people, practically anything. Decision makers must weigh the risks, minimize those risks, monitor activities as they take place and assess what works to reduce risks to the maximum extent practicable.*

Based on feedback from people who carry out these types of deer management activities, there have been no known adverse safety impacts from the use of specialists to cull deer by sharpshooting. The Village has determined that the work can be done without undue risk to Village residents.

Comment 19-1 (Jeff Cox, 12/6/10, See also Pages 44-45 of Public Hearing Transcript, 12/6/10): Ten years ago I served on the Cayuga Heights Deer committee. Two extensive surveys were done during that period to determine what residents

actually wanted. The final survey was sent to everyone of the approximately 800 stakeholders in the response rate was high. While, like now, the majority of residents wanted the reduction, only 1/3 were willing to kill deer. No such survey has been done since then to determine whether the community as a whole now favors killing. Without this information, it is difficult for the community to know that it is properly represented by its policies and that it is not being bullied and taxed to serve the needs of a minority interest.

> ***Response 19-1:*** *Comment noted. The Village has been working with the community for many years to obtain input and feedback. Please refer to the Village website for background on such interactions.*
>
> *It is the Board of Trustees' job to measure the sentiment in the community and make its decisions on how to manage the Village accordingly. Input is obtained in many, many ways - through public hearings, discussions with residents, e-mails and of course voting during Village elections.*
>
> *NYS law does not provide legal authority for a municipality to conduct a survey of its residents or hold a referendum. It would not be lawful for the Village to do so, regardless of the source of funding for the survey. If a private person or entity wished to conduct a survey of Village residents, the Village would consider the methodology and results to the extent relevant to any pending decisions.*
>
> *It should be noted that the Village elections conducted over the past several election cycles served as a de facto survey of Village residents, as the primary issue dividing the candidates for Board positions was their support of, or opposition to, a deer management plan that involved culling of the herd. In the case of each such election of a Board member, the candidate who supported such action by the Village was elected. It should also be noted that at both of the public hearings conducted in the course of completing the Village's SEQR review, a significant majority of the Village residents who spoke or submitted comments were in favor of such a management plan.*

Comment 19-2 (Jeff Cox, 12/6/10): If deer are allowed to live in this community, and the present proposal calls for all but 30 or so to be neutered, those 30 deer may still be the ones who visit on the gardens of the people who most vehemently want them removed. Deer migration will continue to fill the spaces left by killing. Also not considered are the people who actually enjoy deer or who will tolerate their presence as a pesky neighbor but who consider paying more for their removal an exorbitant, unacceptable or immoral solution. These same people might prefer to see their money that will begin to by taxation used for improved roads and other community services.

> ***Response 19-2:*** *See Response 19-1 and 23-10. The Village acknowledges that there will be migration of animals in and out of the Village boundaries in the future. And if this program is implemented, a lower deer population will still continue to inhabit the Village and continue to consume unprotected landscape*

materials and gardens (albeit at a likely lower rate than at present). Deer will still be enjoyed by most residents. They will not be exterminated.

In a democracy, people elect those whose platforms are generally consistent with the majority of voters, and decisions are then made by those elected individuals. However, it is rare that decisions on government spending is supported by 100 percent of the taxed population.

Comment 22-1 (Frithjof Hungnes, 12/15/2010): wonders about the safety of the program within an area so small and with so many homes close together. Is it possible to do this safely?

Response 22-1: *See Response to Comment 16-5.*

Comment 22-2 ((Frithjof Hungnes, 12/15/2010): As I understand that real estate prices will decrease if this plan is put into effect, both because of the divisive and fearful atmosphere, and also because of the increase (5% per year over 10 years) in the already very high property taxes that will be levied to fund this deer-killing program.

Response 22-2: *Comment noted. Real estate prices in other communities where deer management has taken place have risen and fallen with the regional real estate economy, not because of deer management. The communities surrounding the Village of Cayuga Heights have for many years had some form of deer population control. In particular, the Village of Lansing, adjacent to and north of Cayuga Heights, has for well over a decade permitted bow hunting through DMAP. Cornell University, adjacent to and east and south of Cayuga Heights, has conducted culling and sterilization operations on an ongoing basis for many years. In the Town of Ithaca, adjacent to the east, hunting and managed hunt programs are permitted. In none of these communities has there been any indication that such activities have had any impact on property values.*

Comment 23-1 (Lowell Garner, 12/16/2010, See also Page 89 of Public Hearing Transcript, 12/6/10): My comments will draw from my practice of medicine of 25 years, educational background and most recently course work at Cornell University in landscape architecture, plant science and integrative pest management. The major source for supportive information will derive from the National Park Service Rock Creek White-Tailed Deer Management Plan DEIS (NPS) completed July 2009 that has detailed references.

Overall, it is my assertion that the CHDEIS has not met the standards required under NY SEQR process particularly in the presentation of accurate data supportive of its conclusions. The format I will use to support this is as follows: I will bold the page in the CHDEIS when the topic I take issue with first appears. The specific statement will be placed in italics, followed by a 'Comment' section that includes personal knowledge as well as referenced sources. Additional pages in the CHDEIS that are later mentioned, which allude to the same topic, will be discussed in this section. This may be followed

by further commentary as it relate to the NPS document mentioned above. I have made every attempt to restrict my comments to the CHDEIS.

Response 23-1: *See Response to Comment 18.3. Comment noted.*

Comment 23-2 (Lowell Garner, 12/16/2010): Pg. 1-1 of the CHDEIS: *...A study committee was subsequently formed with a view towards reducing the deer population. Efforts were made at deer sterilization in the early 2000s, but ultimately did not result in long term herd reduction.*

Comment: The Cayuga Heights plan acknowledges that sterilization appeared to work. It is an acknowledged fact that faulty serum was used as follow-up so that there was ultimate failure of the contraceptive approach (stated clearly on pg. 2-6 of CHDEIS: "... that study, a two year research trial (using surgical sterilization by tubal ligation) was undertaken in the Village and that did reduce the size of the deer herd. That study morphed into a year of contraception, which failed in 2005 due to a faulty vaccine." The misinformation that contraceptive modalities have repeatedly failed has been repeatedly stated to buttress arguments for lethal management of deer. Tubal ligation is permanent and is 100% effective. Because tubal ligation is non-lethal (except in cases of perioperative mortality) it would be acceptable to most who object to lethal means. It more than likely would require a phased-in plan approach, which is already part of the CHDEIS. Because Cornell has among the most extensive experiences in the country on this, there is no reason not to pursue this further. Although twice the cost, it remains as effective as killing. Control of fertility is constantly evolving and provision in the CHDEIS is included to continually reassess this option.

From the NPS:

APPENDIX C. REVIEW OF WHITE-TAILED DEER FERTILITY CONTROL

...The use of reproductive control in wildlife management has been assessed for several decades. Its use has gained more attention, as the public has become more involved in wildlife management decisions. Interest in reproductive control as an innovative alternative to traditional management methods, has led to the current state of the science (Baker et al. 2004). Often, the use of reproductive control is promoted in urban and suburban areas where traditional management tools, such as hunting, are publicly unacceptable or illegal due to firearm restrictions (Kilpatrick and Walter 1997; Muller, Warrnen, and Evans 1997)

CURRENT TECHNOLOGY

The area of wildlife contraception is constantly evolving as new technologies are developed and tested ...

IMMUNOCONTRACEPTIVES

... Curtis et al. (2002) demonstrated approximately 85-90% efficacy for both GnRH and PZP immunocontraceptive vaccines in white-tailed deer. Over a 13-year period on

Assateague Island National Seashore, contraceptive efficacy in PZP-treated horses ranged from 92 to 100% (Kirkpatrick and Turner 2008).

NON-IMMUNOLOGICAL REPRODUCTIVE CONTROL METHODS
... Leuprolide acetate: Leuprolide is one GnRH agonist that has been studied. Tests reveal that when it is administered as a controlled-release formulation, it results in 100% pregnancy prevention in treated female elk and mule deer (Baker et al. 2002, 2004, Conner et al. 2007). In addition, the treatment is reversible, and the effects last only for a specific period of time (90-120 days) (Baker et al. 2004; Trigg et al. 200 I). Advantages of leuprolide acetate are that it is 100% effective in preventing pregnancy, is safe for human consumption (Baker et al. 2004), can be delivered remotely (Baker et al. 2005), does not result in physiological side effects, and short-term behavioral effects are minimal (Conner et al. 2007).

... Surgical sterilization is an invasive procedure generally performed on females. Successful implementation is generally 100% effective in preventing pregnancy and this method is common in managing domestic animal fertility .... Conditions that may contribute to successful use of sterilization to reduce abundant deer populations include small population size and demographic closure (or nearly so) (Merrill et al. 2006).

> ***Response 23-2:*** *Monitoring, evaluation and deer management adjustments will be ongoing. The feedback from the SEQRA and EIS processes will help to inform and shape any proposal developed by the Trustees. Even since the DRAC submitted its report to the Trustees in May 2009, additional options have become available, including the use of mobile sterilization units and the recently authorized use of netting and bolting. The Village will continue to track and evaluate deer control options as they evolve or become available.*
>
> *Once there is a core population of tagged does, the Village can implement a deer census using a camera survey. Over time, the Village will monitor the total deer population, both sterilized and unsterilized does. This information will enable the Village to determine the amount of in-migration of unsterilized does. The Village will then determine the best method to make any further reductions to or maintenance of herd size.*
>
> *If new technologies or mechanisms become available that will be as effective or more effective than the techniques employed under this program, the Village will certainly consider them, and modify its program accordingly.*

Comment 23-3 (Lowell Garner, 12/16/2010): Pg. 1-1 of the CHDEIS: *At the present time, the estimated population of deer in the 1.8 square mile Village of Cayuga Heights ranges between 160 and 200.* Comment: On page 68 of CHDEIS Appendix A Professor Paul Curtis asserts "The last reliable population estimate I conducted for the deer herd in the Village of Cayuga Heights was in the spring of 2006." This again is cited on page 1-7 of the CHDEIS. I believe this is now the Winter of 2010- 4 years later. We have no idea what the current population is. It is well known that deer populations can fluctuate

significantly due to environmental conditions such as food availability (e.g. acorns) and weather. To assume a 10% rise per year (and his letter states just that apparently based on a *single* data point of a 7% increase from 2005 to 2006), it can only be conjecture at best.

From the NPS: I took the data from Rock Creek below and calculated the % variation from year to year of *seven* data points. Which single point should we have used below to have estimated the future deer population?

Had we chosen 3 of the years (2002,2004,2005) no action would have been even warranted! It is clear depending what year was chosen for examination, this would have critically influenced the preferred plan. This same comment is applicable to remarks on pg. 1-7 "... based on projections by the DRAC", which continues to use Dr. Curtis' best 'guess'.

> ***Response 23-3:*** *Comment noted. One of the Village's goals is to bring the deer population to a level more consistent with a rural environment, that of about 15 deer per acre. Whether the deer population is 160 or 200, is thus not that relevant. If the population at the time of actual implementation of program elements is lower that the current estimate, the management program will be that much easier and less costly to implement.*
>
> *Monitoring of the program will also provide feedback to the Village as to population dynamics as time passes. As deer are sterilized, tagged and collared, more information will be available regarding future population dynamics.*

Comment 23-4 (Lowell Garner, 12/16/2010): Pg. 1-2 of the CHDEIS:...*water contamination through substantially higher levels of untreated wastes in stormwater runoff.* Comment: This is conjecture only and nowhere in the CHDEIS is this contamination documented. Page 3-4 of the CHDEIS reasserts this conjecture. No mention of fecal waste contamination ever appears in the entire NPS document although it talks about stormwater and surface water repeatedly. Historically, the Village has been careless in its duty to protect the watershed for other causes. It therefore surprises me in light of these prior experiences that the Village cannot supply more information.

> ***Response 23-4:*** *The actual statement in the DEIS says that "..deer feces are deposited daily in the local watershed and the majority of it is washed into local watercourses and storm sewers, contributing to higher biological oxygen demand in local water systems and increased levels of organic nutrients that come from mammal wastes."*
>
> *A more accurate statement would be "..deer feces are deposited daily in the local watershed and it is likely, since there is no structured clean up of deer wastes, that the majority of it is washed into local watercourses and storm sewers. When mammal wastes are carried into local watercourses, it often contributes to higher*

biological oxygen demand in local water systems and increased levels of organic nutrients that come from mammal wastes."

Since it is also likely that dog and cat feces are washed into local watercourses and storm sewers from residential yards and other spaces, it would be impossible to differentiate between the wastes from household pets, and deer. No such study has been undertaken.

There is no evidence of carelessness in the Village's policies or practices in protecting the local watershed.

Comment 23-5 (Lowell Garner, 12/16/2010): Pg. 1-2 of the CHDEIS:... *It is expected that this program will, once implemented, result in* a *reduced and stable deer herd in approximately three to five years.* Comment: No data has been supplied to support this assertion.

Response 23-5: *Comment noted. That is the goal of the program. It cannot be known how long it will actually take until the program is initiated and the effectiveness of the program is be monitored.*

Comment 23-6 (Lowell Garner, 12/16/2010): pg. 1-4 of the CHDEIS:... *The smaller deer population will likely reduce deer/car accidents*

Comment: there is no data provided in this report as to the traveling speed of vehicles involved in deer collisions. In data that includes this variable, on average 85% of vehicles are traveling 35 mph of more. The Village speed limit is 30 mph. Enforcement of the Village speed limit will not only result in fewer collisions but also enhance pedestrian, bicycle, and domestic and wild animal safety. The table below (see Letter 23 in Appendix) supports the contention that the roads at highest risk for speeding in Cayuga Heights also have the most accidents. Page 3-3 of the CHDEIS restates this point without pointing out the deficiency of this observation.

Response 23-6: *Comment noted. The speed limit on Village roads is 30 mph, with a 15 mph limit in the school zones. The CHPD are known for rigorous speed enforcement.*

Chief Boyce has identified the locations of deer-vehicle accidents by street from 2003-2010. A copy of this chart is provided in Appendix C.

Comment 23-7 (Lowell Garner, 12/16/2010): Pg. 1-4 of the CHDEIS: *...It is expected that in the long term, local vegetative diversity and wildlife habitat will improve..* Comment: The word 'expected', without the performance of controlled exclosure experiments for a suburban landscape, is wishful at best, considering that surface water runoff from suburban landscape is known to contain significant herbicidal loads.

Response 23-7: *There have been no reports of vegetative die off, to the Village's knowledge, from stormwater runoff. It is known, however, that in enclosed plots where deer cannot browse, the density and variety of vegetation is greater, often much greater than in unprotected areas. See Response to 9-3. Planting a garden in the Village without a fence, versus a garden with a fence, easily bears this out.*

Comment 23-8 (Lowell Garner, 12/16/2010): Pg. 1-4 of the CHDEIS: *... Culling activities are likely to involve the discharge* of *firearms in the VCH. Mr. Anthony Denicola, the owner* of a *firm that carries out deer culling activities, advises that in 15 years* of *such work and the culling* of *some 9,000 to 10,000 deer, there has never been an incident* of *harm to people, nontarget animals or property in connection with said activities (personal communication, 9/28/10...* Comment Mr. DeNicola stands to benefit significantly in both recognition and financially as a private consultant if this plan goes forward (although it may not be obvious since White Buffalo, Inc. is currently seeking tax exempt status as a public charity according to its own website). To not corroborate his statistics of 'no incidents', is abandonment of responsibility by the government body that is supposed to protect its electorate. Has a search been done to see if any civil or statutory actions have been taken against him or White Buffalo, Inc.? Have organizations been contacted that have utilized his services to see if any untoward outcomes have been associated with lethal action? "No record of incidents" is by his account. In fact, I contacted the Kansas Department of Wildlife and Parks after reading about an incident, which possibly could disturb some public officials, should they consider hiring him. I was told they keep no such records. There are no national clearinghouses that even keep these statistics; some states do (e.g. NY) and some don't.

Response 23-8: *The Village has made no commitment to White Buffalo or to Anthony DeNicola, PhD, or to any other contractor concerning their involvement in any deer management plan that the Village adopts. As a very preliminary step in considering available options, the Village has reviewed material found on line describing White Buffalo. Among that information, the Village has reviewed their business plan/annual reports.*

The Village will conduct the evaluations or background checks that are standard practice for the Village's engaging contractors before the Village enters into a contract with White Buffalo or another firm. The Village contact with White Buffalo up to now has been only for informational purposes.

Because the Village has not yet approved a deer management program, it would be premature to be evaluating any particular contractor at this point. The Village is currently working to identify other potential firms/organizations that perform similar wildlife management services, though thus far has not found any.

Village representatives have met with Cornell Wildlife experts and several DEC officials during this SEQRA proceeding. One element of that discussion

highlighted that working within the restrictions of the 500 foot rule may dictate a hybrid approach, combining the services of a firm like White Buffalo and the resources at Cornell.

Comment 23-9 (Lowell Garner, 12/16/2010): Pg. 1-5 of the CHDEIS: ...*While the culling* of *deer,* as *proposed by the Village, may be experienced* as a *potential significant impact to the social conscience* of a *portion* of *the VCH community...* Comment: The lethal option introduced (not mentioned publicly prior to the CHDEIS), to be done in conjunction with sterilization, is trapping and use of a penetrating bolt, sometimes referred to as netting and bolting. This lethal method will not only create greater public dissent due its brutality but will amplify neighbor-to neighbor conflict due to significantly less property restrictions of where the technique will be permitted. No 500' sign-off is required. This will place a burden on the community as well as public safety departments. This is evidenced by the fact that a Freedom of Information request was necessary to find out that net-and-bolt was being considered as late in the EIS process as 2 weeks ago. Clearly they did not want the community to have a chance to dissent.

Response 23-9: *The net and bolt technique was considered as an alternative for deer management as early as 2009. However, it was not included in the DRAC recommendations, nor was it presented in the main body of the DEIS (the project description) because it was not known if that option would be permitted by NYS DEC. When the DEC indicated that net and bolt would be an option to the Village (which occurred late in the process) it was added to the alternative section of the DEIS, with the intention of obtaining feedback on this management option.*

Comment 23-10 (Lowell Garner, 12/16/2010): pg. 1-5 of the CHDEIS:...*The result* of a *successful sterilization and culling program will be* a *stabilized deer herd* of *approximately* 30 *animals.* Comment: This statement assumes that Cayuga Heights is essentially an exclosure, which it is not.

Response 23-10: *The Trustees acknowledge that the Village's deer population rises and falls along with the ebb and flow of nature. The severity of the seasons, weather, food, incidents of disease, birth rates, in and out migration and other uncontrollable factors play a role in population dynamics and they will continue to do so in the future. The Village is not fenced, so it can be expected that the population will shift over time as animals move about and find conditions suitable to feeding, breeding and cover. Nonetheless, the Village holds as a goal, a smaller, stabilized herd than that which presently exists in the Village.*

Comment 23-11 (Lowell Garner, 12/16/2010): Pg. 1-6 of the CHDEIS:....*No significant unavoidable adverse impacts have been identified in connection with the proposed deer management plan ....*Comment: One of the major purposes of a DEIS is to present all possible alternatives to determine whether or not a particular alternative imposes a significant adverse impact that could be avoided. There is ample evidence that lethal

methods will produce significant community resistance. The NPS document has a whole section devoted to this. Specifically it states:" ... There may be some unavoidable adverse effects to visitors relating to the implementation of the sharpshooting or capture and euthanasia, if the visitors happened to be near areas where this was occurring and were disturbed by these actions."

Response 23-11: *Comment noted. See Response to Comment 26-5.*

Comment 23-12 (Lowell Garner, 12/16/2010): Pg. 1-6 of the CHDEIS: .. *lack* of *food will either result in wasting disease or result in increased deer population in areas outside the VCH...*Comment: This misinformed statement's purpose is to confuse the lay expression "wasting disease" with Chronic Wasting Disease, which is clearly implied above to be due to lack of food, rather than a transmissible disease (spongiform encephalitis), which has yet to be documented in our area as well as to cause additional public concern. As for preventing an increased deer population in outside communities, this was never a stated in the CHDEIS as an objective. In fact, the successful outcome of the CHDEIS is directly dependent upon the assumption that Cayuga Heights is a relatively closed system- you can't have it both ways.

Response 23-12: *The sentence on page 1-6 begins with the phrase "It is possible that if the herd grows significantly" lack of food...etc. The reference to wasting disease is an error.*

Comment 23-13 (Lowell Garner, 12/16/2010): Pg. 1-8 of the CHDEIS:... *This is the most cost effective method* of *reducing the size* of *the deer herd...* Comment: Nowhere in the CHDEIS is an "apples-to-apples" cost-benefit analysis provided taking into account preparatory, implementation, and outcome phase costs. To assert this without and actual accounting, is an uncertain statement at the very least and very possibly quite erroneous at the worst. (see NPS page 65 for an example of such a comparison; many such examples appear throughout the document so their summary conclusions have data to support them). Pages 3-9 through 3-10 of the CHDEIS devote a discussion to socioeconomic considerations and offer no CH data other than its annual budget. Pages 4-6 through 4-7, a section dedicated to analysis, offers nothing more than "it is possible that the costs associated with the high density deer population (ecological damage, vehicular accidents, tick borne diseases, landscape loss, etc.), as discussed in Chapter 3 will be substantially reduced as well" The expression 'It is possible' is not an acceptable conclusion to embark upon a plan in this time of fiscal triage.

Response 23-13: *The information presented in the Draft EIS on the potential costs of the deer management program represent the most current information available. Once the FEIS is approved, the Board will develop a plan for deer remediation, including a detailed budget. The 2011-2012 FY budget will include money for implementation of the deer management plan. Those budget numbers will continue to be refined based on the choices made for the POA.*

Comment 23-14 (Lowell Garner, 12/16/2010): Pg. 2-4 of the CHDEIS:...*Cayuga Heights is not* a *forest but rather an ecosystem heavily influenced by a pattern of residential development and an associated suburban landscape. Ideal deer population densities are likely different in the suburban setting than an undeveloped forest* ...Comment: The CHDEIS repeatedly supports its plan with historical and current data that utilize the forest ecosystems as its gold standard. To use this data as assumptions for suburban Cayuga Heights, as its own DEIS admits, can be nothing less than suspect.

> ***Response 23-14:*** *Comment noted. The DEIS was written using available data. Very little research has been done on the ecological impacts of deer on the suburban environment as that environmental setting varies tremendously from community to community.*

Comment 23-15 (Lowell Garner, 12/16/2010): Pg. 3-3 of the CHDEIS:... *These areas are important aesthetically in the Village, contain old growth forest and hold other valuable ecological characteristics. They provide habitat to the local deer herd. The impact* of *browsing on these natural areas is not known...* Comment: One of the key points in making the case for deer population control is the loss of biodiversity. Here we have a forested "control" as part of the Village, to use in conjunction with data from many other forested deer population control plans throughout the U.S. and have the opportunity to determine comparability to our region (let alone a suburban environment which they are attempting to compare a forest to), and no attempt has even been made! This is a glaring oversight.

> ***Response 23-15:*** *The density of whitetail deer in its range in the United States 500 years ago was about 10 deer per square mile.*
>
> *In the late 1990's, density was estimated throughout the whitetail deer's range by McCabe and McCabe.*
>
> (*see http://nrs.fs.fed.us/sustaining_forests/local-resources/docs/deer_damage_overview.pdf*)
>
> *In New York, the vast majority of the state had fewer than 30 deer per square mile with substantial areas less having fewer than 15 deer per square mile.*
>
> *Densities in the Village exceed this significantly. The Internet abounds with studies that indicate that at densities above 60 deer per square mile, there are substantial impacts to a forest's understory, the ability of the forest to regenerate, and the biological diversity within that ecosystem.*
>
> *It is not necessary to do a research project on the condition of the few natural areas remaining in the Village of Cayuga Heights to reach the very logical conclusion that given the estimated density of deer in the Village, the impact on the understory in those natural areas has occurred and will continue to occur if no remedial action is taken relative to the deer population in the Village.*

Comment 23-16 (Lowell Garner, 12/16/2010): Pg. 3-3 of the CHDEIS:.. *.It is not known how many people support the plan* of *the Village versus how many people oppose it...* Comment: Because trapping and penetrating bolt gun is the desired lethal means and only recently announced 2 weeks ago, the Village resident survey done in the 1990's is not applicable. Many of the public are still unaware of the implications of net-and-bolt and have not been surveyed as to their views. This has the potential to mobilize a significant objection from the community with public safety becoming even more of an issue than frangible bullets (besides the simple fact that a majority of the community may be against the action, and the fact that the Village board has repeatedly stated that they are acting at the wishes of their community). The lack of recognition for the possibility of intense community opposition as indicated on page 4-6 of the CHDEIS, has led to the gross underestimation of allocation of personnel and money to the CH police, of the effect on public safety, and of the costs of a probable legal challenge.

> ***Response 23-16:*** *The option of using a net and captive bolt technique is indicated as an alternative in the DEIS and has only recently been considered by the Board of Trustees. Also, it was only recently that the NYSDEC indicated that the net and captive bolt techniques would be considered as a legal option (see letter from Gordon Batcheller in DEIS).*
>
> *No decision has been made as to whether this element will be included in the Village's Deer Management Program. It has the advantage of not involving the discharge of firearms in the Village and the disadvantage of potential short-term trauma to the deer prior to its death.*
>
> *The Board of Trustee's acknowledges that any action taken in connection with deer management will mobilize some portion of Village citizenry to express concern and/or objection and in certain instances the polarized views may be quite intense. The Village is fully prepared to address these matters as this review and decision-making process moves forward.*

Comment 23-17 (Lowell Garner, 12/16/2010): Pg. 6-1 of the CHDEIS: 6. 1 *No Action Alternative - Under this alternative, no management* of *the deer herd would take place. The DRAC has determined that No Action will result in continued growth* of *the deer herd. Given the complaints about the deer population and the ongoing impacts of ecological damage, deer/vehicle incidents, landscape destruction and tick borne diseases, the No Action alternative will simply exacerbate the current situation. It* is *possible that* if *the herd grows significantly, lack* of *food will either result in wasting disease* or *result in increased density* of *the deer population outside the VCH. If the No Action alternative* is *selected, certain activities associated with sterilization and culling* as *identified earlier in this DEIS will not occur. While the costs* of *the deer management program would not be expended from the Village budget, the ongoing costs of ecological damage, vehicular accidents, landscape loss and replacement and Lyme disease treatment would remain similar to existing conditions* or *potentially increase* as

the density of *the herd increases. The No Action alternative would likely have far more adverse impact than the proposed action.*

Comment: The whole purpose of the CHDEIS from its inception was to reject this alternative. The assertions within this statement have been previously commented upon in my aforementioned comments, and are generally unsubstantiated.

> ***Response 23-17:*** *Comment noted. The Board of Trustees has considered the No Action alternative and finds that it would not be consistent with the goals of the Village.*

Comment 23-18 (Lowell Garner, 12/16/2010): Pg. 6-1 of the CHDEIS:...*6.2 Sterilization Only. No Culling - Under this alternative, no culling would take place and greater numbers* of *deer would need to be sterilized in order to stabilize the herd at the numbers recommended by the DRAC. This option* is *slower and more expensive than culling alone or the combined approach* of *culling and sterilization. It would take three to five years to stabilize the herd, and herd reduction would not be evident for five to six years, based on projections by the DRAC.*

Comment: Once again, unsupported projections of population control are asserted to dismiss this as an option. As presented previously, tubal ligation combined with pharmocologic or immunologic contraception might provide a more effective method that would produce earlier stabilization of population density.

> ***Response 23-18:*** *Comment noted. See Response to Comment 18-1. The Board of Trustees has considered the Sterilization Only-No Culling alternative and finds that it would not be consistent with the goals of the Village. It would unnecessarily prolong the impacts that are presently taking place due to the overpopulation of deer in the Village. A chart regarding herd stabilization versus time can be found on the Village website under Deer Population Control.*

Comment 23-19 (Lowell Garner, 12/16/2010): Pg. 6-2 of the CHDEIS:...*6.3 Firearm Culling Only, No Sterilization - This is the most cost effective method (in the short-term) to reduce deer herd and also the most controversial...*

Comment: It is not the most controversial. See the next section. Of particular note is that sterilization was not combined with this technique to make this an unacceptable alternative, as emphasized by "in the short-term".

> ***Response 23-19:*** *While it may not be the most controversial, the Board acknowledges that, nonetheless, it is controversial.*

Comment 23-20 (Lowell Garner, 12/16/2010, See also Pages 88-89 of Public Hearing Transcript, 12/6/10): Pg. 6-2 of the CHDEIS: *6.4 Sterilization and Culling by Trapping...At the present time, trapping and killing deer is not permitted under the wildlife regulations* of *the State* of *New York. However, if relief could be secured from*

that provision via the deer management permit, an alternative to using firearms to cull deer would be to trap deer and use a captive bolt gun. This device kills the animal instantly allegedly without causing pain. A captive bolt gun has a *steel bolt that is powered by either compressed air or* a *blank cartridge. The bolt is driven into the animal's brain. It has the same effect on the animal* as a *firearm with* a *live bullet. A captive bolt gun is safer than* a *firearm and is considered to be an effective form* of *euthanasia by the American Veterinarian Medical Association. This is* a *slower process than culling and more labor intensive. Multiple traps could be employed and deer could be culled over an extended period with minor disruption to the local community.*

Comment: Firstly this alternative is misrepresented by the title of the section, perhaps giving the reader the impression that trapping will be combined with translocation. This is not the case. Rocket-assisted nets are typically combined with a penetrating bolt gun (used in the slaughter industry) to kill the animal The following are comments I presented at the Village meeting of 12/6/10: The net and bolt technique outside of a slaughterhouse 1) lacks ways to minimize fear of the condemned animals. There is mainstream neuropharmacology supporting the assertion that fear and stress, not pain, are the most inhumane of all stimuli we can inflict upon an animal Temple Grandin has written extensively on this subject. Even those who earn their living by eliminating deer speak about the increased stress the animals experience with the net and bolt technique. Netted deer will agonize from the most severe form of fear. I can't emphasize this enough. From the time the deer are netted until they are killed these animals will suffer; 2) lacks effective and predictable restraint- the key to killing swiftly is an effective restraint, otherwise there are too many 2nd attempts. A net does not provide effective restraint. There must be extreme precision of bolt placement to effectuate a first-kill. A terrified struggling deer will have its face frequently shattered before subsequent attempts are successful in producing death; 3) lacks quick and accurate killing that minimizes pain making the slaughter of these netted deer even more odious than any other technique suggested until the present time. Though the bolt device is "effective" as a form of euthanasia by the American Veterinary Medical Association Guidelines (as in guidelines; not standard of care) on Euthanasia, the AVMA has never endorsed this method as the preferred technique in the slaughter of whitetail deer. To bring this point home further: It is "effective" to give cancer patients *intermittent* pain medication to control suffering associated with their disease. It is neither acceptable, desirable, suitable, adequate, applicable nor any other word one might use. However, *continuous* administration of pain medication is essentially the only method used today, and if it is not, there better be a justifiable reason other than convenience. Those that make their living from killing deer attest to the fact that net-and-bolt is the most stressful of all techniques. In the NPS's final EIS document on Catoctin Mountain Park
http://www.nps.gov/cato/parkmgmt/loader.cfm?csModule=security/getfile&pageid=127892 they emphasize this point.

> ***Response 23-20:*** *Comment noted. The Board of Trustees will give consideration to the above comment, prior to making a final decision on the mechanisms to be implemented in the deer management program.*

Comment 23-21 (Lowell Garner, 12/16/2010): Pg. 7-1 of the CHDEIS:... *The labor and energy that will* go *into sterilization and culling activities will be irreversible and irretrievable ...*
Comments: And "Irreversible and irretrievable" both in financial cost and life as well.

> ***Response 23-21:*** *Comment noted.*

Comment 23-22 (Lowell Garner, 12/16/2010): There is potential for significant conflict of interest issues with respect to Drs. Anthony DeNicola and Paul Curtis both individually and in collaboration with one another. This is not disclosed in the CHDEIS and integrity demands this.

> ***Response 23-22:*** *Both individuals have been contacted during the preparation of the DEIS, as both are considered to be experts in their respective fields. However, neither have been paid to give their input, and neither have been retained to do business with the Village in connection with the Deer Management Program.*

Comment 23-23 (Lowell Garner, 12/16/2010): Throughout the CHDEIS there is mention of tick-borne disease and in particular Lyme as a reason to pursue deer population control. Not in a single sentence, in the entire 400 page NPS EIS can one find mention of tick-deer interaction as a reason to pursue deer population reduction (see below). The CHDEIS page 2-10 assertion that "Studies also show that the number of ticks in a local area is generally linearly correlated with the number of deer present. Recommended mitigation of deer-borne diseases includes fencing, reducing tick habitats... Educating the public includes practicing 'due diligence' in clothing for outdoor wear and learning to check for ticks after being outdoors" have disappointedly proven false time and again. All studies to date that have looked at this, have supported the conclusion that reduction is helpful are quite isolated systems or where other mammalian hosts other than deer are lacking. The single paper (out of hundreds that show otherwise) cited in the CHDEIS on page 3-5 was an isolated offshore island that states clearly this fact. In a telephone conversation (12/9/10) I had with Dan Sealy, Acting Chief of Natural Resources & Science of the National Capital Region at the Center for Urban Ecology, he stated in no uncertain terms, that the NPS never uses Lyme's incidence or tick densities as threshold indicators for deer population intervention since there is no correlation. Current medical literature on prevention recognizes this issue as well. Gary P. Wormser, MD, from New York Medical College in Valhalla and an expert on Lyme disease is caused by *Borrelia burgdorferi,* transmitted by the bite of the tick species *Ixodes scapularis and Ixodes pacificus* has written extensively on this (Wien Klin Wochenschr. 2005 Jun;117(11-12):385-91). He states: Deer elimination or exclusion, application of topical acaricides to mice or deer, and application of systemic acaricides to deer are more complex approaches. However, none of these methods for reducing tick numbers, nor any of the recommended personal prevention measures, such as reducing the amount of exposed skin, use of tick repellents on exposed skin or clothing, and frequent tick checks to remove attached ticks expeditiously, has been demonstrated to decrease significantly the incidence of

Lyme borreliosis in humans. It is also erroneous for CH to use countywide data (a rural region) to support its contention that Lyme is a public health issue for its residents, as it does in Appendix D of the CHDEIS, as well as to omit the travel histories of CH's residents affected by this disease.

> ***Response 23-23:*** *The Board of Trustees seeks to satisfy a number of goals in its deer management program including the potential to reduce the deer tick population and number of tick bites and associated Lyme disease. It recognizes that there are a number of studies that have conflicting results.*
>
> *If tick control were the only goal of the Village, it would need to evaluate the options for tick management in a different light. But it is not. The goals to reduce the deer density, improve landscaping and aesthetics and biodiversity, and reduce deer/vehicular conflicts also are important factors in decision making. The cumulative goals carry considerably more weight than any individual one. The Village has reviewed the various data and studies and consulted with experts and its citizens. All things considered, the Village continues to view the Deer Management Program as a viable means of achieving the Village's goals.*

Comment 23-24 (Lowell Garner, 12/16/2010): A glaring deficiency (pgs. 2-7 through 2-10 which encompasses Specific Recommendations) of this CHDEIS is that there is no provision or statement that the plan's efficacy will be reviewed at periodic intervals to evaluate methods currently in use in light of new concepts, especially non-lethal modalities. The NPS document emphasizes the importance of this point repeatedly. In addition, there is no mention anywhere in the CHDEIS of adaptive management considerations for any of the alternatives. (NPS page 73)

> ***Response 23-24:*** *See Response to 23-2 and 23-3.*

Comment 23-25 (Lowell Garner, 12/16/2010): Frequent requests from the community, even those in favor of the lethal alternative, have been made for 8' fencing- the village refuses to consider this an option for individual property owners (see page 3-6 of CHDEIS) and it continues to be ignored as an alternative in the CHDEIS.

> ***Response 23-25:*** *See Response to Comment 16-4.*

Comment 23-26 (Lowell Garner, 12/16/2010): One of the main intents for a DEIS is to invite interested stakeholders to comment. There is no list of stakeholders in the CHDEIS other than mention of the public and CayugaDeer.org. nor is there record of solicitation other than public notice. The NPS document contains a fairly large list, some of which could be used to identify similar entities locally that would have an interest in this plan. I have included the list (see list in Appendix A.)

> ***Response 23-26:*** *The Notices for the DEIS were filed with the New York State Environmental Notice Bulletin, in the local paper and the document was posted to the worldwide web.*

Comment 24-1 (Wenonah Hauter, Food and Water Watch, 12/16/10): The Village of Cayuga Heights has recently proposed an aggressive deer population control program in response to an increased deer population. The proposal is justified in part by the purported public health risk from runoff tainted with deer waste. Certainly animal waste can pose risks to drinking water supplies, but the slight risks posed by waste from wild deer can be easily mitigated by less aggressive, less risky and less expensive approaches than the net-and-bolt strategy currently favored by the Deer Remediation Advisory Committee. First, the focus on deer as the key source of microbiological contamination risk may be misplaced. It is far from clear that deer are the primary source of any runoff contamination. Some localities have found that waterfowl were the primary source of wildlife waste runoff Using U.S. Department of Agriculture data, Food & Water Watch recently reported that Tompkins County contains nearly 3,600 dairy cows on the largest class of farms that produce 145 million pounds of untreated manure every year.

> ***Response 24-1:*** *The comment implies that the Deer Management Plan was proposed to protect public health from runoff tainted with the waste. This is an incorrect interpretation. In fact there was only one or two sentences in the Draft EIS relating to this and it simply noted as an aside that deer are heavy browsers of vegetation and deposit feces in the local watershed which is washed into local watercourses and storm sewers.*
>
> *It was not stated as an adverse impact that the program was intended to mitigate, but rather an existing condition, that would likely be improved in the event that the population of deer were reduced.*

Comment 24-2 (Wenonah Hauter, Food and Water Watch, 12/16/10): Determining the existence and source of any manure or wildlife waste runoff must be the first step in developing an appropriate policy to mitigate the risk of water contamination. The U.S. Environmental Protection Agency recommends tracking the bacterial source of non-point microbiological contamination before putting a plan in place. Inexpensive alternatives to assess the source of any runoff pollution include antibiotic resistance analysis that can pinpoint the risk from deer. Until native deer are determined to be the source of any waterborne bacteriological contamination, it would be ill advised to pursue an expensive and dangerous program to limit the deer population.

> ***Response 24-2:*** *See Response 24-1. No one has made such a determination. To suggest this would be incorrect. There are multiple goals that the Cayuga Heights Deer Management Program is intended to satisfy. The elimination (or reduction) of waterborne bacteriological contamination, while a potentially beneficial side affect of the program, is not among the several reasons this program is under consideration.*

Comment 24-3 (Wenonah Hauter, Food and Water Watch, 12/16/10): If wild native deer are determined to be the source of any runoff contamination, there are many less expensive, less dangerous and more effective policies that can provide greater

protection to municipal water sources. The most effective strategies to reducing contamination from runoff are to improve the grade, contour, buffer and foliage surrounding waterways to provide natural filtration and reduce the speed of water runoff.

> ***Response 24-3:*** *There is no question that deer feces is washed into local water courses and storm drains. And as noted above, the Deer Management Program was not envisioned to address this issue alone. However, it can be expected to improve it if deer populations are reduced. It is a well established fact that deer consume substantial amounts of bio-materials daily. When the population of deer is reduced, there a greater likelihood that there be more understory in the area and less feces deposited within the watershed. There is no need to do a study on something so obvious.*

Comment 24-4 (Wenonah Hauter, Food and Water Watch, 12/16/10): The New England Interstate Water Pollution Control Commission recommends habitat modification (including landscape changes and tree branch pruning), preventing human feeding of wildlife (especially waterfowl), monitoring wildlife populations in and around water supplies, deterring wildlife from vulnerable watershed areas and reducing available food sources. These strategies have the added advantage of addressing the extant deer population but also any future deer that may enter the community and repopulate the area after any short-term deer population control strategies.

> ***Response 24-4:*** *Comment noted.*

Comment 24-5 (Wenonah Hauter, Food and Water Watch, 12/16/10): There are a host of additional legitimate criticisms to the proposed strategy to control the native deer population. The proposal includes a waiver from New York state rules to use "net-and-bolt" methods that are usually banned because they are inhumane. It would be expensive, intrusive and potentially dangerous to local citizens and pets to deploy explosive nets within the village residential areas. Short-term population control mechanisms over native deer only address the current deer, not the long-term existence of whitetail deer in Western New York.

> ***Response 24-5:*** *Comment noted. Deer management is a controversial subject and if management techniques are not employed with care and by experienced individuals, mishaps are possible. However, documented incidents of mishaps have been rare. It is the current deer population of the Village that the Deer Management Plan intends to address. The long term existence of whitetail deer in Western New York is beyond the scope of the Village's proposed management plan.*

Comment 24-6 (Wenonah Hauter, Food and Water Watch, 12/16/10): Although the current deer might be controlled, more deer will likely come to the village. It is especially disingenuous to use the legitimate concern of water contamination to justify a policy that is considerably more draconian than necessary to protect the village water supply.

Response 24-6: *Comment noted. The Village is not fenced and it can be expected that deer will move in and out of the Village during the term of the management program. However, it is well established that the habitat range of a white tail deer is generally less than a square mile. Thus the number of deer that would move in and out of the Village on a daily or seasonal basis is limited.*

While potential degradation of water quality is of concern to the Village, as noted above, it is a minor factor in the Village's decision making as regards deer management.

Comment 24-7 (Wenonah Hauter, Food and Water Watch, 12/16/10): There are a host of more affordable, more effective, and less dangerous and aggressive policies to protect the village's water supply than the proposed net-and-bolt so-called strategy offered by the Deer Remediation Advisory Committee. Stopping the spread of dangerous pathogens and chemicals in our water is a legitimate concern for all governments. But using those concerns as a scare tactic neither serves the people of Cayuga Heights nor protects the water resources of the area.

Response 24-7: *Comment noted. Cayuga Lake is the source of water for the Bolton Point Municipal Water System, which provides drinking water to the Village of Cayuga Heights. The water intake is approximately 3 miles north of Stewart Park, 400 feet out from the eastern shore of Cayuga Lake, and 65 feet below the surface of the Lake. There are no known problems with the drinking water system and no reported water quality violations. The proposed management plan is not intended as an action to protect the Village's water supply, nor did the DEIS indicate that the water supply was in danger due to the high density of deer living in the Village. However, reduction in the deer population will result in less untreated wastes carried in local storm water.*

Comment 25-1 (LaCapra and Pedersen, 12/10/10, See also Pages 29-30 of Public Hearing Transcript 12/6/10): Believes that the Board of Trustees do not prove cogent and specific reasons why deer management is needed. Believes that the management plan changes the character of the community in significant ways (tension and animosity among neighbors). Indicates that there has been no recent poll of residents. Indicates no recent estimate of deer in Village since 2006 and no credible study of biodiversity in the Village. Concerned about the high costs of the plan and a 5 percent increase in taxes could represent a hardship to some residents.

Response 25-1: *The Draft EIS set forth the reasons why the deer management program is being proposed (see page 3-6 of the DEIS):*

- *Reduction in deer browsing and associated affects on natural and planted landscapes*
- *Potential reduction in deer/vehicle mishaps*
- *Potential reduction in incidents of Lyme Disease*

With respect to the potential impacts on community character, the Board has listened to all community views and has given consideration to them in its deliberations. There is very little that any governing body can do when people choose to vehemently disagree on a potential course of action, that is supported by many other people in the community. Government decisions are rarely supported unanimously.

No decision has yet been made. It is being considered. If someone in disagreement chooses to respond with animus, clearly that is a stressful choice for the respondent. No one, however, is being forced to have that experience.

The Board of Trustees will either vote to take action on the Deer Management Plan as proposed, take action on a modified plan, or take no action.

There has not been a recent poll of residents and there is no plan to do so. The Board of Trustees is not legally authorized under New York State law to carry out a survey or hold a referendum on this issue. That being the case, it is best decided at the polls during Village elections.

The Board has no reason to believe that population dynamics of the Village deer herd has changed significantly in the past five years and has no immediate plan to have the population of the deer herd reevaluated. There is an expectation that the management program will include an assessment of the deer herd on a regular basis. If it is determined that the herd is at or near the targeted levels, the Board always retains the option of reassessing the management program accordingly.

It is not the Board's wish to create a hardship on any tax payer and appreciates the stress that the New York economy may have placed on some people. Funding for deer remediation could come from the Village's unreserved fund balance or from property tax revenue. A 1% increase in Village property taxes results in an additional $30,000 of revenue.

As a deer management plan has not yet been adopted, the actual costs of implementing the plan cannot yet be calculated specifically. For example, based upon the foregoing, if the plan were paid for from current tax revenues, and if, hypothetically, the plan involved expenditure of $90,000 per year, the Village could impose an 3% tax increase to cover that expenditure.

Nonetheless, it is the Board's responsibility to address those matters before it, and deer management has been before the Village for many, many years.

Comment 25-2 (LaCapra and Pedersen, 12/10/10, See also Pages 30-31 of Public Hearing Transcript 12/6/10): Speculates that the plan may drive away some civic minded residents which does damage to the community and its character. Notes that

the Village has no way of preventing deer from other areas from entering the village. The program will have to be repeated endlessly.

> ***Response 25-2:*** *Comment noted. There will be monitoring of progress during the term of the deer management program and future decisions will be made based on its efficacy, potential future costs and factors in play at the time of future assessment.*

Comment 25-3 (LaCapra and Pedersen, 12/10/10): Believes the use of frangible bullets would be dangerous in highly populated areas.

> ***Response 25-3:*** *Comment noted. Any contractor retained by the Village must demonstrate prior safe experience and provide references of that for the Village to review. No culling of the herd will occur until the contractors provide to the Village and its department heads an acceptable safety plan. White Buffalo, a contractor with consider experience in culling deer, has culled more than 9,000 deer with no public safety mishaps.*

Comment 26-1 (Stein, LaVeck, Huang, 12/16/2010): Cayuga Heights' Deer Management Plan DEIS Executive Summary: page 1-5 puts forth a budget of $750,000 over the course of the first five years of the deer killing plan. While carrying out calculations about the cost of the mass killing of deer is in itself disturbing, based on the claimed current level of deer population of 160-200, the target population number of 30, and the estimated figures given for the costs of either sterilizing ($1,100 each) or killing ($500 each) deer, along with a generous allowance for the cost of killing deer immigrating in from other municipalities after most of the deer are killed in the Village, it appears that no more than roughly $150,000 to $250,000 could conceivably be needed to carry out these activities, leaving $500,000 - $600,000 of the total budget allocated to 1) contingencies, 2) the salary of a "deer management director", and 3) an item described as "modeling/tracking study." A "Draft Plan Cost Analysis" document developed by the Village government and obtained through an October 15, 2009 Freedom of Information request, included two years of salary for a deer management director at $30,000 per year. Factoring this in, between $440,000 and $560,000 of the $750,000 put forth in the DEIS will be left to cover contingencies and an item described as a "modeling/tracking study." Based on the Draft Plan Cost Analysis document, the "modeling/tracking study" is an activity for which $275,000 is budgeted over the 10 years of the projected plan, of which $225,000 would be expended in the first five years. According to statements made by Trustee Robert Andolina at an 8/24/09 meeting, these funds are budgeted to pay a "PhD from Cornell" to carry out these vaguely specified duties.

In order for the public to be able to evaluate the potential environmental impact of an action, the description of the action offered must be of sufficient detail for us to be able to clearly understand what sort of activities will be carried out in the community, where and when they will be carried out, by whom, and for what purpose. As the DEIS is

written, this information is completely omitted for activities substantial enough to comprise 30% of the project's budget.

> ***Response 26-1:*** *The elements of the proposed project have been accurately described and the potential impacts of the project have been appropriately discussed in the Draft EIS. The presentation was done at a level that allows for a reasonable "hard look" to be taken.*
>
> *In the event that additional activities are authorized that were not described in the SEQRA process, and those activities would have potential significant environmental impacts, they, of course, would be subject to a SEQRA review. No such activities are envisioned at this time. Research, monitoring or the hiring of personnel would not be expected to result in adverse environmental impacts, for example.*
>
> *The Board of Trustees anticipate that if the proposal moves forward, there will be a line item in the 2011-2012 budget that will be held as a place holder for funding the first year of activities. The actual expenditures will be detailed as the POA is finalized and decisions are made regarding staffing and outside contractor assistance.*

Comment 26-2 (Stein, LaVeck, Huang, 12/16/2010): Further, in a July 16, 2009 e-mail (returned in a group of documents received in response to a November 23, 2009 Freedom of Information request), Paul Curtis, the principal scientific advisor to the Trustees and architect of the deer killing plan, said "Immigration is extremely difficult to measure, and little is published on this topic. The situation in VCH would provide a unique case to actually measure immigration rates if a known number of adult females were tagged, and all other deer were removed. I don't think such a field experiment has ever been conducted previously." This confirms how fundamentally the deer killing program is an "experiment," which only emphasizes the obligation of the Trustees to include detailed information about the nature and purpose of the activities to be performed under the rubric of "study." These activities are of such a scope to require the disbursement of a substantial portion of the budget, yet no details whatsoever are specified.

> ***Response 26-2:*** *As noted in the Draft EIS, the plan for Deer Management is a Phased Option Plan. It includes the development of guidelines for evaluating whether or not the POA is reaching its goals. The Plan anticipates that long term monitoring and management will be likely.*

Comment 26-3 (Stein, LaVeck, Huang, 12/16/2010): Further, based on the limited information available, these activities appear to bear no essential relevance to the accomplishment of the goals set forth in the DEIS for the action. The omission of this information is inexplicable, particularly given the level of interest local citizens have demonstrated in this part of the Draft Deer Remediation Plan prior to release of the DEIS. At September 13, 2010 Board of Trustees meeting, Catherine Stein, a VCH

resident, asked specifically what the $275,000 listed in the "Draft Plan Cost Analysis" for "Modeling/tracking study" would actually pay for. No explanation for the duties to be performed for this sum of money, or the justifications for the inclusion of such research duties in a taxpayer publicly funded program were offered to Ms. Stein at that time by Mayor Supron or any of the other Trustees. At the next meeting of the Trustees, on October 12, 2010, another VCH resident, Guy Tabacchi, inquired as to what these funds were intended to pay for, and again, Mayor Supron would not answer this question in a public forum. At the next meeting of the Trustees on November 8, 2010, Catherine Stein again raised this issue, and again, was not given an answer. Furthermore, two Freedom of Information requests produced no further details about the basis for this figure. We therefore request that the Trustees take the necessary steps to supply the public with the detailed information which has been omitted from the DEIS for unknown reasons and is clearly necessary to understand the nature of the activities associated with the major budget item of "modeling/tracking study." We further request that that the public then be given sufficient time and the opportunity to comment on this new information prior to the preparation of a final Environment Impact Statement, pursuant to New York State environmental law.

> ***Response 26-3:*** *Comment noted. See Introduction regarding the purpose of the SEQRA process. Once the FEIS is approved, the Board will develop a plan for deer remediation, including a detailed budget. The 2011-2012 FY budget will include money for implementation of activities to be undertaken in the first year of the program, if it is approved.*

Comment 26-4 (Stein, LaVeck, Huang, 12/16/2010): In the DEIS, it is claimed that the presence of deer is having a negative effect on "biodiversity" in the Village, to the point that over 400 species are specifically listed in this context, the clearly intended implication being that killing most of the deer in the village will have a correspondingly positive effect on these species and hence, enhance the Village's "biodiversity." No Cayuga Heights-specific data is offered to support this argument. Further, in the DEIS it is acknowledged that deer are a keystone species, emphasizing their centrality in the Village's ecology and indicating that their removal will have numerous and complex implications. To assume that this action has no significant impact, or that the impact will only be "positive," is nonsensical.

> ***Response 26-4:*** *The EAF, attached to the DEIS, expressed the professional opinion of R. Robert Wesley, Natural Areas Manager and Field Botanist, Cornell Plantation, that "reducing the whitetail population can only have a positive impact on endangered plant species in our project area." The Board of Trustees can find no valid scientific or ecological reason why reduction in the overpopulated deer herd would have a significant adverse impact on the Village's biodiversity.*

Comment 26-5 (Stein, LaVeck, Huang, 12/16/2010): Additionally, as others have pointed out, the use of the term biodiversity in the context of an almost completely developed 2 square mile municipality borders on being absurd, or even disingenuous. This fundamental misuse of basic biological concepts notwithstanding, in reading the

DEIS, it is clear that the Trustees have failed to consider at all an alternative to the wholesale prevention of species loss with far less extreme negative impacts than an annual backyard mass slaughter of deer.

Response 26-5: *In simple terms, biodiversity is the number and variety of organisms found within a specified geographic region. The term applies to Cayuga Heights in its developed condition and of course includes the more than 100 acres of somewhat "natural" land in the Village identified in Figure 3-2 of the Draft EIS.*

The Trustees have considered a number of alternatives to the proposed project, including the no-action alternative. The Trustees have also reviewed and considered the deer management options set forth in Appendix E of the Draft EIS. These include the following:

- *No Population Control (hands-off policy),*
- *Damage Control, (fencing, repellents and frightening devices, tick control using 4 poster technology, strieter-lite highway warning reflector systems, alternative plants, wrapping plants, feeding,*
- *Non-Lethal (habitat alteration, capture and relocate)*
- *Fertility Control (contraception, surgical sterilization in a mobile or stationery lab)*
- *Lethal (predator introduction, parasite or disease introduction, poisons, capture and kill, bait and shoot with options, traditional hunting, controlled hunting).*

To suggest that the Village has not considered alternatives for deer management is untrue and inconsistent with the very long record of planning that has taken place on this matter.

Comment 26-6 (Stein, LaVeck, Huang, 12/16/2010): Freedom of Information Law requests submitted on 8/25/10 and 11/12/10 returned no documentation of: 1) Any efforts the Village has made in the last 5 years to assess the presence of any of the over 400 species of concern listed in the DEIS at any sites slated for development, or 2) Any cancellation or even modification of even one development project for the purpose of protecting even one of the over 400 species of concern listed in the DEIS that are implied, without the presentation of Cayuga Heights specific data, to be threatened or in some way harmed by the presence of deer in the village. It is well documented that human development of the landscape is exacting a heavy price on, and even devastating, the environment worldwide. Therefore, until a systematic scientific study of the ecology of the Village is conducted over a series of years, it is not even possible to say whether the number of species is increasing or decreasing in the Village, what

effect deer may be having on whatever change is occurring, and why other factors, such as development projects and climate change are not dramatically more responsible for undesirable changes than local deer.

> ***Response 26-6:*** *The commentator is referring to a report from F. Robert Wesley, the Natural Areas Manager and Field Botanist at Cornell Plantations that listed rare and unusual plant species in the project area and was provided in an Appendix to the DEIS. Mr. Wesley expressed the view that reducing the density of deer would have a positive effect on the rare, threatened or endangered plant species in the area. He also indicated that over the years he has noted a number of plant species diminishing greatly or disappeared including wild yew and white trillium. He goes onto state that in some of the local forested areas, lush plant communities with many species of herbaceous plants have given way to mostly blue cohosh or wild leek. He has observed a drop from 20 species of spring wildflowers to only two or three.*
>
> *As noted previously, at densities above 60 deer per square mile (and there is no evidence that the density of the deer in the Village is less than this), deer browsing results in substantial impacts to an ecosystem. It is the Village's view that it is unnecessary to carry out studies to ascertain something that has already been intensely studied and can be observed throughout the Village on a daily basis.*

Comment 26-7 (Stein, LaVeck, Huang, 12/16/2010): In the meantime, in the absence of even the most basic location specific data collection and scientific analysis, it seems clear that regulating development and/or fencing in environmentally sensitive areas would be viable alternative approaches to reducing species loss and to actively fostering species diversity than the proposed plan. Furthermore, such efforts could bring positive results without any of the destructive impacts that come along with implementing a divisive, violent program that results in destroying most of the members of an indigenous species.

> ***Response 26-7:*** *The reduction in deer population will not destroy "most of the members of an indigenous species". It will reduce that population to a size that more closely reflects natural densities and is more readily sustainable than current overpopulated levels.*

Comment 26-8 (Stein, LaVeck, Huang, 12/16/2010): In the DEIS, it is stated that decreasing the risk of Lyme disease is one of the objectives for the implementation of a program to kill the majority of the deer who live in the Village. (Cayuga Heights Deer Management Plan DEIS Executive Summary: page 1-6). Numerous recent scientific studies have conclusively refuted the idea that killing deer is an effective approach to reducing the incidence of Lyme disease. Indeed, neither the Tompkins County Health Department nor the American Lyme Disease Foundation recommend the killing of deer as a strategy for reducing the risk of Lyme disease. Instead, our local health department recommends preventive practices including such things as the use of

proper attire when walking in tall grass and developing a greater ability to recognize tick bites to insure prompt treatment. The fact that the Village Trustees have been publicly discussing the risk of Lyme disease for over two years now in the context of promoting a deer killing program, and in that time, have not implemented a Village-wide education program about Lyme disease based on our local health department's guidelines, is testimony to how little consideration the Trustees have given to this low-cost, yet highly effective alternative to a deer killing program. We hereby request that the Trustees take action to redress this deficit and make a serious evaluation of this alternative to the deer killing program that offers true preventive value and that will clearly have negligible negative impacts in comparison to a deer killing program.

Response 26-8: *Comment noted. See Response 13-1.*

Comment 26-9 (Stein, LaVeck, Huang, 12/16/2010): In the DEIS, it is stated that decreasing the rate of deer-car collisions is one of the objectives for the implementation of a program to kill the majority of the deer who live in the Village. (Cayuga Heights Deer Management Plan DEIS Executive Summary: page 1-2). Roadside wildlife warning reflector technologies are being used all over the world, and studies show them to be effective. According to the traffic engineer of Owego, NY, the "Strieter Lite" system reduced deer-vehicle collisions by nearly 100% in the areas it was installed. During early meetings, this technology was summarily rejected by the Deer Remediation Advisory Committee for "aesthetic" reasons, which seems unjustifiable in comparison to the importance of potentially preventing automobile accidents. Another alternative, the Roadside Animal Detection System, uses sensors to detect large animals approaching a roadway, and sends out a warning signal alerting drivers to reduce their speed. One study found that these systems can reduce collisions up to 82%. Since 2008, the Trustees have been informed and regularly reminded of the existence of these options, and yet, the DEIS offers no serious consideration of this low-impact, reasonably priced and highly effective alternative to the annual mass slaughter of the local deer herd. Local citizens have also frequently suggested at meetings that speed limits be lowered, speed bumps be installed, and that speed limits be more strictly enforced. These viable alternatives are also given no serious attention in the DEIS.

Response 26-9: *These matters were reviewed by the DRAC (see Appendix E) and will continue to be reviewed by the Board of Trustees. However, they will not achieve other goals of the Village with respect to deer management.*

Since the Village has 20 miles of roads, and deer travel throughout its 1.85 sq. miles, the Board's understanding is that Streiter Lites would not be effective because deer are continually crossing streets. This could be addressed by further mapping and analysis of DVA locations.

Comment 27-1 (Carl F. Moravec, Stein, 12/10/2010): If you please, please "TRAP" the excess deer from Cayuga Heights (I know this is possible). release them to other

lands / landowners in Tompkins County who pre-sign up to accept one / two or more deer to be released onto their private owned property. The DEC cannot be against this?

> ***Response 27-1:*** *Trapping and relocating deer is not permitted by the State of New York. See Response to Comment 1-1.*

Comment 28-1 (Victor Nee, December 5, 2010): The argument for culling the Village deer population is neither persuasive nor cost-effective. Deer from the surrounding area will only replace those culled at considerable expense to the taxpayer and residents of the Village. Research suggests that the "net-and-bolt" method causes unnecessary suffering in wild animals who will be active and struggling at the time of shooting. Moreover, clearly deer are driven in greater numbers into Cayuga Heights as wooded areas have been disappearing in the face of the type of development we have seen in the Sapsucker Woods area. We need to have more discussion of the broader context surrounding the increase of the deer population.

> ***Response 28-1:*** *The rate of movement of deer in and out of the Village is not known. The Village will monitor the results of the Deer Plan each year to develop an understanding of the efficacy of the program.*

Comment 29-1 (Richard Ostfeld, PhD, Cary Institute, 12/6/10): The DEIS contains many inaccurate and unsupported statements about relationships between deer, blacklegged ticks (incorrectly called “deer ticks”), and Lyme disease. A comprehensive review of the scientific literature on the relationship between numbers of deer and numbers of ticks reveals that the majority of studies find no statistical correlation at all.

> ***Response 29-1:*** *See Response to Comment 13-1.*

Comment 30-1 (Allen Rutberg, PhD, Tufts School of Veterinary Medicine, 12/15/10): In building a case for taking action, the DEIS makes clear that it is the impacts of the deer, rather than their numbers, that should shape management actions. However, the objectives of the proposed management effort are expressed only in terms of deer numbers. No targets are set for reductions in deer-vehicle collisions, reductions in impacts on ornamental plantings, reduction in Lyme disease rates, or restoration of biodiversity. Indeed, because the Village appears to have no information at all on deer impacts on ornamental plantings or on biodiversity that are specific to the Village itself (or even plant inventories within the Village's small natural areas), such targets are currently impossible to set. Likewise, although the DEIS waves the Lyme disease flag, it presents no site-specific data related to Lyme disease incidence or risk, and consequently concedes any prospect for measuring reduction in disease risk associated with the proposed deer management action.

> ***Response 30-1:*** *The Board of Trustees has certain limited data such as the numbers of deer/vehicular incidents and incidents of reported lyme disease that it will continue to track as the deer management program is implemented. At present, there are no targets for these parameters. Reducing the deer herd to*

what is viewed as a more natural, sustainable density in the Village is one of the goals of the program.

Simply stated, the Village is overrun by deer. With the estimated deer population between 160 and 200 and the food requirements for a typical deer known to be 3 to 6 pounds of browse per day, the Village does not believe that a baseline study of existing browse or landscape conditions is needed. A herd of 150 deer will consume 500 to 1000 pounds of food materials daily, depending on the season and food availability. Thus, in rough numbers 200,000 to 300,000 pounds of plants, grasses, mast and landscape materials are likely consumed annually.

Since the vast majority of the Village is developed residentially, it is apparent that much of these food materials are consumed from landscaped areas. For the Village to expend funds to study this further is not viewed as necessary.

Comment 30-2 (Allen Rutberg, PhD, Tufts School of Veterinary Medicine, 12/15/10): In my view, accurate deer population numbers are important for the development of management plans mostly because they define the scope of deer population management. Because there has been no population assessment for four years, there remains much uncertainty about the number of deer present, and hence about the outcome of any deer reduction effort. Extrapolation of wildlife population growth rates into the future is purely speculative, and the further into the future one extrapolates, the more speculative it is. In Cayuga Heights, where deer population estimates apparently were stable between 2002 and 2006, there is certainly no sound basis to postulate a 10% increase over the four years that followed.

Response 30-2: *Even if the population were stable, it is excessive and well beyond what is viewed as a healthy density. There is ample opportunity to evaluate the deer population when individuals are in the field investigating the matter on a regular basis and such activities will be undertaken as the deer management program proceeds.*

Comment 30-3 (Allen Rutberg, PhD, Tufts School of Veterinary Medicine, 12/15/10): From a population management perspective, the DEIS commits a serious oversight in completely omitting any reference to less invasive methods of controlling fertility in deer. There are two injectable immunocontraceptive vaccines that have been shown to be effective in deer: the porcine zona pellucida (PZP) vaccine, which I and my collaborators have been working on for more than 20 years, and GonaCon®, an EPA-registered vaccine that was developed by the USDA's National Wildlife Research Center. Safety, effectiveness, and population impacts in suburban deer have been extensively documented for PZP in particular, and recent technological advances have eliminated the need for annual re-treatments (see especially Turner et al., "Controlled-release components of PZP contraceptive vaccine extend duration of infertility *Wildlife Research* 35:555-562 (2008); Rutberg and Naugle, "Population-level effects of immunocontraception in white-tailed deer," *Wildlife Research* 35:494-50 I (2008): and Rutberg and Naugle, "Deer-vehicle collision trends at a suburban

immunocontraception site," *Human Wildlife Conflicts* 2:60-67 (2008. There may ultimately be reasons for not choosing to employ either of these vaccines, but both deserve serious consideration in a legitimate EIS.

> ***Response 30-3:*** *The DRAC did consider fertility control (contraception) prior to making its recommendations to the Board of Trustees (see Appendix E in DEIS). The DRAC elected to recommend other means of management because the view was that these vaccines were not viable. Also, see Response to Comment 18-1.*

Comment 31-1 (Laura Simon, The Humane Society, 12/8/10): Captive bolt guns were designed for use on domestic animals in highly structured and controlled environments. The HSUS does not believe that net and bolt methodology can be used correctly and consistently enough in field settings to provide for the humane capture, restraint and killing of deer. A deer caught in netting panics and thrashes around, reacting not only to the restraint, but also to the perception of other impending threats to his safety such as approach and handling by people.

> ***Response 31-1:*** *Reports from individuals using this technique in the field indicate that the deer are generally stabilized within 60 seconds of netting and the captive bolt is highly effective in euthanizing the animal. See Response to Comment 18-4.*

Comment 31-2 (Laura Simon, The Humane Society, 12/8/10): As stated by the American Veterinary Medical Association *Guidelines on Euthanasia* (June 2007), "Adequate restraint is important to ensure proper placement of the captive bolt. A cerebral hemisphere and the brainstem must be sufficiently disrupted by the projectile to induce sudden loss of consciousness and subsequent death." The AVMA points to those few contexts where penetrating bolt guns can provide euthanasia, if properly used and maintained -as being "in slaughterhouses, in research facilities, and on the farm when use of drugs is inappropriate." These conditions cannot be met in field settings with free-ranging deer when so many variables occur with restraint and handling. Accordingly, we cannot condone this procedure as humane.

> ***Response 31-2:*** *See Response to Comment 31-1*

Comment 31-3 (Laura Simon, The Humane Society, 12/8/10): Killing deer will also not reduce incidence of human cases of Lyme disease, as demonstrated by an interview with a leading researcher in the Harvard Newsletter http://www.hsph.harvard.edu/news/features/features/kiling-deer-not-answer-reducing-lyme-disease.html and by the new authoritative text, Lyme Disease: the Ecology of a Complex System (2011), which points out how assumptions that reducing deer will significantly reduce the black-legged tick (see attached chapter) are fatally flawed. The fact that the tick is carried by over 125 hosts, plus dozens of scientific studies, all underscore the futility of trying to control the disease by reducing numbers of one host. Health authorities such as the Centers for Disease Control (CDC) and World Health

Organization don't recommend hunting to reduce the incidence of Lyme disease for the simple reason that it doesn't work.

Response 31-3: *Comment noted. See Response 13-1.*

Comment 31-4 (Laura Simon, The Humane Society, 12/8/10): It seems counter -intuitive. but reducing the deer population won't necessarily result in fewer deer car collisions. For example. a countywide study was conducted by the Virginia Department of Transportation to determine which factors are correlated with deer-vehicle collisions. The logistic regression indicated that deer density was either a non-significant factor or that deer/vehicle collisions were actually lower in areas of higher deer density. The conclusion was that "there is little evidence that increased deer harvest reduced deer/vehicle collisions (McShea et al, 2008, Human-Wildlife Conflicts 2:110-121." These kinds of data reflect the complexity of deer related problems and the need to make sure the remedy actually addresses the problem.

Response 31-4: *Comment noted. See Response to Comment 32-5. It is recognized that depending on the methodology of a study, the hypothesis being tested, the experience of the researcher and the validity of the data, that any number of study results can be obtained. Nonetheless, there seems to be little logic to the idea that reducing the number of deer in urban and suburban environments will not affect the number of deer/vehicular accidents as suggested by the above comment.*

According to published reports, counts of total vehicle-deer collisions are not always accurate because not all deer carcasses are located and removed from the roads or reported. Some deer continue to travel after being struck and later die away from the road and many accidents are simply not reported.

Research has shown that the number of vehicle-deer collisions is dependent on both the deer density and the overall volume of traffic (MCCAFFERY, K. R. 1973. Road-kills show trends in Wisconsin deer populations. Journal of Wildlife Management 37:212-216).

As deer densities increase, the number of vehicle-deer collisions usually increase even when traffic volume remains constant. Likewise, when traffic volume increases and deer densities remain constant, vehicle-deer collisions usually increase. Decreases in deer density will result in fewer deer hit by vehicles, assuming traffic volume remains constant. Risk of vehicle-deer collisions has not been reduced by whistles, roadside reflectors, or fencing. The only known way to efficiently reduce deer collision hazards, without reducing traffic, is by reducing deer numbers (see http://usgs.wildlifeinformation.org/S/00Ref/MiscellaneousContents/D109EIS_CWD_Wisc/Appendix_I.htm)

Comment 32-1 (Barbara Stagno, New York Campaign Coordinator in Defense of Animals, 12/16/10): I am writing on behalf of In Defense of Animals, an international animal protection organization with more than 8,000 members in New York State. We are aware that the town of Cayuga Heights is considering exterminating deer locally using the net and bolt method. We strongly advise against using this method to kill deer as it has been shown to be a very inhumane method of inducing death.

Response 32-1: *See Response to Comment 31-1.*

Comment 32-2 (Barbara Stagno, New York Campaign Coordinator in Defense of Animals, 12/16/10): Using the captive bolt gun on animals such as deer in a field setting is highly controversial and condemned by many humane societies and veterinary professionals, including Temple Grandin, a noted expert in humane animal agricultural practices. The main problem with netting and bolting deer in a field setting is the inability to properly restrain the deer to ensure proper placement of the bolt gun. It is not unusual for the animals to be struck multiple times in the skull before a fatal shot is established, thus compounding their suffering and stress greatly.

Response 32-2: *See Response to Comment 31-1.*

Comment 32-3 (Barbara Stagno, New York Campaign Coordinator in Defense of Animals, 12/16/10): A study conducted in 1997 demonstrated that deer who were immobilized and killed using a captive bolt gun exhibited blood cortisol levels that were *ten times higher* than deer killed by rifle shot. Blood cortisol, excreted by the adrenal glands under conditions of duress, is considered by scientists to be an accurate measure of an animal's physiological and psychological stress. Humaneness of deer control is an important criterion for the public. Recently, the town of Hastings-on-Hudson, NY rejected a plan to kill deer using the net and bolt method after widespread opposition from town residents. After careful consideration, Hastings Mayor Peter Swiderski accurately observed that netting and bolting of deer would not be a one-time event and that he could not reasonably expect the community to tolerate such an extreme measure year after year.

Response 32-3: *Comment noted. The stress exhibited by netted deer is understandable as wild deer, even those that have become accustomed to the presence of humans, will intensely resist capture. When it occurs, their adrenal system will immediately respond. This would also occur, but for a prolonged period, if they were trapped and transported. Add to this the stress the animal will experience attempting to reestablish itself in an unknown habitat.*

In netting and captive bolting, the duration of the experience is extremely limited, generally to a minute or less. As there are no known baseline studies of deer and their cortisol levels in other circumstances (i.e. If hit by a car, or when exposed to some other fear inducing, threatening experience), it is impossible to use this criteria as the basis for labeling the net and bolt approach as inhumane.

Comment 32-4 (Barbara Stagno, New York Campaign Coordinator in Defense of Animals, 12/16/10): Please also note that many communities facing a perceived overabundance of deer have learned that lethal programs have not been the answer to their problems. Typical issues, such as deer vehicle collisions, spread of Lyme disease and browsing on vegetation are best dealt with by methods that specifically address these problems. For example, road reflector lights and proper signage are more effective at reducing deer collisions than simply killing deer. When deer are crossing at particular sites, there is often a reason, such as the need to get to a water source. Deer, even in smaller numbers, will continue to cross those sites if the need remains, which is why simply killing them is not the solution. Similarly, browsing on residential vegetation will continue even with lowered populations of deer. To address that problem requires the direct application of deer deterrents, of which there are many effective ones available. Gardening supply companies offer a range of products to address this problem.

> ***Response 32-4:*** *Village citizens have been encouraged to use deer deterrents and or resistant landscaping materials. A listing of such deterrents is provided in Appendix E and there is also such information on the Village's website. However, a deer deterrent will not address the existing overpopulation of deer in the Village.*

Comment 32-5 (Barbara Stagno, New York Campaign Coordinator in Defense of Animals, 12/16/10): Between 2000 and 2005, the Town of Millburn, NJ spent $177,329 to eliminate 85% of the deer population, but failed to achieve lowered deer-vehicle collisions or incidences of Lyme disease. (Lyme disease, in fact, increased). (Source: Humane Millburn. Attached) This demonstrates the need for a comprehensive program that targets each problem at the source, rather than simply relying on reducing numbers of deer.

> ***Response 32-5:*** *A number of recent highway studies show that the factors that suggest a higher probability that a roadway segment would be a high DVC segment include: proximity to woodlands; number of bridges, number of lanes, in-line visibility, posted speed limit, lack of fencing, adjacent area closed to hunting; daily vehicle travel miles; local deer harvest. No studies have been conducted over a large geographic area.*
>
> *Only a few studies have been found that review deer population reduction in smaller geographic areas (such as a city or park) as it relates to deer/vehicle accidents (dva's) Among them are Princeton Township, New Jersey; Oak Ridge Reservation, Tennessee; Ned Brown Forest Preserve, Illinois; and River Hills, Wisconsin.*
>
> *From Princeton Township, 2006:*
>
> *Year Deer/Vehicle Accidents*

Pre-program: year 2000 - 342 dva's

After a culling program: 2001 - 245 dva's; 2002 - 170 dva's;, 2003 - 128 dva's; 2004 - 127 dva's; and in 2005 -100 dva's.

At the Oak Ridge Reservation, Tennessee, deer hunts were initiated in 1985 in response to increases in the number of deer/vehicle collisions. Yearly deer/vehicle collisions have been reduced from 273 to 143 (time period is not noted).

At the Ned Brown Forest Preserve, Illinois, sharpshooters, rocket netting and drive netting were employed to increase vegetation and to reduce DVA. Collisions were reduced from 37 per year to 13 (time period is not noted).

At River Hills, Wisconsin, 438 deer were relocated between 1987-1992. DVA declined accordingly. "Before we started trapping in 1986-'87, we had 76 car kills. Annual incidents have been reduced to as low as eight.

While it is reported that no positive correlation appears in Millburn's deer culling vs. Deer Vehicle Collisions, it is believed that the principal reason for this may be that the great majority of Millburn's recorded DVCs occur in the vicinity of JFK Parkway, adjacent to NJ American Water Preserve lands where no culling has been practiced.

Http://www.all-creatures.org/hope/DOE/4%20-%20Deer%20Management%20Policy%20of%20Millburn%20Township,%20NJ.htm

Comment 33-1 (Doreen Tignanelli, 12/14/10): Executive Summary makes connection between lack of food and "wasting disease". It is not clear what exactly is meant by "wasting disease". If Chronic Wasting Disease is meant, it should be noted that CWD is believed to be caused by an infectious protein or prion, not lack of food.

Response 33-1: *This reference in the executive summary was incorrect. The sentence should have read "It is possible that if the herd grows significantly, lack of food may result in unhealthy animals, malnutrition or result in increased deer population in areas outside the VCH.*

Comment 33-2 (Doreen Tignanelli, 12/14/10): In Existing Conditions section, statements are made equating reduction of deer with reduction of tick borne diseases with experts from Connecticut cited. However, Dr. Richard Ostfeld, Senior Scientist, Institute of Ecosystems Studies in Millbrook NY stated "in many Lyme disease zones, reducing the deer herd is unlikely to substantially *affect* tick abundance. Reducing mice is more likely to be effective" and "several recent studies in New York and New Jersey have found no connection between populations of deer and ticks." See below "Reducing Herds Won't Reduce Risks" by Dr. Richard Ostfeld and Dr. Felicia Keesing, biology professor at Bard College.

Response 33-2: *The Trustees acknowledge that there are different views and studies regarding the relationship between deer densities and incidents of tick borne illnesses.*

Comment 33-3 (Doreen Tignanelli, 12/14/10): Description of Proposed Action states that 80 percent of people surveyed wish the deer population in Cayuga Heights would decrease. As the actual survey question was not provided, it is not clear if those surveyed were provided with description of proposed net-and-bolt process where deer would be trapped under nets and restrained while a captive-bolt gun was pressed against their heads and a retractable steel rod fired into their brains. Unless the procedure was fully explained to those wishing for a decrease, the 80 percent figure seems questionable.

Response 33-3: *The survey question related to the deer population. The method of reducing population was not surveyed. The Village intends to post the results of survey information collected by the Human Development Resources Unit (HDRU) at Cornell University regarding deer management in the Village, when it is available*.

Comment 33-4 (Doreen Tignanelli, 12/14/10): Description of Proposed Action states that deer are impacting biodiversity. It should be noted that development results in habitat loss that negatively impacts biodiversity yet restriction of development to protect or restore biodiversity was not discussed in any detail or included as an alternative.

Response 33-4: *The Village of Cayuga Heights is largely built out. Restricting future development in the Village in the few areas that are vacant and where zoning would allow further development would have no meaningful impact on biodiversity and certainly not in the way that the overpopulation of deer has had.*

Comment 33-5 (Doreen Tignanelli, 12/14/10): Potential Impacts states "deer may be shot over bait". It is not clear if the NYSDEC allows this or if NYSDEC requires that bait be removed for a time period before shooting is to occur.

Response 33-5: *This would be permitted by the NYSDEC as part of the deer management permit.*

Comment 35-1 (Oswald J. Schmitz, PhD, 12/14/10): The document is correct in stating that research over the past 20-25 years has examined how deer can affect species composition, biodiversity and forest regeneration. However, many of these studies are in a single location and could thus be conflated by human land use type and land-use history so that deer cannot be concluded to be a leading factor determining the impact in anyone of these studies (see Rutherford and Schmitz 2010, Journal of Wildlife Management 76:1257-1263). Indeed, such conflation of land use on deer populations has been alluded to in 2.3 Project Background... which claims that

agricultural practices and forest management has improved and expanded deer habitat and sub-urbanization of landscapes has created edge habitats preferred by deer.

Response 35-1: *Comment noted.*

Comment 35-2 (Oswald J. Schmitz, PhD, 12/14/10): It is correct that high deer densities can significantly influence habitat and forest composition and structure. However, our research (Rutherford and Schmitz 20 I0), conducted in a similar landscape as VCH, and includes several replicated town sites, again shows that these damage levels are unrelated to deer density per se across a wide range of deer densities. This means that lowering deer densities will not by itself lessen deer impacts on habitat and vegetation. Furthermore, the DEIS never provides criteria for quantifying and assessing damage levels that are acceptable or unacceptable. Hence, there are no a priori criteria to judge success of management aimed at lessening "damage".

Response 35-2: *The statement that lowering deer densities will not by itself lessen deer impacts on habitat and vegetation would need to be explained much further before it can be taken at face value. Deer consume substantial amounts of food daily and removal of +100 deer from the Village herd would undoubtedly lessen impacts on local habitat and vegetation. For example, if the population of deer now is 200, and that population is reduced by 170, the 30 remaining deer would need to consume the equivalent of 200 deer in order that the impacts not be lessened. This appears unlikely.*

Comment 35-3 (Oswald J. Schmitz, PhD, 12/14/10): The document is correct that deer densities above 10-15 per square mile can be quite damaging in some areas. But, again, there is wide variation in damage levels, meaning that 10-15 is not a damage threshold, as implied by the document.

Response 35-3: *Comment noted.*

Comment 35-4 (Oswald J. Schmitz, PhD, 12/14/10): I see no evidence that this population size goal is attainable for 2 reasons. First, the document itself states that deer population [sizes] are difficult to ascertain accurately due to daily and seasonal movements (page 2-4). Thus, there is no evidence provided that accurate estimates of deer will be obtainable to judge the success of the management. Second, because of the acknowledged daily and seasonal movements, the deer population in VCH may not be closed-meaning deer may not be confined within the town boundaries, but may enter and leave VCH. There is further evidence to suggest that VCH does not have a closed population. The current reported deer population sizes (Letter to VCH Trustees from Paul Curtis Dated 12/912009-Appendix A) indicates that the deer population size (presumably within VCH boundaries-the exact area of the population estimate is not specified) is very high by deer population standards. However, the population was only sampled in the spring (according to the letter) so the seasonal movement of deer remains unclear. One might expect that under such high abundance, that deer birth rates would slow because of competition for food (called density-dependent feedback). The claim that the deer population is still growing prodigiously (according to the letter)

means there is incomplete understanding about the population dynamics on this landscape. One possibility is that deer arc moving seasonally into and out of the VCH from the surrounding landscape, are highly abundant seasonally, but are not resident within the VCH.

> ***Response 35-4:*** *Comment noted. The Village acknowledges that ascertaining existing and future deer populations in light of the conditions in and surrounding the Village is not an exact science. However, the Village anticipates a monitoring program will be carried out in conjunction with the Deer Management Program.*

Comment 35-5 (Oswald J. Schmitz, PhD, 12/14/10): Sterilization. If it works at all. will only work for a closed population. The fact that the DEIS has not provided evidence that the VCH deer population is a closed population means that sterilization, and hence a POA as defined in the document could be altogether untenable. Furthermore, if the population is open, then it will be difficult to reach a target "stable" population size of 15 deer per square mile. even within a single culling period. Because culled deer could be rapidly replaced by deer from the landscape surrounding VCH, there is a likelihood that even a 5 year time horizon will be insufficient to reach a target population size. It may never be reached with an open population and culling efforts focused only on a small part of the greater landscape.

> ***Response 35-5:*** *Sterilization does inhibit the reproduction of a female deer. Because it is proposed in an open biological system, there are innumerable variables that will influence the results. However, in combination with culling, it appears to have the potential to achieve the desired reduction in the Village's deer herd. The Village will review, study and monitor its success over each year and that information will be used to make future decisions on the efficacy of sterilization.*

Comment 35-6 (Oswald J. Schmitz, PhD, 12/14/10): There is insufficient evidence provided in the documentation to show that the management effort will achieve its stated objective deer population size of 15 per square mile within VCH. Evidence to support the assertion that a deer population size reduction will lessen impacts on ecosystems (habitat and vegetation) within VCH is also insufficient. Furthermore, the DEIS needs to consider the conflating effects of human land use as a driver of deer movements and population growth on this landscape. That is, deer populations may be the consequence of human impacts on the landscape rather than a cause of impacts to humans.

> ***Response 35-6:*** *It is the view of the Trustees that the population of deer in the Village is excessive and cannot be sustained given the Village's human population, land uses and natural and planted landscape conditions. The Trustees believe that there is ample evidence that reducing the deer population will lessen impacts on habitat and vegetation and have other potential ancillary benefits as stated in the DRAC recommendations, the DEIS and herein. These views are supported by the experience had by other communities and the New York State DEC who grants deer management permits with the understanding*

and expectation that the population numbers represent a "nuisance" that requires intervention of some kind.

Comment 37-1 (Sherene Baugher, PhD, 12/16/10): The DEIS bases its belief on what the community thinks regarding "the deer problem" on a survey done in the 1990s (no specific date is given and nor who did the survey) and the survey was only of property owners. The survey is minimally at least 10 years and perhaps 15 or more years out of data and it also excludes all of the renters in Cayuga Heights who would be impacted by a deer killing plan socially, psychologically, and economically (in terms of the increase in taxes being passed along to them in increases in their rent).

Response 37-1: *Although not known with certainty, it is likely that the population of deer in the Village has increased since the aforementioned survey was conducted. The Trustees can find no substantive reason to assume that community views have since then changed.*

There is ample evidence that the overpopulation of deer continues to be a substantial concern to residents of the Village based on commentary at public meetings, local blogs, recent elections and anecdotal information. Village elections also bear this out as the majority of Trustees continue to affirmatively consider the value of the deer management recommendation of the DRAC. If the majority of residents oppose deer management, they can express their views in the voting booth at Village elections which occur every two years. Renters as well as property owners are included in the voting pool of Village elections. (See the HDRU survey on the Village's website.)

Comment 37-2 (Sherene Baugher, PhD, 12/16/10): The deer count was not a systematic deer count accepted in scientific studies (no scientific study is provided) but it appears to be a personal estimate of the deer population by Dr. Curtis of Cornell University instead of a scientific study. Since the proposal of numbers of deer to kill is not based on hardcore scientific data in a scientific study it does raise the question of how valid is the proposal of numbers of deer to kill.

Response 37-2: *It is the intent of the deer management program to be flexible and to make future decisions based on future information, experience, feedback and trends. Monitoring the size of the deer herd in the future is anticipated to be a part of the deer management program. The Trustees will monitor the deer herd as the management program is implemented and based on that data, will make future decisions as to what measures are to be implemented to best suit the goals of the program.*

Comment 37-3 (Sherene Baugher, PhD, 12/16/10): The DEIS study discusses the problems of Lyme disease in Maine and then suggests that this is a serious problem for the citizens of Cayuga Heights. However, no data is given on how many residents of Cayuga Heights have contacted Lyme disease in Cayuga Heights and there is no study of Lyme disease in Cayuga Heights to scientifically demonstrate that there is growing problem over the last few years or even if there is a problem at all. There is simply a

veiled threat that if the deer-killing program does not go forward Lyme disease will become a serious health issue for the residents. This is not science, this is simply opinion based on emotion not facts. An EIS should deal in facts.

> ***Response 37-3:*** *It is rare that community decisions are made based on data alone. In any community, there are preferences and opinions that may run counter to data. Nonetheless, the Trustees will work with the best information available as the Village proceeds with its decision making.*
>
> *As noted in prior responses, data on Lyme disease cases is not sorted by Village boundaries and it cannot be known with certainty if the incidents of Lyme will decrease in the Village. There are various studies that provide opposing results.*

Comment 37-4 (Sherene Baugher, PhD, 12/16/10): The study provides minimal discussion of the other alternatives to the deer-killing program. There are scientific studies of alternatives to deer-killing that have been discussed in public hearings but those studies are NOT included DEIS. There are studies showing that deer-killing has not worked in other communities that have been discussed in public hearings but those studies are NOT included DEIS. No discussion of the effectiveness of fencing is presented in the EIS although it has been discussed at length in public hearings.

> ***Response 37-4:*** *See Response to Comment 16-4.*

Comment 38-1 (Hazel Brill Brampton, 12/15/10, See also Page 65-66 of Public Hearing Transcript 12/6/10): As a lover of human beings, as well as other creatures of nature, I am speaking up to encourage intelligent thought in the current struggle to live with white tailed deer in the Cayuga Heights area. I and many others have come to meetings to share our thoughts on this issue, where sensible and well-informed voices called for alternative manners of reducing conflict between deer and humans. But the Cayuga Heights village Board of Trustees has decided, to my knowledge, to kill the bulk of the deer herd - this without any serious research into non-Iethal options. Now, I have recently learned, it seems this will be done in a thoroughly vicious manner described as "net and bolt" killing. Plunging ahead with violence in defiance of both science and ethics appalls me. In a setting filled with intelligent and well-educated people, there are apparently some who value flowers and bushes untouched above beautiful sentient beings who were, of course, here before us all.

> ***Response 38-1:*** *The goal of the Trustees is to restore balance to the degree possible in a human-influenced environment. To do so requires some very difficult choices. Use of netting and captive bolt is being considered as an alternative and no decision has been made at this point in time, as to its application.*

Comment 38-2 (Hazel Brill Brampton, 12/15/10): I found in the village's Draft Environmental Impact Statement little discussion of the significance of the impact the proposed killing program will have on the people of this community. On page 5 it is

stated, "While the culling of deer, as proposed by the Village, may be experienced as a potential Significant impact to the social conscience of a portion of the VCH community, under the rules of the New York State Environmental Quality Review Act, community controversy is not criteria for determining significance." I agree that this killing program is going to impact the conscience of many people, not just in Cayuga Heights, but in the entire Ithaca area, and perhaps beyond. But to conclude that conscience is the same as controversy is incorrect. While this certainly is a matter that should weigh upon our consciences, it is also a Significant question of mental health, on both a community level and individual level. The village board is obligated to closely and objectively assess the human health implications of the proposed plan.

> ***Response 38-2:*** *Culling programs have taken place in many other communities in the Northeast with no known long term adverse affects on community health. The Board of Trustees has no reason to expect that long term health impacts will result from this project. There has been a number of successful culling operations, some of which are discussed in Appendix B.*

Comment 38-3 (Hazel Brill Brampton, 12/15/10): As a mental health professional, I am deeply concerned about the impact of this killing program on children. The lesson we teach them by carrying out mass killing of innocent wild creatures in our backyards, particularly in the manner planned, is that only human beings matter, that any creature who gets in our way can be struck down without care. And that the suffering of the creatures of this earth doesn't count as much as our often superficial wants and whims. Thus we teach them the wrong lesson for living. It continues the myth that violence is the answer to problems, and it will certainly cast a shadow on their still developing inner lives.

> ***Response 38-3:*** *Comment noted. There are many experiences that can be had when choices such as the ones in front of the Board of Trustees are deliberated. The writer expresses one potential experience and viewpoint. It is not necessarily so, that children will learn what the writer believes is being "taught".*
>
> *The proposed management plan, with no reinterpretation of it, is simply a series of options to address an unhealthy density of animals in the Village. If there is no action, the implications of deer overpopulation will continue to be felt for some time.*
>
> *Making hard choices on matters that have positive and negative implications is common in all aspects of family, government and business management. Addressing this matter publicly with calm debate allows everyone to learn from it (including children).*
>
> *All animals are "innocent" yet when they become a nuisance or a hazard, or their "use" as food or fur is desirable, they are "managed" to serve the goals of humans. If a community were infested with feral cats, dogs, rats, or bees, it is unlikely that the polarized views that have arisen around deer management*

would make themselves known in the way they have been presented in the Village. When animals are viewed as being undesirable, their "management" often carries little controversy.

Comment 39-1 (Julia Cozzarelli, 12/12/10): The plan, as proposed. will not provide a permanent solution, and. in fact, will have very little or no immediate effect for property owners like me who live close to the boundaries of surrounding municipalities. Deer in other areas will simply move in to fill the void, and reproduce at a higher rate.

Response 39-1: *See Introduction.*

Comment 39-2 (Julia Cozzarelli, 12/12/10): It is irresponsible to spend the tremendous amount of capital required by the program. especially when the community is so strongly divided on its implementation. As you should know, the tax rates in this area are already excessively high and must be lowered, not raised. To add a new burden for an issue that does not deal with basic services ignores this fact, and demonstrates a lack of concern for Village residents.

Response 39-2: *Comment noted.*

Comment 39-3 (Julia Cozzarelli, 12/12/10): Other than for superficial reasons (yard aesthetics). the rationale behind the culling is not sound. Deer aggression is rare. and those who do their research quickly learn that the tick that transmits Lyme disease, despite its name, is carried into yards by small creatures, particularly chipmunks and rodents. A chipmunk eradication program and clearing of brush from yards would be much more successful in this regard than a program targeting deer.

Response 39-3: *The Board of Trustees intends to implement a public education program for tick management, along with the Deer Management Program. (See Village website).*

Comment 39-4 (Julia Cozzarelli, 12/12/10): Although I am from a family whose members hunt deer. the culling methods suggested in this program are unethical. It is both wrong and dangerous to bait and shoot in a residential area, and the new method mentioned recently on the news (to net the deer and then kill them with a bolt) is very disturbing. The Village should not engage in activities that model undesirable behavior and could traumatize some residents, especially children.

Response 39-4: *Ethical action is action taken in accordance with accepted principles of right and wrong that govern the conduct of a profession. Culling of nuisance animals is something that has historically occurred when such animals adversely affect health and safety. Such management techniques are sanctioned by the State of New York through Deer Management Permitting processes.*

The Trustees disagree that the proposed deer management plan is thus unethical.

Comment 44-1 (Ann Gray & Rebecca Davidson, 12/15/10): We have several criticisms of the Draft Proposal "The Cayuga Heights Deer Management Plan." There are no data relevant to the Village of Cayuga Heights (VCH) regarding its native habitat, its native plants and animals and if studies conducted in different environments regarding loss of habitat can be applied to the village. The Village of Cayuga Heights is a suburban development. It is not a native forest, not a wetlands, not a home for ground breeding birds nor a wild flower garden. There are some undisturbed wooded areas that, if fenced, could be restored to a somewhat native environment. The document notes that the impact of deer on these natural areas is unknown. Otherwise, it should be noted that the Village contains many non-native invasive plants such as non-native privet *(Ligustrum sp.),* European Buckthorn *(Rhamnus cathartica),* and bush honeysuckle *(Lonicera maackii)* and that these plants were introduced by humans, not deer. It is well documented that these plants and others found in our community *(Euonymus a/atus, Lythrum sa/icaria, Euonymus fortunei, Ailanthus altissima* and *Acer platanoides)* threaten native species. Removing deer will do little to improve plant and animal diversity unless these non-native invasives are removed.

> ***Response 44-1:*** *Comment noted. The Trustees would welcome a proposal directed toward educating the public on the reduction of non-native invasives.*

Comment 44-2 (Ann Gray & Rebecca Davidson, 12/15/10): There are no data to justify the estimated size of the herd within VCH. Estimates of herds sizes are generally based on the number of reported deer killed within a year. This method is being evaluated by the State of Pennsylvania. Hunters within NY legally took 222,798 deer in 2009, a number that is within the range for the number taken in the past 20 years.

> ***Response 44-2:*** *See Response to Comment 15-1.*

Comment 44-3 (Ann Gray & Rebecca Davidson, 12/15/10): The number of reported deer/vehicle incidents should come from law enforcement and not from a committee made up primarily of persons predisposed to favor killing deer (the Cayuga Heights Deer Remediation Advisory Committee). Giving a 5 year number based on an estimated single year (10 per year) is misleading.

> ***Response 44-3:*** *The committee's only source of data on this matter, in fact, was from local law enforcement agencies.* (*The Village Police Chief was a member of the DRAC).*

Comment 44-4 (Ann Gray & Rebecca Davidson, 12/15/10): As for water contamination, many residents use large amounts of herbicides and pesticides to maintain lawns and gardens. Run-off from these chemicals go directly into the source of the village drinking water. No one proposes to study that. The effect of run-off into Cayuga Lake from the village deer compared with run off from all the dairy farms that are within the watershed is not mentioned. The effect is misleading.

Response 44-4: *Water passing through the Village's system is monitored regularly and complies with drinking water standards. The DEIS did not imply that drinking water quality was at risk. However, the proposed action is the management of the overpopulation of deer in the Village and making note of the excessive deer waste being carried in stormwater in the DEIS is appropriate.*

Comment 44-5 (Ann Gray & Rebecca Davidson, 12/15/10): There are no data on the incidence of Lyme disease caused by ticks encountered within the Village.

Response 44-5: *See Response to Comment 13-1.*

Comment 44-6 (Ann Gray & Rebecca Davidson, 12/15/10): Many of the "implications of the density of the existing deer herd in the VCH" are preceded by the word "likelihood." Without sufficient data, these implications can be seen as fear mongering, or at the least, such statements give rise to controversy because they invite counter-statements.

Response 44-6: *The Trustees have no wish to engender fear but rather intend to be forthright as to the information and data that is available. Because the deer herd is a biological system that changes from day to day and season to season and managing biological systems always has inherent uncertainties, the use of the term "likelihood" seems appropriate. At the present time, the Trustees are using the best information available to make its decisions.*

Comment 44-7 (Ann Gray & Rebecca Davidson, 12/15/10): The Trustees who currently govern the village were elected by a large majority of the people who voted. The village has information on exactly how many persons took part in the elections and the percentage of eligible voters who participated in the elections. The overwhelming majority of village residents did not *vote* in either election. For the sake of honesty, this fact should be in the document. The existing statement that the Village Board members "have been elected by an overwhelming majority of those voting in the largest election turnout in the history of the Village" is misleading.

Response 44-7: *The statement is accurate as it was written.*

Comment 44-8 (Ann Gray & Rebecca Davidson, 12/15/10): In the section on "Community Viewpoints" it is noted that "community controversy is not criteria for determining significance," whatever that means. If the viewpoint of the community is of no relevance, why is it included? Culling deer within the village will cause significant pain and anguish to many villagers. To call that an "impact to the social conscience" misrepresents the feelings of many. It should be known to the Trustees who have listened to speakers at public meetings that these deer have been a part of village life for decades and many residence have a loving bond with these wild creatures despite the problems they cause. Another objection that is frequently voiced is that this proposal will bring violence to the village - a violence that cannot be ignored and about which nothing can be done. If the killing of the deer includes the use of captive bolts it

may attract activists from outside the community who have little regard for the safety and welfare of the rest of us.

> ***Response 44-8:*** *Comment noted. The Trustees have listened to many comments from citizens and those comments include a wide range of opinions, views, perspectives and emotions. There was no intent to mislead, but rather to capture the views of the various stakeholders in the broadest possible way.*
>
> *The actual culling of deer will occur during relatively brief periods of time. Whether it is done by sharpshooter or netting and use of a captive bolt device, it will be swift and briefly intense. Such actions may be considered violent under some definitions. Nonetheless, they are humane and ethical, and consistent with the State of New York's legal expectations with regard to wildlife management.*

Comment 44-9 and 44-10 (Ann Gray & Rebecca Davidson, 12/15/10): There are NO studies that show that killing deer within a suburban community has contributed to a significant increase in the quality of life, biodiversity, or economic vitality. There are many confounding variables regarding deer/vehicle encounters. None are mentioned. We believe there are no data to support the claims that deer within VCH are responsible for a significant amount of loss of biodiversity, vehicular accidents, and Lyme disease. Vehicular accidents, Lyme disease, and loss of biodiversity are not particular to VCH.

> ***Response 44-9 and 44-10:*** *The Trustees acknowledge that there are many confounding variables and those have been reviewed by the DRAC and brought forth at public hearings that are part of this SEQRA record. There are studies that show reduction in DVA's and studies that show intense densities of deer herds have severe impacts on biodiversity and those studies are referenced herein and in the DEIS.*

Comment 44-11 and 44-12 (Ann Gray & Rebecca Davidson, 12/15/10): The Trustees have already stated that there will be no change in the existing fence ordinance and that 20 deer will be sterilized. The document makes reference to the use of fences and the sterilization of 20 to 60 deer. That should be changed to reflect current decisions by the Board. The deer do eat things and they do leave droppings. These are the real reasons behind this proposal.

> ***Response 44-11 and 44-12:*** *Comment noted.*

Comment 44-13 (Ann Gray & Rebecca Davidson, 12/15/10): Both of us were brought up in households where "what's for dinner" was often raised and killed by our families. We are very aware of the sources of our food. We treasure the natural and the native. On our property we attempt to create an environment that nurtures birds, butterflies, bees, and native plants. The Cayuga Heights Deer Management Plan, as described, will cause great suffering to us and will do very little to protect us from Lyme disease and vehicular accidents, nor will it prevent our plants from being eaten by deer, ground

hogs, moles, voles, mice, chipmunks, and rabbits. Nor will it promote increased biodiversity.

Response 44-13: *Comment noted.*

Comment 44-14 (Ann Gray & Rebecca Davidson, 12/15/10): Deer management is an important issue for many people. To have it based on such an inadequate report is distressful. This document is faulty. It pretends to show the need to kill these deer, but it fails to prove anything. There are alternatives to reducing the deer population and with the help and support of interested groups, such as hunters and environmental groups, the Board should be able to find a solution. There are reasonable voices on both sides of this issue. Some accommodation should be possible.

Response 44-14: *The DRAC has reviewed and evaluated many alternatives to deer management and each of them is contained in the DEIS. The Board will continue to consider options as it moves forward with the POA.*

Comment 47-1 (Karen Kaufmann, 12/6/10): I am appalled and deeply ashamed that my neighbors in the Village are willing to move ahead with a program of mass slaughter on the flimsy collection of inapt suppositions and unquantified speculations set forth in the DEIS. I would urge the Board to demand additional, local, data collection and quantification before approving this document or proceeding with the program.

Response 47-1: *See Introduction to this Chapter, regarding the purpose of SEQRA.*

Comment 47-2 (Karen Kaufmann, 12/6/10): For instance, the DEIS begins its analysis with a general overview of studies purporting to show the impact of white tail deer populations in natural-- specifically, forest-- ecosystem regeneration and environmental diversity, with only a small caveat that the Village is not a forest. Yet it goes on to use deer-density criteria drawn from such studies to support the Village's assessment of the optimal or acceptable deer density in the Village. Clearly, if ecosystem regeneration or environmental diversity is the Village's goal, as the DEIS and the Village's supporting EAF both suggest, culling ought to be the penalty for any ecosystem- or diversity-destructive activity-- for instance, when I clear brush from the back portion of my lot, or when the few remaining undeveloped plots in the Village are put up for development. or when we spray pesticides on our unnatural lawns.

Response 47-2: *See Response to Comment 47-1. The target for deer density may be adjusted as the POA is implemented. The Village has used the best information available to assess potential impacts of the Deer Management Program, consistent with the requirements of the New York State Environmental Quality Review Act.*

Comment 47-3 (Karen Kaufmann, 12/6/10): In addition, on the issue of density, the DEIS is upfront in pointing out that a deer population enumeration is difficult if not

impossible to obtain. Nonetheless, it goes on to premise the need for and impacts of mass culling on repeated references to excess population density, based on projection from a 4-year-old "count" based on population modeling. The projection may or may not be accurate, especially for the 20I0 season, when folks in the Village have repeatedly observed that there seemed to be fewer fawns and fewer multiples than in previous years. The bottom line is, however, that the impact of the culling proposal on the deer and on the rest of our Village environment cannot be accurately gauged without at least some current population count or data-based modeling, if only to know how many deer must be killed, how much shooting must be done, how many days or nights of gunshot and neighborhood police stake-outs we must endure, how much waste must be disposed of, how many truckloads of personnel, equipment, and waste must traverse Village streets and for how many years in order to achieve ephemeral "stability" of the deer population.

Response 47-3: *See Introduction, Response to Comment 15-1 and 47-3.*

Comment 47-4 (Karen Kaufmann, 12/6/10): Beyond that, if ecosystem preservation or environmental diversity is the Village's goal, isn't it ironic to find that, for the three identified "unique natural areas" remaining in the Village, no enumeration of species, no quantification or any other measure of deer damage, and no analysis of the impact of culling, has been undertaken or assigned? We are talking about mass slaughter of close to 200 deer, at a cost of $1 million over a period of five years, purportedly to maintain environmental diversity, with no data to even suggest that such diversity actually exists, is threatened, or will be impacted here in our well-manicured Village or its residual unique natural areas.

Response 47-4: *See Response to Comment 47-2. The protection of "unique natural areas" in the Village is under consideration as part of the Village's Comprehensive Plan proceedings.*

Comment 47-5 (Karen Kaufmann, 12/6/10): A similar lack of data or data analysis is evident in discussions of Lyme disease, deer-vehicle accidents, and the alleged problem of "untreated waste:' Notably, the Board, in its EAF, pointed to information from the American Lyme Disease Foundation acknowledging that Lyme is actually percolated by mice, although transmitted long distance by deer, and that effective Lyme control would entail a reduction in mouse population and/or the use of tick pesticides to reduce Lyme incidence; while the DEIS, touting the prospect of Lyme control, relies on a précis of studies actually concluding that Lyme control through deer culling remains inconclusive with regard to human disease, and/or demonstrating that such control is most compelling where captive deer populations are involved. There are no statistics offered for Lyme disease incidence in the Village; and even Tompkins County statistical reports, while warning that Lyme can be contracted in the County, continue to suggest that the reported incidence does not necessarily reflect locally-acquired tick bites. It is sheer speculation to suggest that killing 200 deer will prevent Lyme disease locally, particularly as the Village boundaries are permeable and deer abound in the surrounding areas.

Response 47-5: *See Appendix D and Response to Comment 13-1 and 23-4.*

Comment 47-6 (Karen Kaufmann, 12/6/10): Likewise with automobile accidents: while the DEIS does cite to statistics for 2003-2008, it does not analyze them by year, or by location. or by reporting protocols. to identify any upward trending or any correlation with traffic, speed, or terrain. In addition, the DEIS use of correlate statistics for the Village reporting category of deer-related "incidents" is suspect, as the DEIS misinterprets the category, describing such "incidents" as instances where, although no vehicle is present, the police must shoot an injured deer; whereas Chief Boyce clearly explained, in reports to the Board during the Board's preliminary environmental assessment, that "incidents" included all deer-related complaints, not necessarily vehicle-related nor necessarily involving the shooting of an animal. Can an assessment of the beneficial impact of the culling plan for drivers really rest on such a poverty or misinterpretation of data or analysis?

Response 47-6: *The role of the DEIS is to project potential adverse impacts. The Trustees do not view the culling as adversely impacting DVA's, based on experiences in other communities where a positive trend (fewer accidents) was noted. See Response to Comment 32-5.*

Comment 47-7 (Karen Kaufmann, 12/6/10): And on the alleged problem of untreated waste entering the local watershed, there is no quantification of current deer-related waste production. nor any environmental analysis of the contribution of deer scat to water quality relative to other waste, nor, apparently, any concern about the infusion of lime-treated deer guts into the waste stream in the remote location where the waste will be trucked, or about the environmental costs of trucking waste away from the bait sites and out of the Village. Anyway, if deer scat poses a waste-stream threat sufficient to justify mass slaughter, as the DEIS implies, then let's put a comparable death warrant out for commercial pesticide operations, for rabbits and crow, geese and coyote, and other wild waste producers, for those dog owners whose canine feces rot in our yards and along our sidewalks.

Response 47-7: *Comment noted. See Responses to Comment 23-4 and 24-3. The Trustees are unaware of any other animal population that has achieved the level of overabundance as the whitetail deer in the Village. In the event that should occur in other animal populations, action may be necessary to curb or otherwise manage that population.*

As to dog owners, there are laws that require cleanup in public areas.

It is assumed that homeowners and commercial pesticides contractors are carrying out those activities consistent with best management practices and guidelines.

Comment 47-8 (Karen Kaufmann, 12/6/10): Notably, although the DEIS purports to address alternatives to the Board's culling plan, it does not discuss any non-invasive

alternative besides the "do-nothing" option. Yet for concerns with collisions, ticks, and vegetation, there are clear non-lethal non-invasive options that the Village could implement at minimal cost- from speed reduction/enforcement and reflective light posts to a revised fencing ordinance that would address the concerns of gardeners and homeowners much more efficiently and at lower cost to the taxpayers than a large-scale population control program.

Response 47-8: *See Response to Comment 26-5.*

Comment 47-9 (Karen Kaufmann, 12/6/10): Likewise, the DEIS analysis of a sterilization-only alternative quickly writes off that option as too protracted- with a three to five year trajectory-- to meet Village stabilization goals, ignoring completely the evidence that the Village's previous sterilization program saw a marked decline in population in the two or three years it was in operation, that plans for culling have given rise to nearly three years of conflict and controversy in the current go-round alone, that the current plan's own projections call for one to two years of sterilization and five years of culling maintenance operations thereafter, and that in other communities a commitment to culling, once begun, is unending.

Response 47-9: *The Village's phased approach includes culling and sterilization and monitoring. The Trustees hope to achieve a population reduction consistent with the recommendations of the DRAC. If management options are found to be working sooner than later, there are plenty of opportunities to adjust future management techniques.*

Comment 47-10 (Karen Kaufmann, 12/6/10): Unlike the non-invasive options for highway safety and property-protection, or even the non-lethal option of sterilization for deer population control, the Village's culling plan will bring long-term and pervasive change to our community- from the five-plus years of shooting that it is projected to entail (as noted above, other communities have found that their initial short-term projections continue to drag on). in backyards and neighborhoods that will be off-limits to residents, neighbors and passersby for the duration of operations, at times and places that will be unannounced (despite the DEIS promise of "constant communication between [sic] community members, municipal officials and the culling agent" during shooting operations), with the sounds of gunshot, struggle, and painful death becoming a feature of our daily life for unspecified periods each shooting season. I will most certainly not be allowing such operations to occur within 500 feet of my home.

Response 47-10: *Comment noted.*

Comment 47-11 (Karen Kaufmann, 12/6/10): Moreover, as an all-weather, all-hours walker along Village streets, I am concerned about the plan's clear- but scantily addressed- impact on pedestrian and roadway safety and peace of mind, and on the pattern of daily life in the Village, particularly if shooting sites are unannounced. I am also concerned about the polarization of our community around this issue, particularly as the Board continues to blame "outside agitators" for opposition to the culling plan

and gives scant heed to the number or deep-seated concerns of resident opponents. I am concerned about the message we send our children in the Village in looking first to violent population-control measures to address issues that revolve largely around our own convenience or desires; and about the image and public perception of our community, as we opt to spend millions on violent deer control while the county, the state, and the national economy are in a phase of deep cutback and human suffering. I implore the Board to look as deeply at these impacts as at the speculative prospect of an easy life without deer offered by the DEIS, and govern yourself accordingly.

Response 47-11: *Comment noted.*

Comment 51-1 (Robert Munch, 12/6/10): A much better and more acceptable plan to all would be to allow a one year experimental trial by allowing a licensed veterinarian to dart and thoroughly examine each animal for wasting or any other disease and certify to the health of each animal. Only then allow the certified and in good health animal be transported to my 320 acre well posted against hunting, farm, a deer heaven, with excellent deer cover, woods, running brook for fresh water, corn, hay and oats are the crops grown on the farm. This could reduce the C.H. herd by 20-25 deer per year and in 9 or 10 years the 200+ animals would be relocated. In the mean time; surgical sterilization of female deer would speed up the yearly decrease of deer to be left in the C.H. population.

Response 51-1: *Relocation of live animals is not an option for the Village. As detailed in previous comments, relocation of wild animals in NYS is illegal.*

Comment 52-1 (Victoria Pifalo and Kieran Donaghy, 12/15/10): As relative newcomers to Cayuga Heights, we are struck by the evidence contained in the DEIS documenting the failure of the community to sensibly address a growing deer population in a concerted fashion for years. While there are *estimates* of the size of the deer population in the DEIS, the report does not detail compelling evidence of a comparative nature about the incidence of disease and traffic accidents associated with the increased deer population that would warrant taking a drastic lethal measure before non-violent options have been exhausted. It is extremely odd that the DEIS does not provide alternatives between that of no action and that of sterilization/culling. Chief among non-violent methods should be a fence ordinance commensurate with the suburban (as indicated in the DEIS) nature of our community. Others are steps to deter traffic accidents (reflectors, strict enforcement of the speed limit or a lower one, deer crossing signs) and an education program about health and gardening as related to wildlife realities.

Response 52-1: *All of the aforementioned alternatives have been considered by the Trustees and the DRAC as noted in the DEIS, the DEIS appendices and this document.*

Comment 57-1 (Steven H. Shiffrin, 12/13/10): The statement concedes that the plan will need political support over a five year period. It presumes that the plan has current

support because the Board was elected against opposition on the deer issue. This presumption is misplaced. The plan is not practical.

> ***Response 57-1:*** *Comment noted. The program, as presently set forth, and its various alternatives, has been successful in other communities.*

Comment 57-2 (Steven H. Shiffrin, 12/13/10): Although people vote for many reasons, it does seem likely that the deer issue decided the election. The election was between those who wanted to leave deer alone and those who were prepared to kill them. The issue of a compromise involving contraception or sterilization as the exclusive method of reducing the deer population was not presented as an election choice. It seems to me that the election shows that a strong majority of the village population wants to do something to reduce the herd. It does not show that the population was in favor of killing, or killing combined with sterilization, as opposed to sterilization and fencing. Indeed, the Deer Committee endorsed the Cornell study in the late 1990's that 80% of villagers wanted to reduce the herd, but those who favored killing the deer were in a minority that did not exceed 30%. (Appendix D) The Statement has no data to support its view that the majority favor killing of the deer (let alone killing deer with bolts). Of course, the Board has the power to proceed without a majority in support of its actions, but without popular support over a five year period. the plan will fail.

> ***Response 57-2:*** *The Trustees acknowledge that if the plan is not implemented over time, it will may not have the intended results of significantly reducing the deer herd in the Village. This situation is true of any long term plan. Newly elected officials (or future Trustees) have the option to adjust the path of any spending program, generally speaking. A project of this nature, however, can only be funded one year at a time.*

Comment 57-3 (Steven H. Shiffrin, 12/13/10): Whatever support the plan has now, there is reason to believe that support for it will decline over the next five years. It appears that the primary support for the plan in terms of numbers comes from those who are concerned about their gardens. This was the finding of the Deer Committee and the impetus for its establishment. (See Appendix D). And the Statement is not to the contrary. It does not point to lyme cases in the Village and it does not show that traffic accidents have increased in the Village. As the tentative budget for the Plan discloses. the cost for the proposal amounts to a 3.45% increase in the Village budget. It is reasonable to assume that the Village budget will need to be further increased for other reasons (do Village budgets ever go down?). If there is one thing we know about the American people (I doubt the villagers are an exception), they want many things, but they do not want to pay for them. When taxes go up, villagers will grumble and those who wanted to protect their gardens on the cheap may reconsider in a difficult economy.

> ***Response 57-3:*** *It is simply impossible to accurately project what will happen over the next five years. Future Trustees will have the option of budget adjustments based on the circumstances of the future.*

<u>Comment 57-4 (Steven H. Shiffrin, 12/13/10, See also Page 37 of Public Hearing Transcript 12/6/10)</u>: Under these circumstances, villagers will also examine the budget with some care. I expect future political candidates will have a field day in attacking the Board on grounds of fiscal irresponsibility. The plan calls for the expenditure of $150,000 each year for five years ($750,000) and an undisclosed amount thereafter. It has a goal of reaching a herd. Of 30 deer for 1.8 square miles (even though its figures show that other governments have sought to achieve 25 per square mile or what would be 45 for our community). The figure of 30 deer for 1.8 square miles seems to be completely arbitrary. It has no scientific basis. and the Statement does not even attempt to show that it has community support.

Response 57-4: *See introduction to this document regarding the purpose of SEQRA. The DEIS documented the long history of community interactions and deliberations prior to development of recommendations from the DRAC for the management program.*

The Village has choices as to the targeted population for this program, and the number of 10 to 15 per square mile as a sustainable herd size is commonly used based upon the relevant research.

Studies by the United States Department of Agriculture (USDA) suggest that when deer densities exceed 10 deer per square mile they begin to impact a forest ecosystem.

"The science used for managing deer and habitat on the Kinzua Quality Area was conducted by the USDA Forest Service Research Laboratory in Irvine, PA. Beginning in 1988, forestry and wildlife scientists from this Forest Service research laboratory conducted a 10-year study of the impact of white-tailed deer impact on forest resources, evaluating the impacts of deer at densities of 10, 20, 40, and 64 deer per square mile. Results of this research laboratory have been corroborated by scientists in other research locations in New York, West Virginia, Virginia, and Massachusetts. The research represents the impact of deer on forest resources in areas completely forested with no surrounding.

Deer begin to impact forest resources when their density exceeds 10 deer per square mile. At this point abundance of songbird species that nest in habitats affected by deer (the shrub layer) declines, and wildflowers and shrubs preferred by deer begin to disappear. When deer density exceeds 20 per square mile, abundance of seedlings preferred by deer (such as red maple, hemlock, sugar maple, and white ash) decline in abundance or disappear and plants not preferred by deer such as ferns and grasses begin to take over the understory, choking out seedlings and shrubs. At densities exceeding 40 deer per square mile there is a distinct browse line, only tree species resistant to deer browsing (beech, striped maple) are left, and shrubs and wildflowers are basically gone. When density exceeds 60 deer per square mile even resistant seedlings are heavily impacted and the forest understory is basically bare. At this density deer starve to death." See http://kqdc.com/science.html.

The Trustees acknowledge that the Village is not a forest. There has been little research on the ideal carrying capacity of a suburban area. Nonetheless, the Village views a targeted goal of approximately 15 deer per acre as a reasonable number and reserves the potential to pursue deer management until that level is reached. The Village may also choose to stop short of that goal pending review

and evaluation over the course of the management program and review of additional feedback to the overall program and its efficacy. The Village fully anticipates that there will be flexibility in the management program as the phased approach is implemented and evaluated over time.

Comment 57-5 (Steven H. Shiffrin, 12/13/10, See also Page 37 of Public Hearing Transcript 12/6/10): Taking the statement's figures, the Board would sterilize 30 deer at a cost of $1,100 per deer (see Executive Summary) at a total cost of $33,000 and would kill the 170 other deer it estimates to be in the herd at a cost of $500 per deer (see Executive Summary) at a total cost of $85,000. This totals $118,000. Even assuming another 20 deer come into the community to be killed ($10,000), the total figure for killing and sterilization, does not exceed $128,000. This leaves an expenditure of $622,000 to be explained. I have seen a document from the Village that budgets $30,000 a year for two years for a deer management professional (I assume this is for the sterilization period and that the Police Chief would protect public safety when the killings begin).

Response 57-5: *The Village anticipates releasing more detailed information regarding projected costs and expenditures as it finalizes its decision making on the options to be selected for management.*

Comment 57-6 (Steven H. Shiffrin, 12/13/10, See also Pages 37 of Public Hearing Transcript 12/6/10): This still leaves $562,000 to be explained. I do not think an expenditure of this character is politically defensible, and no evidence in the Statement suggests otherwise. If the Board plans to spend $562,000 on studies and unspecified contingencies, I would think any political consultant would forecast that it should plan to lose a lot of political support.

Response 57-6: *See Response to Comment 57-5.*

Comment 57-7 (Steven H. Shiffrin, 12/13/10): Finally, when the killings begin, there are risks of deteriorating support. Killing in the abstract is one thing; when people hear gruesome stories, many will lose their stomach for the enterprise. This would be especially true if the Board adopted a net and bolt plan. A study by Hastings-on Hudson concluded that no community has been able to sustain a net and bolt program and that government has opted for a contraception program.
Http://hastingsgov.org/Pages/HastingsNY_lssueslNew"1020Folder/Deer%20Presentation.pdf

Response 57-7: *Comment noted. The Village has made no commitment to a net and bolt plan at this point in time, and no expenditures have yet been approved for deer management purposes (there is only a place holder in the budget at this time).*

Comment 57-8 (Steven H. Shiffrin, 12/13/10): The Board recognizes that its proposed plan cannot work without support for five years, yet there is little evidence in the Statement that gives any grounds for believing that any present support will be stable.

Communities have started deer plans only to lose political traction. To suppose that the Village will be politically stable around this plan without supporting evidence is to engage in a kind of riverboat gamble: a gamble with the tax money of the Village, a gamble that risks further community polarization and deterioration. There are better alternatives.

Response 57-8: *Comment noted.*

Comment 57-9 (Steven H. Shiffrin, 12/13/10): New York law requires that an environmental impact statement "must analyze the significant adverse impacts and evaluate all reasonable alternatives" [6 NYCRR 6l7.9(b)(l)]. I maintain that the Statement substitutes conclusory assertions for evaluations. It does not meet the legal requirement. The Statement dismisses contraception and/or sterilization as the exclusive method of reducing the herd, but it lacks evidence to do so. It should be observed that sterilization was tried in the Village before and the Statement recognizes that it reduced the herd. Surgical sterilization was abandoned by the Village when Cornell was no longer willing to make its facilities available. The Village Board at the time shifted to darts and serum as a method of contraception, but the particular serum was ineffective. Apparently, the Board has relied on Paul Curtis for the proposition that such methods are always ineffective. But the views of Curtis are contested in the scientific literature and in local communities which have examined the evidence. To hear Curtis is, of course, responsible. But to rely on him without a serious consideration of the contesting evidence is excessively provincial (the local expert is not always right) and is inadequate legal support. For example, Jay F. Kirkpatrick, a Cornell Ph.D. in reproductive physiology from the College of Veterinary Medicine at Cornell University in 1971, is a nationally recognized expert in this field. He has spent 38 years carrying out research on fertility control for wild horses and other wildlife (including deer), for the purpose of developing non-lethal and humane methods of controlling wildlife populations He is currently the Director of the Science and Conservation Center at ZooMontana, in Billings, and has consulted with numerous communities including the city of Pittsburgh. His conclusion is that contraception with darts and vaccine works. See http;//www.zoomontana.org/science-and-conservation-center/. To rely on Curtis without considering the arguments of Kirkpatrick in an independent way is indefensible. Similarly, the failure to take account of the attention paid to the issue by Hastings-on-Hudson which has opted in favor of a contraception plan (at a cost they estimate at $400 per deer) for a deer situation far more serious than in Cayuga Heights is further support for the conclusion that the Statement does not discuss the contraceptive issue in the detail it would deserve if it were adequately considering alternatives.

Response 57-9: *SEQRA requires that alternatives be examined "that are feasible, considering the objective and capabilities of the project sponsor." (see 6 NYCRR 617). The Village has considered contraception and has found, at this time, that it is not sufficiently reliable, and there is no deer contraceptive product that is commercially available that suits the Village's goals. Further, if darting is necessary to tag and treat deer, it would be more reliable to sterilize the deer*

permanently than to treat the deer for a short period of time and then locate the deer again and administer the contraceptive a second time after the first dose of the contraceptive wears off.

The Village is aware that there are many "scientific" views of deer management and acknowledges that they are often in conflict. It is the Village's responsibility to sort through the various views and make choices that are believed to best suit the purpose, goals and intent of this program.

Comment 57-10 (Steven H. Shiffrin, 12/13/10): The Deer Remediation Statement (Appendix E) does mention that surgical sterilization could take place in a mobile lab that can be shared with other communities (Cornell facilities are not necessary), and the proposed plan does call for some sterilization which constitutes a recognition that sterilization is feasible. The Statement objects to sterilization as an exclusive remedy largely on the ground that it is too expensive. The support for this appears to be that it costs $1,100 to sterilize and $500 to kill a deer. But this depends on the number of does that need to be sterilized (the Statement has no evidence concerning the number of does in the Village) and the Deer Committee concluded that only 70% of the does needed to be Sterilized.

Response 57-10: *Comment noted.*

Comment 57-11 (Steven H. Shiffrin, 12/13/10): Even more important, as the Deer Remediation Report observed, the cost figures assume the absence of a volunteer graduate student or volunteer veterinarian (which the Deer Remediation committee recognizes would dramatically reduce costs), and the cost figures do not consider the possibility of private grants. Moreover, the Statement does not take into account the transient character of male deer. Male deer may come in and out of the community inflating the numbers that the Board would kill. Indeed, there is no showing that a killing plan can work in a small area surrounded by a large and mobile population of deer. In truth, the Board does not know if sterilization is more expensive.

Response 57-11: *The Village will consider various costs associated with the final program and give consideration to cost saving actions as noted above. The Village is well aware of the fact that it is not a closed system and male and female deer will move in and out of the Village at any time. For this reason, the Village anticipates that a monitoring program will be carried out from time to time to assist in determining future actions.*

Comment 57-12 (Steven H. Shiffrin, 12/13/10): The Board properly observes that killing deer is faster than relying on sterilization. It suggests without evidence that herd reduction with sterilization would not take place for five to six years, and its killing plan is apparently scheduled to begin in the third year. The Statement does not specify the difference this time differential will make in terms of the Environment.

Response 57-12: *Because this proposed program is not anticipated to have adverse environmental impacts, this question is moot.*

Comment 57-13 (Steven H. Shiffrin, 12/13/10): Finally, the Board may believe that the 60% reduction of the herd that occurred on Fire Island and the 50% reduction of the herd anticipated by Hastings-on-Hudson is inadequate to meet the 30 deer goal set by the Village board. But, as I suggested earlier. that goal has been supported by arbitrary fiat in reckless disregard of the needs of an Environment Impact Statement. The Statement needs to show that it needs to reduce the herd to that number with appropriate argument that reduction to that number is necessary to avoid environmental impacts that need to be remedied with a solution that is practical (I have argued that it is politically impractical). It needs to make that showing in face of the fact that the deer herd has been at levels far above 30 without arousing controversy. Only when the herd has risen to a level five to six times the targeted goal has significant controversy been triggered. The Statement does not come close to making its case in support of the 30 deer goal.

Response 57-13: *See response to Comment 57-4*

Comment 57-14 (Steven H. Shiffrin, 12/13/10): In the end the Board does not seriously evaluate the alternatives of contraception and/or sterilization, and it underestimates this: Unlike killing, contraception or sterilization will have widespread support. It is a plan that can be sustained without intense opposition over a significant period of time.

Response 57-14: *See Response to Comment 57-9.*

Comment 57-15 (Steven H. Shiffrin, 12/13/10): I will conclude with some remarks about fencing. I am pleased that the Statement endorses at least a temporary change in the fencing ordinance. If vegetation is protected, deer will go elsewhere. If it is not, deer will be attracted to the area. The Report, however, does not seriously consider the combination of contraception or sterilization and relaxation of the fencing ordinance as a suitable alternative to a killing program. It needs to do so both as a matter of democratic process, wise policy and legal obligation.

Response 57-15: *See Response to Comment 16-4 and 57-9.*

Comment 59-1 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): Basic to an evaluation of "impairment" is the understanding of the meaning and definition of "community." Apparently, the DEIS consultants and the Village Board define the community very narrowly, as that area lying within the legal boundaries defining the Village of Cayuga Heights. However, in the urban planning field there are alternative definitions of community that are much broader in scope, and much more appropriate to the situation being discussed. Urban (and suburban) communities are seen as a part of a much larger "settlement organism," one that exists with strong interdependent relations to its neighbors. Cayuga Heights as a municipality is a

component of the larger Town of Ithaca, which in turn is part of the larger still Ithaca urban or metropolitan area. People live in the Village, but travel to work at Cornell or elsewhere outside of the Village, shop downtown, and the children go to school in various locations around the area. Fundamentally, the Village is inseparably integrated into the Ithaca community. This is expressed in such basic ways as residents of the Village having an Ithaca, and not a Cayuga Heights mailing address, and the fact that such commonly-used businesses as grocery stores, movie theaters and auto repair shops used by residents of the Village are all located in the other municipalities that make up the larger Ithaca community.

> ***Response 59-1:*** *Comment noted. In this regard, deer management has already been taking place in the "community" for some time as a result of Cornell programs, Village of Lansing programs, and hunting in the surrounding areas, that have and will continue to be implemented locally.*

Comment 59-2 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): Consequently, elected officials in Cayuga Heights are obligated to consider the impact of their actions not just on the proportionally small population and area of the Village, but on Ithaca as a whole, a community that encompasses contiguous municipalities that share a common landscape, cultural values, economic and environmental interests. Indeed, this concept is embedded in a number of federal and state laws, regulations and grant programs.

> ***Response 59-2:*** *Comment noted. Because the Village is not enclosed system, the benefits of deer management within the Village are likely to be felt to an unknown degree in the feeding range of the existing deer herd.*

Comment 59-3 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): State and local governments have long recognized this broader definition of community and have fostered inter-municipal cooperation. In some cases inter-municipal cooperation is required in order to qualify for public grants-in-aid. One example is the Ithaca-Tompkins County Transportation Commission, which, by Federal and State law defines our community (for grant purposes) as the Ithaca Urban area, which includes the City and Town of Ithaca (including Cayuga Heights), Cornell and several small contiguous built-up parts of Dryden and Lansing. Many other public programs also emphasize the concept of the larger community in programs dealing with youth and recreation services, water supply, public and fire safety, libraries, assessment, etc.

> ***Response 59-3:*** *Comment noted.*

Comment 59-4 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): Clearly, many of today's problems facing local municipalities transcend legal borders and, therefore, must be addressed on a broader basis. These shared concerns require public officials and citizens within an urbanized area to work together, and when they do so, they form a shared culture. That certainly is the case in the Ithaca urban area, and if Cayuga Heights acts without due consideration of its neighbors, this has the potential to

damage that common culture. To maintain the vibrancy of our community, the trustees of Cayuga Heights, though leading the smallest of all of Ithaca's contiguous municipalities, must still be responsible for the impact of their decisions on the character of the community as a whole. Likewise, residents of neighboring Ithaca municipalities should not be expected to remain silent if Village officials propose a plan that could damage them or the character of the larger community.

> ***Response 59-4:*** *The Trustees have sought input from not only Village residents, but people from the larger community surrounding the Village. Moreover, correspondence on the DEIS has been received from areas quite distant from the Village, representing national interests. The Village has and will continue to take all input into consideration prior to finalizing its decisions on the deer management program.*

Comment 59-5 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): In professional planning terms, and clearly in the minds of many residents who live beyond those invisible municipal boundary lines that define Cayuga Heights, the Ithaca community as a whole would be negatively impacted by the deer-killing program being proposed by Cayuga Heights. This explains why people residing both inside and outside of the Village have come forward to offer criticism of the DEIS, and why, over the last two years, large numbers of people from other Ithaca municipalities have attended numerous public meetings to express their concerns on the deer issue. Some live within a few blocks of the village boundary, and have spoken of how this proposal will impact their lives negatively, either through the killing of animals they care about, or through negative changes in the character of the Ithaca community this plan will cause. Therefore, it is reasonable that they have come to meetings to be heard. And they have every right to participate, even though several Cayuga Heights residents have at times rudely addressed those not residing in the Village as "outsiders," "invaders" and "outside agitators," and even told them to "get out More significantly, Village officials have expressed the idea that only input from residents of Cayuga Heights is of consequence in their decision making process. The DEIS itself also completely fails to address or assess potentially significant impacts on the wider Ithaca community. In my professional opinion, this calls the validity of its conclusions into question.

> ***Response 59-5:*** *The Trustees have long recognized that some aspects of a deer management program would be objectionable to a portion of the local community. The matter has long been studied and debated. The DEIS projects that the deer management program will not have adverse environmental impacts on the Village. That being the case, there is no reason to conclude that adverse impacts would occur in areas outside the Village.*

Comment 59-6 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): The bonds of community are fragile, and when they are frayed or even broken, the impact on the well-being of the whole can be serious. That is a risk that is inherent in this proposal and the process that produced it; and it speaks to a potentially serious impact that is not addressed by the DEIS. There are troubling signs of increasing isolation of

the village from its neighbors, including acrimonious public remarks directed at non-residents at public meetings on the deer issue, harsh and sarcastic comments made in letters to the editor in the local papers and on online forums. It is obvious that the effects of past Village actions on this issue, plus the impending possibility of the proposed deer-killing project moving forward, is having a cumulative negative effect on the broader community character and well-being, fomenting a kind of inter-municipal resentment that is not characteristic of Ithaca. The widespread perception that this killing plan is being implemented without consideration of its effect on the community as a whole, and with indifference to the effect it will have in isolating Cayuga Heights from the other Ithaca municipalities, is exacerbating the damage being done, damage that will very likely grow if the killing program is actually implemented.

> ***Response 59-6:*** *When people hold opposing views, controversy results. Controversy does not have to be accompanied by the actions noted in the above comment, but such actions cannot really be controlled or even effectively managed, in spite of the best of attempts. However, mere controversy is not a reason to suspend an action if elected officials view it to be in the best interests of the community.*
>
> *The management of animal populations has a long precedent in the State of New York, and if this deer management plan is acted on, it will be acted upon with permission from regulatory agencies that have studied the matter and found it to be acceptable on a Statewide basis, not just in the Village of Cayuga Heights. To suggest that the thinking on this program is limited to the boundaries of the Village would simply fail to acknowledge the manner and the extent to which it has been reviewed and considered on a Statewide basis.*

Comment 59-7 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): However, it may still be possible to avoid the worst of this damage if clear actions are taken by the Village trustees that have the effect of acknowledging their responsibility to consider the impact on the wider community, and if less drastic approaches than a mass deer-killing program, which exist, are taken to address deer-human conflict in Cayuga Heights. The simple and cost-effective mechanism of allowing residents in Cayuga Heights to have access to the same practical fencing options available to residents of the neighboring Town of Ithaca, which has no equivalent deer controversy, is just one example. The DEIS does not seriously consider non-lethal alternatives with less severe negative impacts than the proposed killing plan, and therefore fails to satisfy the very clear requirements of state environmental law.

> ***Response 59-7:*** *The DEIS considered the no action alternative, and sterilization only. Both alternatives had no deer culling proposed. Moreover, the DRAC considered a large number of alternatives as set forth in Appendix E of the DEIS.*

Comment 59-8 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): I submitted a letter on October 28, 2009, as part of the earlier EIS process review, pointing out the impact that the deer-killing program may have on county tourism. I

stated in that letter that such a concern needed to be addressed. However, the DEIS does not appear to have given any attention to the concerns identified in my letter. Since I am quite knowledgeable about tourism both as a professional planner, Cornell professor and former county public official, it is my opinion the Trustees of Cayuga Heights are obligated to consider this issue with the potential to affect many. I am again requesting that the consultants and the Village Board address this issue.

> ***Response 59-8:*** *The New York State Environmental Quality Review Act requires that "EISs should address only those potential significant adverse impacts that can be reasonably anticipated..." And, "EISs should not contain more detail than is appropriate considering the nature and magnitude of the proposed action and the significance of its potential impacts" (see 6 NYCRR Part 617(b)(2)) The Village considered all input as it developed the Draft EIS. It finds no compelling reason that its deer management program would have an impact on tourism, nor has it been able to find any evidence that deer management has affected tourism in other parts of the United States.*

Comment 59-9 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): I want to be clear that, in regard to tourism, I am speaking only for myself, and am not speaking for the tourism board, for my department at Cornell, nor for the County legislature. Nevertheless, I do believe that my many years of experience in the field of tourism give me status to address the issue of economic development and community character to which tourism is a contributor.

> ***Response 59-9:*** *Comment noted. See Response to Comment 59-9.*

Comment 59-10 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): I have a concern that the proposed deer-killing program may have a detrimental effect on characteristics of the community that make it a tourist destination. Tourism development is a recognized component of the county's broader economic development program, which, in turn, is focused on building the tax base and increasing jobs. There is some evidence that the County is seen as a special place, one that is progressive and enlightened, and that this attracts a group of tourists who will spend money here. Ithaca (including Cayuga Heights) consistently shows up on national surveys as a top place to visit and to live. Most recently, we were ranked number one in the country for "well-being." Several years ago the Utne Reader magazine rated the Ithaca area as the "most enlightened" community in the US. Our SPCA is seen nationally as a leader in the "no-kill" shelter movement for animals. We are recognized nationally as one of the centers of the healthy food movement with a vibrant farmers market, an innovative natural foods Co-op, and Moosewood restaurant known far and wide. EcoVillage, in the Town of Ithaca, is a leader in advanced community-building. Ithaca-Hours is known throughout the western world as a creative means of supporting local economic development and keeping money in the community. And we have excellent cutting edge theaters, museums, arts and music. These, and more local "attractions", create an image of our community as a special place to which many people throughout the country respond. It is an image that is part of what brings them

here as tourists. Moreover, it is an image that many who live here embrace with pride, and one that they have come to love. In my professional opinion, those who choose to reside in this community, and those who choose it as a tourist destination, are more likely than average to share a constellation of values that would include such things as inter municipal unity, nonviolent approaches to conflict resolution, and respect for animals and the natural world.

> ***Response 59-10:*** *It is the Trustees view that intermunicipal unity, nonviolent approaches to conflict resolution, and respect for animals and the natural world are relatively minor, even non-significant factors in people's overall travel decisions. It is the Trustees view that the proposed deer management program will not adversely affect intermunicipal unity. As noted earlier, reduction in the deer population will benefit the entire feeding range of those deer removed from the Village, including neighboring communities.*
>
> *The Trustees support nonviolent conflict resolution and in that regard the Village has studied this matter and sought input on it for many years. (No one has been assaulted for their views to date.) And of course, the intent of this plan is to manage wildlife populations in a sustainable way and to allow the natural landscape of the Village to flourish, including its citizens who are also part of the natural world.*

Comment 59-11 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): A 2010 report analyzing the County tourism program *(Profile of Visitors to Tompkins County),* prepared by Chmura Economics & Analytics for the Strategic Tourism Plaruling Board, stated that visitors ranked "the feel of the area-the ambiance, diversity, the peacefulness," as what they enjoyed the most, or found most memorable, about visiting here. In fact, the area's "peaceful ambiance" is one of several aspects identified as being likely to bring tourists back for repeat visits, according to the County tourism program staff (http://www.visitithaca.com/press/41.htmi). A program that entails the annual mass killing of deer in neighborhood backyards to protect garden plantings, in a municipality of Ithaca that refuses to let its own citizens use practical deer fencing, has the potential to detract from those qualities of the larger community that define its core values for many who choose to visit, as well as many who may choose to move here. Thousands around the country and the world have signed a petition against the Cayuga Heights deer-killing program. Local, regional and national media have highlighted the deer-killing controversy. Further, as more information is emerging about the lack of scientific validity behind the justifications for this program, additional unwanted attention is likely, due to the irony of this happening in the bedroom community of an Ivy League University.

> ***Response 59-11:*** *Comment noted. See Response to Comment 59-10.*

Comment 59-12 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): In 2006, 2007, *2009* and 2010, Ithaca was ranked in the top 100 places to live by Relocate America. In 2001, Mothering Magazine named it one of "25 Terrific Places to

Bring up a Family." The growing appeal of this community for retirement, relocation, or raising children could be damaged by the fact that the deer-killing plan calls for not just a onetime bait and kill effort, but a multi-year program that could potentially be performed annually over a 5-10 year period, or possibly longer. Each year that the killing is performed, old wounds will be reopened, leading to an even greater rift than we're already seeing in relations between people in the village itself, and between residents of the village and residents of the wider Ithaca community. Since there are already people residing in Cayuga Heights who are saying they find the plan so morally repugnant that they will move away if it is implemented, it's possible many people might shy away from coming to our county for the very same reason, because they may see us as a community that uses violent means to solve our problems - not the progressive or enlightened place it once was thought to be. If this image of our larger community should become widespread, the broader Ithaca community and county, not just Cayuga Heights, could be impacted negatively in the long-term. This potential significant impact of the program on our community culture and its attractiveness as a place to live has not been considered in the DEIS, and I believe it should be.

> ***Response 59-12:*** *In the event that the image of the area is adversely affected by the Village's proposed deer management program, it is likely to be a result of those that vehemently oppose the program and have used inflammatory rhetoric, rather than the program itself. Media outlets thrive on such inflammatory rhetoric, often referring to it as news.*
>
> *The Trustees have always encouraged input and debate in a reasoned fashion. They have taken no action that would negatively affect the image of the community. Should negative attention occur, it is likely to be shortlived, and would be result of the action of others. However, the Trustees maintain the view that any negative impact on the image of the area due to deer management is unlikely to occur.*

Comment 59-13 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): While the program's negative impact on the tourist program may be difficult to pin down statistically (like many aspects of any tourism program), it should be recognized that such an impact is quite plausible, and therefore should be given further detailed study before the Village goes ahead with its program.

> ***Response 59-13:*** *Comment noted. The Trustees do not anticipate that this program will adversely affect tourism. See Response to Comment 59-8.*

Comment 59-14 (Stuart Stein, Cornell University Professor Emeritus, 12/15/10): It is my professional judgment that the DEIS fails to adequately evaluate the potentially significant impacts outlined in this memo, not just on Cayuga Heights, but on the Ithaca community as a whole, and that these flaws need to be addressed before a responsible decision is made about the proposed program.

> ***Response 59-14:*** *Comment noted.*

Comment 60-1 (Guy Tabacchi, 12/6/10, See also Page 16 of Public Hearing Transcript 12/6/10): If a deer is wounded that animal can become a danger to drivers since the animal will in all probability run away very frightened.

> ***Response 60-1:*** *Culling sites would be selected with public safety in mind. In almost all instances, culled deer drop immediately and rarely move beyond the culling site.*

Comment 60-2 (Guy Tabacchi, 12/6/10, See also Pages 17 of Public Hearing Transcript 12/6/10): How long a time frame is the board of trustees allowed to commit public funds? Are they allowed to commit future administrations to this expense and tax burden?

> ***Response 60-2:*** *Trustees prepare and vote on an annual budget.*

Comment 62-1 (Mary Tabacchi, 12/6/10, See also Page 14 of Public Hearing Transcript 12/6/10): The deer remediation plan will restrict my activities such as walking, biking, jogging or cross country skiing in the Village and nearby locations.

> ***Response 62-1:*** *Restriction on activities as noted above is likely to be extremely limited and for very short durations.*

Comment 62-2 (Mary Tabacchi, 12/6/10, See also Page 14 of Public Hearing Transcript 12/6/10): I believe we could resolve our deer/car issues by placing speed bumps in Cayuga Heights - just as did the residents of Forest Home.

> ***Response 62-2:*** *Speed bumps are expensive to install and difficult to maintain in winter months. The Trustees do not see speed bumps as a solution to the overpopulation of deer in the Village.*

Comment 63-1 (Charlene Temple, MSW, LCSW, 12/15/10): In my professional opinion, psychological trauma will be a likely occurrence for a number of people in this community if the deer killing plan put forth in the DEIS is implemented. Post Traumatic Stress Disorder, Adjustment Disorder with Mixed Anxiety and Depressed Mood, or Anxiety or Dysthymia are some of the conditions that may be caused or worsened as a direct result of the carrying out of a mass deer killing program in Cayuga Heights neighborhoods. Some of those likely to be affected are those who enjoy the individual deer that habitually visit their yards, those who have watched does raise their fawns, or observed the relationships between herd mates over time, and those who have developed a sense of personal connection with one or more of these animals. Such individuals will almost certainly experience deep sadness, possibly even devastation, when the deer they have come to appreciate are systematically killed.

Response 63-1: *There is no way to know which deer will be culled. In any event, this program will take place over time and deer will continue to live and thrive in the Village.*

Comment 63-2 (Charlene Temple, MSW, LCSW, 12/15/10): In all of these scenarios, which are so disturbingly graphic, what could the effects of such trauma look like from a clinical perspective? Potential symptoms could be: recurring and intrusive distressing recollections and dreams; acting or feeling as if the trauma were being relived; psychological reactivity to an external cue that resembles an aspect of the traumatic event; avoidance of stimuli associated with the trauma; difficulty falling or staying asleep; hyper-vigilance; social withdrawal; work inhibition, etc. These clinical symptoms are described in detail in the DSM-IV, the Diagnostic and Statistical Manual of Mental Disorders written by members of the American Psychiatric Association. Such possible negative impacts on the mental health of individuals and the community are extremely significant, and in my opinion, quite likely to affect not just residents of Cayuga Heights, but residents in the wider Ithaca community. Yet, based on the contents of the DEIS, the trustees of Cayuga Heights appear to have failed to consider these impacts. They also appear to have failed to have adequately considered alternative approaches to reducing deer-human impact that have a far lower potential to cause harm.

Response 63-2: *There have been no reported indications of such incidents occurring in connection with deer management programs in other areas. The Trustees would certainly welcome a review of evidence of such actions. In its absence, the Trustees have followed the mandate of New York State Law as set forth in 6 NYCRR Part 617 (see Response 59-8).*

Comment 65-1 (Sandip Tiwari, 12/10/10): It is very problematic that there are no year by year statistics with error margins on deer population provided in the main body of the DEIS From what I understand, such data is available from field studies carried out for the 2000 through 2006 period (from 2000, with a range of 170-210 deer to 2006, estimated at 147 deer with a range of 124-176). Based on the information included in the DEIS, we cannot know with any confidence if the current deer population is smaller or larger than it was in 2006. The current population should have been determined using a field study, as in previous years. As it is, in what way does the estimated population in 2010, in the same range as the population in 2000, reflect such a major change from the past that it should spur drastic action?

Response 65-1: *The action under consideration is the same action generally that was considered many years ago when the deer population was estimated. See Response to comment 15-1.*

1

Comment 65-2 (Sandip Tiwari, 12/10/10): The DEIS should include detailed information on the range of travel of local deer. If most of the village's deer are to be killed, the DEIS should include an accurate analysis of how many new deer are likely to come into Cayuga Heights due to migration. This is important since animals travel, and short range and long range impact in time and space are central to environmental

modeling. Population changes and diffusion are critical in this discussion. It is a serious flaw that this fundamental issue is not addressed.

> ***Response 65-2:*** *See Response to Comment 59-8. New deer moving into the Village would not be viewed as a significant adverse environmental impact. The DEIS is not intended as a research program but rather a reasoned evaluation of the likelihood of impact. That being the case, a study as suggested by the commentator would not be warranted.*

Comment 65-3 (Sandip Tiwari, 12/10/10): Lyme disease, a bacterial disease, is carried by ticks, and there are numerous tick vectors besides deer - all vertebrates. Lyme disease exists in a variety of regions where there are no deer, and it does not always exist in regions where deer are present. I see no statistics in the DEIS on the incidence of Lyme disease in this community. Studies point out that mice and rats are the principal way by which Lyme disease ticks are distributed, at least in the northeastern United States, and killing deer has little to do with controlling the role these kinds of animals play in Lyme disease transmission. If Lyme disease is a true matter of any concern here, the DEIS should make a point of addressing the population of mice and rats, and not deer.

> ***Response 65-3:*** *Comment noted. Lyme Disease is a matter of concern, but only one factor of many in the Village's consideration. The Village has no immediate plan to take management action on the local vermin population. Evaluating that population in the context of this deer management program would not be a productive expenditure of time and money and is not warranted. This project is not anticipated to adversely affect that population.*

Comment 65-4 (Sandip Tiwari, 12/10/10): Biodiversity is a term used entirely inappropriately in this DEIS report'- Biodiversity encompasses measures of both flora and fauna, and no Cayuga Heights statistics at all are provided in the DEIS for past or present levels of either. Household plantings cannot be considered part of this biodiversity; these are largely foreign plants brought in by community members and many of these plants are quite inappropriately matched to the local climate.

> ***Response 65-4:*** *Comment noted. In a suburban environment, some would view biodiversity as encompassing all that is biological in nature.*

Comment 65-5 (Sandip Tiwari, 12/10/10): No year by year statistics are provided for the number of deer-vehicle collisions'. It would be important to know how the number of deer-vehicle collisions change year to year and where clusters of accidents occurred to identify patterns and also to know the speed limit in these locations, as well as how often the accidents were associated with violation of the current speed limit. The DE IS should include the percentage of drivers who have been charged with violating the 30 mph or other even lower speed limits in this community.

Response 65-5: *There are no adverse impacts anticipated on accident rates as a result of the culling of deer. In other communities that have reduced their deer population, accident rates have decreased. The Trustees cannot find a compelling reason to study a matter that is not anticipated to be adversely affected by the proposed action.*

Comment 65-6 (Sandip Tiwari, 12/10/10): While a survey of residents is included from a decade ago, no current statistics are provided regarding the opinions and wishes of local residents. Do the people of Cayuga Heights really want the mass killing of deer by net and bolt? Do they want deer to be sterilized, or do they want them to be left alone? When was the last survey and what did it say' How can such an important decision be made without knowing more about community attitudes?

Response 65-6: *See appendix B of the Draft EIS.*

Comment 65-7 (Sandip Tiwari, 12/10/10): In sum, this DEIS has little that stands up to even the most basic scientific scrutiny, and almost nothing in way of verified factual information. How can an educated community like ours accept such an abjectly insufficient document for which $12,000 of taxpayer money was spent? Cayuga Heights rules and ordinances and their relationship to deer-human conflict.

Response 65-7: *The SEQRA process is not intended to provide research to justify a proposed action, but rather to evaluate the potential adverse impacts of the proposed action. The Trustees have reviewed this proceeding along with the Village attorney and in fact did so before the Draft EIS was accepted as complete. It is the Trustee's view that the DEIS did comply with SEQRA. In strict compliance with SEQRA, the Board took the requisite "hard look" at the potential for significant adverse impacts, presented alternatives to the proposed action and discussed the implications of such alternatives.*

Comment 65-8 (Sandip Tiwari, 12/10/10): As an avid gardener, I fail to understand the arguments regarding the negative impact of deer on gardening. Through the use of fencing and careful choice in plantings our family has had no problems with deer for many years. Even our vegetable gardens have faced no problems.

Response 65-8: *Comment noted.*

Comment 65-9 (Sandip Tiwari, 12/10/10): Allowing people to have higher fences if they want to have plants attractive to deer would remove the biggest source of deer-human conflict in Cayuga Heights. It is a serious flaw that fencing is not seriously evaluated in the DEIS since it is a cheap, sustainable and an effective long term alternative to the annual mass killing of deer.

Response 65-9: *An amendment of the Village Zoning Ordinance to expand options for fencing continues to be reviewed by the Village and in fact is before*

the Trustees for evaluation as this FEIS is being prepared. A copy of a draft fence ordinance is provided in the Appendix of this FEIS.

Comment 65-10 (Sandip Tiwari, 12/10/10): Be stricter about the 30 mph limits. If people have accidents with deer driving at this speed or lower, I would wonder more about the driver's capabilities than about the number of deer in the village. For those speeding, of course, driver reaction time is often inadequate. Speeders should be ticketed for breaking traffic laws.

Response 65-10: *Comment noted. The Village is well known for strict enforcement of its speed laws.*

Comment 65-11 (Sandip Tiwari, 12/10/10): Introduce policies that encourage the biodiversity that the DEIS pays such a lip service to and ends up misinterpreting. Encourage a greater diversity of local species in people's yards and elsewhere by encouraging planting of as many native species as possible.

Response 65-11: *The Village's web site offers guidance on deer resistant plantings. The Village supports the notion of native species in landscaping programs. However, it is noted that native plant species can also be subject to heavy deer drowsing.*

Comment 65-12 (Sandip Tiwari, 12/10/10): Introduce village-wide education program about Lyme disease prevention and early detection, which would be far more effective than killing deer. This is the practice in many communities in Northeast United States and a recommended practice by health sources. This is what was practiced in Westchester County from where we moved to Ithaca. Simple changes in rules and ordinances would protect homeowners' properties and, over time, likely reduce the deer population by reducing the food supply through an increase in fenced in areas. It appears that a variance was recently given to a village trustee for an illegal fence. It is hard to see the logic or comprehend why the rest of the village doesn't have the same courtesy in the use of fences. Greatly restricted fencing in location and in height makes it hard for those who want to protect their plants needlessly increasing the level of deer-human conflict.

Response 65-12: *The Village's web site offers guidance on tick management. (see http://www.cdc.gov/ncidod/dvbid/lyme/resources/handbook.pdf)*

Comment 65-13 (Sandip Tiwari, 12/10/10): In the DEIS it is stated that the killing "may be experienced as a potential significant impact to the social conscience of a portion of the VCH community." This one sentence does not at all represent a serious examination of the negative impact of this killing program on the character of our community. Our elected representatives have responsibility for the well-being of the community and for responsible use of our taxpayer dollars. This means that they must be respectful of the diverse population that resides here and take seriously any act's impact on the physical and psychological health of those in our community - not just

Cayuga Heights, but our whole community including the Town and City of Ithaca and Cornell. This includes trauma connected to acts of killing - both on children and on those who find the mass killing of our backyard deer morally repugnant.

> ***Response 65-13****: The Village's web site details the long history of study and examination of deer management. This history is reflective of the respect that the Village has consistently demonstrated for the community at large. In the meantime, the deer population has continue to grow unabated with concomitant impacts. After considering all the alternatives to management, input from the community, and the potential implications of this program, the Village is prepared to move the matter forward.*

Comment 65-14 (Sandip Tiwari, 12/10/10): This program has already polarized the community, and it is the responsibility of elected representatives to choose a course of action that assures that civilized behavior prevails, laws are followed, and that conduct is ethically and morally correct.

> ***Response 65-14:*** *See Response to Comment 65-14.*

Comment 65-15 (Sandip Tiwari, 12/10/10): Democracy is not dictatorship of majority but involves acting in a way that morally and ethically reflects the values and will of the people. Why is there is no information available anywhere on the will of the people on this issue? Do our residents really want a mass-killing of deer in our backyards by net and bolt, or do they want deer to be made infertile, or do they want them to be left alone? Do they want killing and a divided community, or fences and a community at peace?

> ***Response 65-15:*** *Comment noted. The Village's web site details the history of community involvement. The DEIS provides, in Appendix F, a variety of alternative views on deer management, as does this SEQRA record.*

Comment 65-16 (Sandip Tiwari, 12/10/10): Our elected representatives should take a hard look at the opinions being expressed by our citizens. There are people on both sides of this issue. It is the responsibility of the representatives to develop an informed understanding through collection of factual data on many topics such as the deer population, biodiversity, community attitudes and all possible solutions, and following that, finding a peaceful and legal means by which problems can be addressed.

> ***Response 65-16:*** *Comment noted.*

Comment 65-17 (Sandip Tiwari, 12/10/10): Our family moved to Cayuga Heights attracted by the combination of Cornell University and the values we thought this community represented - a local and global view of the world we inhabit and affect through our actions. We believe in non-violent means of solving problems and conflicts and in raising children and educating students to be civilized humans aware and acting responsibly as one of the large diversity of species who inhabit this planet.

Response 65-17: *Comment noted.*

Comment 65-18 (Sandip Tiwari, 12/10/10): I am a native of India, a country that at the time of my birth was a young country that achieved its freedom from multiple centuries of colonialism and foreign domination, similar in many ways as the independence of United States nearly two centuries before that of India. We grew up in a Gandhian tradition, of civil disobedience, that was so powerfully practiced here by Martin Luther King in the civil rights movement even when significant popular opinion and governance was against it. The approach insists on truth, openness, and ethics and values guided by a moral force and use of non-violent means of civil resistance. These are the values we have practiced and taught our children. These are the values that guide actions of our life. The world, and United States, would be a far more pleasant, humane and livable place if we practiced these values of a civilized society, rather than polarization and violence that has become pervasive. For us, this is our religion and our spiritual way. And practice of this locally is an essential part of a society all connected together living in harmony.

Response 65-18: *Comment noted.*

Comment 65-19 (Sandip Tiwari, 12/10/10): We love the deer that come to the yard, and have known a deer with an ear tag labeled #138 now for a couple of years. She gave birth to two fawns this spring in our yard and that was an expansion for us of our family of whom they are a part and a source of immense love and pleasure. The psychological and personal impact of their unnatural death by any means can scarcely be imagined. My wife and I shudder and cry at the mere imagining of the event, and it is even worse considering my own local government intends to use our own tax dollars to carry out this injustice.

Response 65-19: *Comment noted. Deer will continue to travel the lands of the Village during and after this program.*

Comment 65-20 (Sandip Tiwari, 12/10/10): We are resolved that if such acts of wanton violence comes to pass, we will leave this community. It does not represent our values, morals, and ethics. Fortunately for us and others like us, the world provides many options for graceful living at peace with our surroundings. We are not alone in this thought. The trustees have heard serious objections to the planned program with passion. My colleagues at work that live in Cayuga Heights and numerous neighbors have expressed similar opinions.

Response 65-20: *Comment noted.*

Comment 65-21 (Sandip Tiwari, 12/10/10): Departures from Cayuga Heights based on ethical objections will certainly change the character of the community in ways few would want.

Response 65-21: *Comment noted.*

Comment 67-1 (Carol Warshawsky, 12/5/10): I am strongly opposed to the deer management plan. I do not think it makes sense; I do not think it will have the affect many of you expect; I do not want my taxes increased for a program I find distasteful and frivolous at best, dangerous and useless at worst. I am writing this despite feeling there is little interest on your part in hearing from the public, or at least that part of the public opposed to this plan. If for no other reason. please reconsider this culling program in light of the serious liability it poses to our Village and the burden of higher taxes. As many have pointed out, deer have no sense of boundaries; culling deer in C.H. does not necessarily reduce the herd. Others will roam in filling the void of those culled, enjoying increased vegetation and mating with the remaining females. The situation will not change. I do not trust that culling with guns can be done safely. While bow and arrow hunting would be a minuscule improvement, both are very poor solutions which put residents at risk. The benefits will be minimal contrasted against the frightfully large potential liabilities. The costs of this program is high, more so if it proves ineffective. Village taxes will go up on an annual basis to pay for this tomfoolery which has no end in sight-- deer will still find their way into C.H. I find it unconscionable to be forced to pay higher taxes for a program that is dangerous, unlikely to work, will not increase safety'" and has been frivolously conceived to protect some residents' gardens. Save us the Strum und Drang; plant deer resistant flora and put up fencing. The financial burden would rest on those concerned instead of being foisted on the rest of us. To date there have been minimal (if any) deer/car accidents; if drivers obey the Village speed limit it is difficult to see where this could become a more serious problem. However, deer running from the sound of shot guns could pose a risk to drivers and pedestrians.

> ***Response 67-1:*** *Comment noted. The above comments have been responded to elsewhere in this document.*

Comment PH-1 (Joel Schell, Pages 33-34 of Public Hearing Transcript, 12/6/10): My concern is to maintaining the safety of the village and to the safety of the village police department and the officers of the department. There would need to be an increase in the tax rate to fund this program at a time when we don't know what the financial situation of the state is going to be. The funds are going to be unavailable to the police and fire departments budgets and these budges are going to have to be cut in future years if we commit to a long-term funding of this program.

> ***Response PH-1:*** *The Trustees do not anticipate any reduction in other Village services as a result of this program.*

Comment PH-2 (Joel Schell, Page 34 of Public Hearing Transcript, 12/6/10): The proposed investment of manpower of the Cayuga Heights police department in this plan would be extensive. The DEIS states that the DCH police chief would work with the DMD and the DEC to develop and oversee the culling protocol and the hiring of the sharpshooter. A security plan will be developed by the DCHPD. Protests and objections my require involvement of the Cayuga Heights Village police department to enforce the

law and protect public safety. I'm confident that the chief does not have unlimited time to devote to this project.

> ***Response PH-2:*** *The Police Chief was on the DRAC and has considered the implications of the culling program on Village Police Staff. The police chief foresees no difficulty in handling the culling program.*

Comment PH-3 (Gail Warhaff, Page 74 of Public Hearing Transcript, 12/6/10): As far as the methods used for culling the deer, I don't believe that deer need culling. If we're going to cull them, why not try an alternative to shooting them, which is problematic, as we all know, on many, many levels, and why spend so much money on this?

> ***Response PH-3:*** *Of the alternatives considered, the Trustees view culling in combination with sterilization as the preferred option at this time. It will reduce the size of the herd in a cost effective manner.*

Comment PH-4 (Scott Teel, Page 81 of Public Hearing Transcript, 12/6/10): There are people saying that sterilization doesn't work, well, I have an article from the Suffolk County News, Fire Island, New York a dart program. Everyone from the state parks and the Humane Society said it was a great program and it works fantastic. We can't say that we tried it here, although I believe that some people have, because the vaccine was faulty, that's not really trying it.

> ***Response PH-4:*** *The plan of sterilization and culling has been successful in other communities.*

Comment PH-5 (Gabrielle Vehar, Pages 84-84 of Public Hearing Transcript, 12/6/10): Cayuga Heights has declared that they would use frangible bullets, which explode upon contact, whether in a deer, a window, a pet, or in your child. Is this the way we want to live?

Do we want our children to grow up seeing the world as a completely hostile environment, where a rifle or an explosive net and bolt gun may go off at any time.

> ***Response PH-5:*** *The use of sharpshooters and frangible bullets has proven to be a safe means of culling deer.*
>
> *Wildlife management has been taking place for many, many years in New York and is regulated by the State through license and permits. The Village's program is not ground breaking or precedent setting in any way and would be carried out consistent with New York State policy.*
>
> *Parents have the option as to what they teach their children as regards the Village's program. The Village's web site has substantial and objective information that can be used to inform both adults and children. To scare a child*

by describing the Village's wildlife management program in vitriolic, caustic or rancorous means, is unnecessary.

Comment PH-6 (Marion Deats, Page 100 Public Hearing Transcript, 12/6/10): I just don't understand why every avenue isn't looked into through Cornell to research. We talked about sterilization, are there other avenues, are there other contraceptive avenues that could be researched?

We have the perfect opportunity here to be in the vanguard of research for sterilization and mitigation. Cornell has a living laboratory all around here. Cornell, as being in the vanguard of veterinary science, what an opportunity, and to research this and to put into effect some of the sterilization and the contraceptive research and practice that can be used.

Response PH-6: *The Village's program has been developed with input from Cornell's experts and is not dissimilar to programs that have for many years been carried out by Cornell.*

Comment PH-7 (Victoria Campbell, Page 102 Public Hearing Transcript, 12/6/10): I feel like there's a lot of biological questions that have not been answered.

What is the deer population, and what is the biodiversity number of different species, how will eliminating deer effect that? What about the corridors that the deer should be using going in and out of Cayuga Heights? If they're starving, why aren't they moving on?

Response PH-7: *The deer population has been estimated at between 160 and 200. The number of species in the Village is not material to this review. Certain deer corridors have been established, but those patterns change daily, seasonally and annually. Deer move freely in and out of the Village. They are opportunistic and will move to sources of food as needed.*

APPENDIX A

Public Hearing Transcript
&
Comment Letters

Index of Written Comments Received on the DEIS
Cayuga Heights

Letter #	Author	Date
1	David and Joy Barr, orig. dtd 10/10/09 (with attachment 10/15/09 VCH Supervisor letter to Senator)	12/7/10
2	Ron Bors	12/6/10
3	Peter S. Bottorff	12//3/10
4	Markus from Painted Post, NY	12//3/10
5	Lorna J. Gates	12/4/10
6	Walter Gates	12/4/10
7	Richard and Janet Hale	12/8/10
8	Thomas D. Hall	12/7/10
9	Eric Huang	12/6/10
10	Jean Poland	12/6/10
11	Charlotte Shull	12/5/10
12	Fred and Mary Widding	12/5/10
13	Dr. Tamara Awerbuch, Harvard School of Public Health	12/14/10
14	Kristina M. Baier	12/13/10
15	Angie Baker	12/1/10
16	Edita Birnkrant, NY Director, Friends of Animals	12/15/10
17	Jeanne Elizabeth Blum	12/11/10
18	Sherry Colb, Michael Dorf, Robert Hockett, Steven Shiffrin, Laura Underkuffler, Cornell University	12/13/10
19	Jeff Cox	12/6/10
20	Sharon Deming	12/3/10
21	Catherine Drew	12/6/10
22	Frithjof Hungnes	12/15/10
23	Lowell Garner	12/16/10
24	Wenonah Hauter, Executive Director, Food & Water Watch	12/16/10
25	Dominick LaCapra & Jane Pedersen	12/10/10
26	Jenny Stein, James LaVeck, Eric Huang (with attachments)	12/16/10
27	Carl F. Moravec	12/10/10
28	Victor Nee and Brett de Bary	12/5/10
29	Richard S. Ostfeld, PhD., Cary Institute of Ecosystem Studies	12/6/10
30	Allen T. Rutberg, PhD, Assistant Director, Center for Animals and Public Policy, Cummings School of Veterinary Medicine at Tufts UUniversity	12/15/10
31	Laura Simon, Field Director, Urban Wildlife Program, The Humane Society of the United States	12/8/10
32	Barbara Stagno, In Defense of Animals	12/16/10
33	Doreen Tignanelli	12/14/10
34	Constance Young	12/3/10
35	Oswald J. Schmitz, PhD, Yale University, School of Forestry & Environmental Studies (with attachment)	12/14/10
36	Anne Serling	12/7/10
37	Sherene Baugher, PhD	12/16/10
38	Hazel Brill Brampton	12/15/10
39	Julia Cozzarelli	12/12/10
40	Jonathan Culler	12/13/10
41	Rebecca W. Davidson	12/16/10
42	Sharon Deming	12/3/10
43	Marilyn Glasgow	12/5/10

Letter #	Author	Date
44	Ann Gray & Rebecca Davidson	12/10/10
45	Gayle Gray	12/16/10
46	Joyce Janicki (with letter attached)	12/3/10
47	Karen Kaufmann	12/6/10
48	Dominick LaCapra and Jane Pedersen (with letter attached)	12/5/10
49	Lorraine E. Maxwell, PhD, Cornell University	12/16/10
50	Kristin McCarthy-Bevia	12/16/10
51	Robert W. Munch (with letters attached)	12/6/10
52	Victoria Pifalo and Kieran Donaghy	12/15/10
53	Joe Romano	Undated
54	Mary Schiavone	12/16/10
55	Shelly Schlueter, Wildkind Care	12/3/10
56	Carol & Ron Schmitt	12/13/10
57	Steven H. Shiffrin	12/13/10
58	Catherine Stein	12/15/10
59	Stuart Stein, Cornell University	12/15/10
60	Guy Tabbacchi	12/6/10
61	Mary & Guy Tabacchi	12/15/10
62	Mary Tabacchi	12/6/10
63	Charlene Temple, MSW, LCSW	12/15/10
64	Sandip Tiwari	12/6/10
65	Sandip Tiwari	12/10/10
66	Stephen Wagner	12/16/10
67	Carol Warshawsky	12/5/10
68	Mike Ellis	12/7/10
69	Constance B. Kintner	12/7/10

Village of Cayuga Heights

PUBLIC HEARING

Monday, December 6, 2010, 7:00 p.m.

HELD AT: Cayuga Heights Elementary School
110 East Upland Road
Cayuga Heights, New York

REPORTED BY: MARISA NOLD

1 MAYOR SUPRON: Okay, thank you so
2 much for coming this evening to share your
3 views with the board. I'm going to go
4 ahead and open the public hearing. And
5 before we begin the period of public
6 comment, which is this evening, and the
7 process will be that we have speakers
8 limited to two minutes a piece, and we will
9 have residents speak before non-residents.
10 Before we do that, I want to give a
11 very, very brief overview of where we are
12 in the progression of deer population
13 control in the village. The deer
14 remediation committee formed in August of
15 2008 and worked to put together a proposal
16 for a recommendation to the trustees, which
17 they did in May of 2009. We also held
18 forums in which questions were answered and
19 public comments were taken. The trustees
20 then looked at the FEIS proposal for a
21 period of four months and adopted a draft
22 plan very limited to the developing EIS
23 proposal, and that is what the board has
24 been doing since last fall, and first we

1 were the lead agency as we went through the
2 prescribed DEC process of the state
3 environmental assessment form. The board
4 completed that review process in March of
5 last year -- or, of this year of 2010 with
6 two positive declarations. The positive
7 declarations were of statements of things
8 that could have negative impacts on the
9 environment. Our positive declarations,
10 one related to public with respect to
11 privacy, and one related to the negative
12 impact to the deer that would be culled
13 under the draft plan. Because of those two
14 positive declarations, the next step in the
15 process in the environmental impact is to
16 conduct the DEIS.
17 Fred Miller is -- Fred Welch is here
18 this evening from Tim Miller and Associates
19 to -- to listen to your comments as they
20 prepare the DEIS. At this point, the board
21 has been presented by our outside
22 consulting firm with the draft
23 environmental impact statement, and we have
24 the option of having a public hearing to

1 hear the public's review of that. And then
2 the public comment period extends ten days
3 beyond today.
4 Tonight's comments that are deemed to
5 be substantive and relative to govern the
6 DEIS will be reviewed and answered by Tim
7 Miller and Associates in the final DEIS,
8 which will then be presented to the board.
9 It's at that point in the process, once the
10 board accepts the final environmental
11 impact statement, that the village board
12 can vote for the first time on whether or
13 not to implement deer population control.
14 So we are so pleased that so many of
15 you have come out this evening to the
16 public hearing on the draft environmental
17 impact statement.
18 Do you need to add anything else?
19 No. All right.
20 Mary Mills, I'll introduce you to
21 her, who is going to be calling up speakers
22 and also letting you know when you are
23 almost out of time and then out of time. I
24 think we'll pass along and introduce the

1 trustees. Okay, I'll do it myself, because
2 it's faster. I have next to me Bea
3 Szekley, who is a village trustee and
4 deputy mayor. Diana Riesman, trustee, Liz
5 Karns, trustee, Bob Andolina, Christopher
6 Crooke and Steve Hamilton; all trustees.
7 And then at the end here we have Randy
8 Marcus, our village attorney.
9 MARY MILLS: Okay, as I make my way
10 back, I have to get my list, which you all
11 graciously signed.
12 What I would like to do is call four
13 people at a time, there's four chairs in
14 the front. And if you'd like to move up to
15 the four chairs and take turns speaking,
16 that would be great.
17 MAYOR SUPRON: If you wanted to speak
18 this evening, we had everybody sign in, and
19 there was a spot on the list to check your
20 name to speak. What we'll do is run
21 through the people who have signed in and
22 checked the box, who were residents, and
23 we'll ask if there's any other residents
24 and then we'll move on and do the same

1 thing with non-residents. So regardless of
2 whether you checked the box or not, you'll
3 have your opportunity to speak.
4 MARY MILLS: I'm showing the first
5 four people, and please forgive me if I
6 mispronounce your name, I don't do it
7 intentionally.
8 Peter Bottomer, then followed by
9 Roger Segelken, Barbara Johnson-Foote
10 Sandip Tiwari; those would be the first
11 four people, please.
12 And I will interject. When you start
13 speaking, I will start the timer at that
14 point. And when it gets to be 30 seconds
15 left in those two minutes, I will interrupt
16 and say 30 seconds please.
17 So, Peter, if you'd like to start us
18 off.
19 PETER BOTTOMER: Hi, can you hear me?
20 At one of the village meetings, professor
21 Paul Curtis, who was the expert advisor to
22 the deer remediation committee, said if
23 there weren't too many deer in the village,
24 we wouldn't be having this meeting. That

1 applies tonight, and it defines the problem
2 that the trustees are seeking to overcome.
3 As you know, the recommendations of
4 the Cayuga Heights deer committee was a
5 phase program of sterilization and culling.
6 It was -- the DEIS, I don't know if I've
7 got that right, did a very good job of
8 commenting on this plan. I urge you to
9 read it, if you haven't done so already.
10 In contrast, the so-called
11 alternatives that have been put forward by
12 the cayugadeer.org do not address the
13 overpopulation problem and would make it,
14 in fact, worse. They clearly want the
15 village to do nothing, and they have had
16 the -- they will have the environmental
17 damage without limit, and eventually the
18 herd will be limited by starvation and
19 disease. Cayugadeer.org has engaged in a
20 campaign based on the use of firearms to
21 cull a herd. But when a -- a new method
22 that does not require firearms has been
23 mooted, they immediately attacked it. This
24 proves to me that they have no real concern

1 for the people in the village. They're
2 only concerned about the deer. And I just
3 learned today that there's a video clip on
4 their website that totally misrepresents
5 the net involved process, so, you know,
6 more deception. Finally, they seem
7 incapable of honest and --
8 MARY MILLS: Peter, time please.
9 MAYOR SUPRON: Finish your sentence.
10 PETER BOTTOMER: Well, my last
11 sentence was to call for a round of
12 applause for the tenacity and the
13 determination and the courage that you all
14 on the board of trustees have shown
15 throughout this process.
16 (APPLAUSE)
17 ROGER SEGELKEN: My name is Roger
18 Segelken, 114 Texas Lane. My wife and I
19 have lived there for more than 17 years.
20 I'm also the village's municipal
21 representative to the environmental
22 management council of Tompkins County;
23 however my remarks tonight are as a private
24 citizen and as a resident of the village,

1 and not as a member or chairman of that
2 advisory group. The EMC may render a
3 separate opinion on this draft
4 environmental impact statement in its
5 official capacity.
6 In my opinion, this draft represents
7 a proper environmental impact statement in
8 that it covers all of the impacts, legally
9 relevant impacts, it covers all of the
10 alternatives to the proposed action, and it
11 covers all of the mitigations to negative
12 impacts. In regards to mitigations, I
13 would make three points; one, that during
14 the trapping, sterilization and culling of
15 the deer, every effort should be made to do
16 it humanely, so that the animals do not
17 suffer.
18 Secondly, any meat that's harvested
19 during this project should be distributed
20 to people in need; and third, at any time
21 in the course of this project, if
22 alternatives arise, to --
23 MARY MILLS: -- 30 seconds, please --
24 ROGER SEGELKEN: -- to the culling

1 and/or to the surgical sterilization, these
2 alternatives should be considered and
3 implemented at least.
4 Thank you.
5 BARBARA JOHNSON-FOOTE: I'm Barbara
6 Johnson-Foote, I live at Kendall. I think
7 the deer are pretty to look at, but I think
8 that the whole country, not just Cayuga
9 Heights, needs to help reduce the deer
10 population.
11 They don't have natural enemies like
12 they used to have. They are destroying not
13 just your planting, but they are destroying
14 the country. All over the country, the
15 deer, where they're not being harvested,
16 are eating the new vegetation in the
17 forests, and there will be no new
18 vegetation growing.
19 There will be no new trees. It's
20 important that we harvest those deer, do
21 something to stop them. One of my
22 neighbors at Kendall can't drive his car
23 right now. It's in -- parked in the
24 garage, because he had a -- a deer ran into

1 him, and when he went to the body shop,
2 they told him that 40 percent of the
3 bodywork they have to do is on cars that
4 have been hit by deer. It's ridiculous for
5 -- to just let them keep growing.
6 MARY MILLS: 30 seconds, please.
7 BARBARA JOHNSON-FOOTE: I think
8 that's enough.
9 SANDIP TIWARI: I am Sandip Tiwari.
10 My family and I moved here in 1999,
11 attracted by the combination of Cornell
12 University and the values that the
13 community has presented, a non-self
14 centered and humanist view of the local and
15 global world as we have it and affect to
16 our actions.
17 We have resided on Upland Road since
18 the arrival in 1999. This will end, since
19 it is becoming knowingly clear that the
20 extremism and lack of civilized
21 conversation that has become more pervasive
22 in this decade across the world, two wars
23 and community-based polarization has
24 arrived here. This country is going

1 through its worst financial crisis with
2 nearly 10 percent unemployment. There are
3 budget shortfalls all around, local, state,
4 nation; and we propose to spend a million
5 dollars on the deer culling.
6 Mahatma Ghandi said the more helpless
7 a creature, the more entitled it is for
8 protection by man from cruelty of man. If
9 we are not willing to consider solving the
10 problem through individual use of fences,
11 it's unethical, uncivilized and is
12 representative of the style of government
13 that is becoming from too pervasive from
14 Cayuga Heights to Washington, and all this
15 act of killing will do is to create a
16 long-term sustainability problems for the
17 community; Cayuga Heights, Ithaca, the
18 institutions and the companies that have
19 made this area their home.
20 We, in Cayuga Heights, think we are
21 rich and immune to this financially
22 struggling country --
23 MARY MILLS: -- 30 seconds, please --
24 SANDIP TIWARI: -- and we may

1 complain about the taxes. We think that a
2 good use of a million dollars is this
3 proposition. May I suggest, you look at
4 the workers and the way they live and find
5 a way of spending this money, so that
6 people who work for you actually can live
7 around here.
8 Well, look at the potholes and look
9 at that intersection of Cayuga Heights --
10 of the parkways and Upland and fix that
11 intersection that has always been iced up
12 during wintertime. Help improve education
13 in the elementary school here. Bring a --
14 to every grade, and support arts and music.
15 MARY MILLS: I'm sorry, that's time.
16 The next four people, please, Mary
17 Tabacchi, Guy Tabacchi, Joe Romano and Judy
18 Leviet.
19 MARY TABACCHI: Hi. As a 33-year
20 tax-paying resident of Cayuga Heights, I'm
21 opposed to the current plan for deer
22 remediation, which clearly means killing
23 the deer in an inhumane manner.
24 I am afraid of stray bullets, I am

1 afraid of deer running loose who have been
2 injured. I am afraid to be out walking,
3 biking, jogging, cross-country skiing or
4 whatever I like to do outside. I do not
5 want the children or elderly people in the
6 -- in the village to be tongue-tied by
7 culling or viewing of injured deer. I will
8 be afraid to have my pets outside, if we're
9 going to shoot. I do not want to pay taxes
10 for the slaughter of these animals,
11 especially when the village needs to pay
12 more attention to its infrastructure.
13 And in a time when we need to focus
14 on the safety and security of our
15 residents, walkways, speed bumps are more
16 tactilized and so on. I believe we could
17 resolve our car/deer issues by placing
18 speed bumps in Cayuga Heights, just as did
19 the residents of Forrest Home. I believe
20 that we can resolve the garden issues by
21 allowing adequate fencing.
22 I am strongly opposed to the deer
23 remediation plan, because it divides the
24 residents of Cayuga Heights into camps,

1 neighbor against neighbor. I believe that
2 this annual killing will reduce property
3 prices and the value of my home. I will
4 not allow deer to be killed within 500 feet
5 of my home. I do not want to be alarmed at
6 night or suddenly at home, due to noise or
7 violence associated with the killing of
8 these deer.
9 MARY MILLS: 30 seconds, please.
10 MARY TABACCHI: I believe that
11 baiting and killing deer is unethical and
12 cruel. I do not like being intimidated,
13 because I believe it is wrong to kill deer.
14 It is unpleasant to live in an atmosphere
15 of pressure and fear.
16 Thank you very much.
17 GUY TABACCHI: Guy Tabacchi, we've
18 been here for 33 years. Since this
19 previous administration has continually
20 culled the deer remediation by lethal
21 means, the village has become divisive and
22 has destroyed the community spirit. We now
23 have a split community.
24 So that the board may know, I do not

1 give permission for our property to be used
2 for any purpose of this program, nor do I
3 give permission for the discharge of any
4 firearm within 500 feet of our home. There
5 is no guarantee that if a bait and shoot
6 plan is adopted that a straight projectile
7 will not become a lethal object to people
8 or pets. If a deer is eluded that animal
9 can become a damage to drivers, since the
10 animal in all probability will run away
11 very frightened.
12 How can the number of deer left to
13 survive be defined as 20? Exactly how many
14 deer do we have in the village? Since the
15 mayor claimed in her television interview
16 on WSTN that there are too many deer, and
17 has been claiming this for over a year, it
18 is time that we know exactly how many deer
19 there are. I would like to know how much
20 public monies our mayor and the board of
21 trustees have spent on the deer remediation
22 issue.
23 Why are the mayor and the board of
24 trustees not concerned about the village's

1 infrastructure, such as sidewalks for all
2 neighborhoods, so that adults and school
3 children can walk safely and not have to
4 walk on our roadways? But I guess that we
5 would take money away from their wanting to
6 kill a living creature who does them no
7 harm.
8 Why is the mayor and the board of
9 trustees more concerned about maintaining
10 divisiveness within the village than
11 creating a harmonious place to live? How
12 long a time frame does the board of
13 trustees allow to commit public funds.
14 MARY MILLS: 30 seconds.
15 GUY TABACCHI: Are they allowed
16 to commit future administrations to this
17 expense and tax burden?
18 Thank you.
19 NANCY GREEN: I'm Nancy Green, and I
20 am a Cayuga Heights resident. I am not Joe
21 Romano, but I'm reading this statement for
22 him, because, unfortunately, he and his
23 wife are out of the country. I'm reading
24 this on behalf of Joe Romano, who can't be

1 here this evening.

2 I'm overwhelmed by the latest turn

3 thus farce has taken. Up until now, I have

4 held back from talking about the inhumane

5 aspects of form of deer killing process --

6 plan, I have focused instead on the dangers

7 of firing guns in our small community. But

8 this current plan is so ghastly, I have

9 even refrained from telling my 13-year-old

10 daughter about it, because of the effect I

11 know it would have on her. Net and bolt is

12 a horrifyingly methodology, condemned the

13 world round and is illegal in our state.

14 Why is Mayor Supron so focused on

15 this deer killing issue? Why will the

16 board work for years to protect the few

17 hostas, coming out with such outlandish

18 plans that media has made our small, and

19 normally wise community, into a laughing

20 stock and media circus? Anyway, I'd much

21 prefer that our roads be fixed, that our

22 school children be made more safe going to

23 and from school and that our water supply

24 be brought up to modern standards than

1 waste any more time on these dangerous and
2 shockingly inhumane plans, made by a
3 handful of people behind closed doors.
4 A community is made up of intelligent
5 people, who care about one another. If we
6 were brought together in a forum where we
7 could really talk amongst ourselves in
8 small groups, instead of being given a few
9 seconds to spot our position, we could hear
10 each other and solve this problem. Put
11 this issue into the hands of the community
12 where it belongs. Thank you.
13 JUDY LEVIET: Hi, everybody, I'm Judy
14 Leviet. I've lived in the village since
15 the year 2000. I want to say, first of
16 all, where there's divisiveness, there is
17 democracy. And I think there's a place for
18 all points of view, and I don't think that
19 we should exaggerate the idea of pitting
20 neighbor against neighbor.
21 We have different ideas about what
22 should happen, and we all have the right to
23 express those ideas. I think there's been
24 ample opportunity for people to get

1 together to talk about these things. There
2 have been countless hearings, I've been to
3 four of them myself. I think the process
4 has been extraordinary.
5 I just want to say that there -- we,
6 as human beings, have -- have the
7 responsibility to be stewards of this land.
8 The deer cannot be stewards of this land.
9 There is overpopulation in the country of
10 deer, and many, many communities are
11 wrestling with these very issues.
12 Just -- I have a lot of wooded area
13 on my property. When I first moved here, I
14 could barely walk through the woods because
15 of the understory and the underbrush. Now,
16 it is gone, and the little animals that
17 that supports are gone, as well. The
18 little saplings that will take the place of
19 the major big trees that will die of old
20 age, trees do that, will be gone, and the
21 damage to the landscape will be
22 extraordinary.
23 In this time of fiscal
24 responsibility, there are people starving,

1 who would be happy to have the venison.
2 And I like -- I love animals. I did not
3 like the idea that there were three dogs
4 this summer who were attacked by deer
5 during the fawning season in their own
6 backyards. I think the behavior of the
7 deer is changing, because there is an
8 overpopulation, and I think we have to be
9 responsible for that, and I applaud the
10 efforts of the committee, who have given
11 countless hours and energy to this process.
12 Thank you.
13 MARY MILLS: The next four people,
14 please: Linda Bors, Ronald Bors, Joan
15 Mangione and Rick Falck.
16 LINDA BORS: I'm going to make this
17 very quick, short. I agree with the last
18 speaker, almost everything she said, I
19 totally agree. In a way, I feel like I
20 want to speak for the deer, but in a
21 different fashion.
22 On our street, in our own backyard,
23 we had a deer that was hit in traffic and
24 died miserably out in our backyard. We

1 didn't know about it until the next day and
2 we had to call for somebody to help take it
3 away. That is a terrible way, as is
4 starving to death in the winter, because
5 there isn't enough to eat. So when you're
6 talking about loving deer, I think we all
7 love the deer in a certain way. But I do
8 not believe that most of us want to see
9 them get hurt the way they're being hurt;
10 forced into the road, if there are too many
11 fences, fenced-in yards, and on our
12 particular street we have, you know, we
13 have so many deer, a dozen or so moving
14 through all day long that if -- if
15 something isn't done, it's going to be a
16 really bad winter for all of us on Texas
17 Lane.
18 So I just want to say, please keep
19 going forward with the original plan of
20 sterilization and culling; and I do want to
21 thank you all for your perseverance and
22 dedication.
23 RONALD BORS: My name is Ronald Bors,
24 and I have lived at 121 Texas Lane in the

village for 35 years. I have been greatly concerned about the current economic downturn in our economy, and particularly about the high unemployment rate.

However, when I opened my mailbox a few days ago, I found an eight-page newsletter dealing with the subject of tonight's meeting. So you can imagine my relief, when I realized that those paid political activists are still on the payroll of a certain wealthy Cayuga Heights family.

When I moved to the village, we did not have a deer problem. My family had a wonderful vegetable garden, and we were able to feed our children with many varieties and nutritious, homegrown foods. As the deer herd slowly increased, we found ourselves sharing our vegetable garden. As the deer herd grew to an unmanageable level, we sadly had to abandon our vegetable garden.

I would like to commend the current members of the board of trustees for

1 continuing to pursue a rational course of
2 action with our gross overpopulation of
3 deer. You know from the past two village
4 elections, and from all of the public
5 meetings that a substantial majority of
6 villagers are in agreement with this
7 proposed action.
8 MARY MILLS: 30 seconds, please.
9 RONALD BORS: Please pull firm in
10 your resolve to bring the deer herd back to
11 a reasonable size.
12 JOAN MANGIONE: My name is Joan
13 Mangione, and I've been a village resident
14 for the last seven years, as well as many
15 years during the 1980's.
16 In the last six months, my dog was
17 attacked by deer, chased up to our deck,
18 where my husband and I were finally able to
19 get the deer to stop the attack. My dog
20 was also found to have contracted giardia,
21 a one-cell parasite carried by deer. My
22 physician put my husband and me on
23 antibiotics to treat us for exposure, as
24 well.

1 My yard is completely littered with
2 deer feces. I have a compromised immune
3 system, due to cancer treatment. I want,
4 and I expect, my village government to
5 protect me, my family, my pets, and my
6 property. Let's be honest, if this
7 situation had been dealt with through all
8 the years, our community wouldn't be forced
9 to take such drastic measures, the same
10 arguments made by some of the same people
11 and funded by the same source are robbing
12 us of our rights to use our property in
13 peace.
14 I predict that by January and
15 February, the huge herd that's been allowed
16 to breed here will be starving. I watch
17 these animals suffer on a daily basis.
18 They struggle to survive. They eat plants
19 not in their normal diet and they've raided
20 bird feeders, and --
21 MARY MILLS: -- 30 seconds --
22 JOAN MANGIONE: -- this is during the
23 growing season.
24 What are they supposed to do now?

1 They didn't cause this imbalance, we did,
2 by our inaction. Keeping our environment
3 bio-diverse and healthy for all residents
4 is our responsibility as stewards of this
5 planet and public safety for all is the
6 primary responsibility for government, and
7 ours have failed us up to this point. I
8 commend the board for tackling this
9 difficult problem, and I urge them to vote
10 to control the deer.
11 RICK FALCK: My name is Rick Falck.
12 My wife, Nikki, and I have lived here for
13 25 years, 20 years or so on the parkway,
14 now we live on Highland Road. Our kids
15 went to this school, and I'm also concerned
16 about disease, specifically Lyme disease.
17 My daughter contracted Lyme disease, my
18 daughter, Olivia, who was here in Cayuga
19 Heights, and she'll never be the same.
20 And I, you know, I live two
21 houses away, so I can see 8, 10, 12 deer
22 right here in the play yard. In the
23 summertime, you come out here, there are
24 deer all over the school yard, as they are

1 in the village, you've heard about the
2 other areas. My daughter won't be the
3 same; her eyesight, her compromised immune
4 system. You know, it's an epidemic in
5 Connecticut, you don't have to go far to
6 find Lyme disease.
7 We just have this distorted
8 population of deer. You can't -- you know,
9 it's sad. I'm not a hunter, I don't mind
10 hunting. I eat meat, I know where it comes
11 from, I've been in the ranching business, I
12 know where the meat protein comes from.
13 And you know, there's different ways to
14 deal with -- with this situation, but to
15 just let it go on, I think the last speaker
16 was absolute correct, it's irresponsible.
17 And I guess to close, you know, to
18 characterize people like me -- I'm all for
19 controlling this distorted population.
20 MARY MILLS: 30 seconds.
21 RICK FALCK: To compare and to say
22 that I am a slaughterer, I just find it
23 reactionary and just so offensive to take
24 this position.

1 I'm just trying to -- I live here, I
2 would like to see a much more balanced
3 population. I had a wonderful garden that
4 was decimated, but, you know, that wasn't a
5 problem for me. It's the automobiles, the
6 deer, the health issue with them and with
7 us.
8 So, you know, a lot of pieces --
9 tough choices aren't easy, I have to make a
10 lot of them. Let's just make the choices
11 that are sensible.
12 MARY MILLS: The next four people,
13 please: David Sahn, Jane Pederson,
14 Rosemary Parker, Joel Schell. I'm sorry,
15 Rosemarie Parker.
16 JANE PEDERSON: My name is Jane
17 Pederson, and I live on Cayuga Heights
18 Road. I first came to the area in Cayuga
19 Heights 40 years ago and have been in and
20 out of it since then and now in for quite a
21 few years.
22 The introduction and normalization
23 that systematize the mass slaughter, I'm
24 sorry, but it is technically slaughter or

1 killing, whatever you wish to call it, is
2 likely to produce a manifestly negative
3 change in the character of any community.
4 In this case, it also raises a question
5 about a community structure of government.
6 It is well known that a portion of the
7 community find the proposed plan both
8 morally objectionable and extremely
9 upsetting, but officials elected without
10 anything resembling a mandate to kill are
11 choosing to go forward in spite of visible
12 and vocal opposition. This is a varied
13 change of the character of the community in
14 terms of its culture of government.
15 A few short years ago, the mayor and
16 the trustees did not implement a plan that
17 had blatantly divisive effects and
18 contravene the fundamental values of a
19 significant portion of the community. To
20 blow off that portion of the residents both
21 marks the failure of practical wisdom and
22 threatens to make the community a house
23 divided against itself.
24 Besides the general offenses, the

1 suspicion and mistrust, for many there is
2 disillusionment in the sense that there is
3 no real democratic exchange, respects of
4 the views of others and a willingness to
5 compromise an issue that are for some, very
6 basic. For instance, revisiting fence
7 questions in a more serious way than the
8 recent years, nor does there seem to be a
9 sound sense of priorities. As some others
10 have said, mentioned or referred to, this
11 is a very high cost plan, upwards of a
12 million dollars.
13 MARY MILLS: 30 seconds, please.
14 JANE PEDERSON: At a time when taxes
15 may be increasing at all levels of the
16 local government and important programs,
17 which support the families and children of
18 the region of being cut, this use of tax
19 dollars seems not only non-sensible, but a
20 offensively out of touch with the current
21 economic reality. So a lack of hard data
22 and clear outcomes in this plan, it's
23 seemingly an inevitable failure. It's
24 bound to go on and on and be not

1 sustainable, but would have to be repeated
2 annually, as well as its exorbitant costs
3 cannot diminish suspicion and create
4 goodwill. This is especially the case when
5 there are obvious less costly and viable
6 alternatives to the plan, one of them being
7 flexibility with respect to the fencing
8 policies. Thank you.
9 ROSEMARIE PARKER: Rosemarie Parker,
10 I've been here since '97, I live on Cayuga
11 Heights Road. I'm really concerned about
12 the discussion about democracy and being --
13 being divisive and whatnot, we voted on
14 this, people, we voted twice. We voted for
15 the people, who very clearly made it a
16 mandate to do something specific about the
17 deer, including killing them. We voted.
18 Now, of course, there's a minority.
19 It's a minority that are not for this,
20 there will always be. Everybody has the
21 right to their own opinion, everybody has
22 the right to protest. Yes, there will be
23 protests indefinitely, if we do this. But
24 that's not the point, we have voted on

this.

I don't understand why we're not doing it, I think if we had done it ten years ago or three years ago, we would be so much better off now. I happen to like deer, I happen to have a deer fence. I think that fences are wonderful if you need to fence off a particular area, but they do not help the deer, they do not help the other wildlife, they channelize them. They barely get through -- a deer has a 15 foot gap between everybody's fence, that's nothing left for the deer either, that's not appropriate.

I think Cayuga Heights is -- is a manipulated environment, there's nothing natural about it. Every single bit of Cayuga Heights is affected by people, and we need to decide what we want that to look like. Do we want it to look like lots and lots and lots of deer, not too many plants, not too many other animals, not too many birds, invasive plants? Do we want it to have some deer? Some deer, yes. And some

1 understory, and all of the rest of the
2 lives that that understory --
3 MARY MILLS: -- 30 seconds, please --
4 ROSEMARIE PARKER: -- encourages. We
5 need salamanders, we need butterflies, we
6 need some of the native plants. And I
7 thoroughly resent people classifying this
8 topic. Everybody knows that deer eat
9 hostas, we don't plant hostas. But they
10 eat my corn, my native plants, that really
11 hurts. Thank you for sticking with us.
12 JOEL SCHELL: Hello. My name is Joel
13 Schell, and I've been a resident in the
14 village for approximately 15 years. And my
15 concern with the DEIS doesn't relate to the
16 deer, but to maintaining the safety of the
17 village and to the safety of the village of
18 Cayuga Heights police department and the
19 officers of the department. It's already,
20 people -- someone has already spoken about
21 the increase in the tax rates that would
22 have to take place to fund this program at
23 a time when we don't know what the
24 financial situation of the state and -- is

1 going to be, the funds are going to be
2 unavailable to the police and fire
3 departments, perhaps the police and fire
4 department budgets are going to have to be
5 cut in future years if we commit to a
6 long-term funding of this program.
7 Secondly, the proposed investment of
8 manpower of the Cayuga Heights police
9 department in this plan would be extensive.
10 For example, quoting from the DEIS, the DCH
11 police chief would work with the DMD and
12 the DEC to develop and oversee the culling
13 protocol and the hiring of the
14 sharpshooter. A security plan will be
15 developed by the DCHPD. Protests and
16 objections may require involvement of the
17 Cayuga Heights Village police department to
18 enforce the law and protect public safety.
19 I'm confident that the chief does not
20 have unlimited time to devote to this
21 project.
22 MARY MILLS: 30 seconds.
23 JOEL SCHELL: How much time are we
24 prepared to have siphoned off and what

1 duties are we prepared to have left undone
2 in order to see this project through? The
3 safety of the officers and residents of
4 Cayuga Heights is at risk. Implementation
5 of the plan outlined in the DEIS threatens
6 the safe and secure environment that we all
7 enjoy here in the Village of Cayuga
8 Heights.
9 MARY MILLS: The next four people are
10 David Sahn, Steve Shiffrin, Jim Gilmore and
11 Leslie Ungburg.
12 DAVID SAHN: Good evening, thank you.
13 Thank you for accommodating my comments.
14 Since I'm a little out of breath running
15 over here, I will keep my comments brief
16 and especially since I haven't had the
17 opportunity to hear others, I apologize for
18 that.
19 So I just have come here to express
20 my strong sentiment on behalf of my family
21 and some of my close neighbors to urge the
22 village to act expeditiously and to -- to
23 cull the deer herds. I live across the
24 street from the school, and, of course, I

1 guess the school is an ideal stomping
2 ground for the deer. But I drive home at
3 night, regularly night after night, and I
4 must see 15, 18 deer roaming around in the
5 school yard and trying to get into my yard.
6 I don't have children in Cayuga Heights
7 school any longer, I had three children who
8 attended school here. But I do walk over
9 to the school, and I walk over and I look
10 at the deer droppings, and I look at the
11 deer droppings in my yard and my neighbor,
12 who I think has spoken to you, has spoken
13 about how Lyme disease has threatened and
14 devastated his family. I have a cousin who
15 has Lyme disease, who was equally
16 devastated and has been disabled throughout
17 her life. To me, this is a public health
18 issue first and foremost.
19 MARY MILLS: 30 seconds, please.
20 DAVID SAHN: So I urge something to
21 be done. Second, it's a matter of
22 protecting my property. I have a lovely
23 home, which I cherish, take care of, and it
24 has been decimated by the deer population.

1 And the third and final thing I'd
2 like to say is that while the village is
3 pondering this issue, and I hope you move
4 quickly and expeditiously and forcefully to
5 kill the deer, I would at least urge you to
6 allow us to put up fences to protect our
7 property. Thank you very much.
8 STEVE SHIFFRIN: My name is Steve
9 Shiffrin. I'm in favor of sterilization of
10 the deer, but not killing the deer. I want
11 to make a preliminary point.
12 The environmental impact report says
13 that it would cost $150,000 a year over a
14 five-year period, and it is unclear as to
15 what it would cost after that. I don't
16 understand that claim. If you killed 170
17 deer and sterilized 60, which is more than
18 what the report costs, than it says, that
19 would cost, according to the EIS report's
20 figures, $150,000 actually $151,000. So
21 where are the other $600,000 going to?
22 Your report does not add up.
23 About sterilization, the report says
24 that we tried sterilization, and it reduced

1 the herd. The report says we shifted from
2 surgery to chemical attempts, but had the
3 wrong serum. I don't understand why we
4 don't try sterilization first. The report
5 does not discuss the fact that although
6 females stay in the village, male deer are
7 transient, so the report --
8 MARY MILLS: -- 30 seconds, please --
9 STEVE SHIFFRIN: -- is asking for the
10 killing of transient deer, it is not clear
11 to me how much that culling or killing
12 would actually reduce the deer. It strikes
13 me that the best approach is to try
14 sterilization first, which worked before,
15 before proceeding to something that has so
16 deeply divided the village.
17 JIM GILMORE: Good evening. Thank
18 you, Mayor Kate, and all the trustees and
19 Randy for having this open democratic
20 event. I haven't been behind a mike for a
21 while. I just want to say that first of
22 all, I don't feel in my neighborhood on
23 Hanshaw Road that we're divisive, that
24 we're at odds against each other. We've

1 been talking about this in a lively,
2 respectful manner for a long time, and I
3 think that's part of my point.
4 It's been a little bit too long. I
5 personally gave about two years of my life
6 to this issue, and I'm really glad that the
7 trustees and our current mayor are
8 continuing the resolve to do something
9 about it.
10 When I was in office, we did not have
11 the net and bolt option. If I were sitting
12 in that desk today, I probably would
13 consider that, because I do feel that it
14 may, at some level, be perceived as safer
15 for our residents, and, also, I suspect it
16 could be quite a bit less costly. But I
17 don't have any of the details, except I
18 know it's not a projectile that goes
19 hundreds of feet or, in this case, if
20 you're shooting downward, 30 or 40 feet or
21 50 to the ground.
22 MARY MILLS: 30 seconds.
23 JIM GILMORE: I am fully -- I've read
24 the draft environmental impact statement,

1 and I think it's well done. I commend our
2 board and our mayor for having it reviewed
3 and thoroughly summarized by the firm of
4 Miller, et cetera, and I think it's right
5 on, and I do support culling, as well as
6 sterilization, but I would have to say I
7 think the net and bolt is a good idea; and
8 I also spent the summer volunteering, at
9 Loaves and Fishes they could really use the
10 protein. Thank you.
11 LESLIE UNGBURG: My name is Leslie
12 Ungburg. I live at 3 Winter Place. I'd
13 like to thank the mayor and the other
14 members of the board for the time and
15 consideration they've given to this
16 difficult problem. I've lived in the
17 Williamsburg Park neighborhood for 35
18 years, and for five years in the Town of
19 Ithaca and 30 years in the Village of
20 Cayuga Heights.
21 If there were deer on the land that
22 became our neighborhood, we rarely, if
23 ever, saw them, so in that sense, the deer
24 were not here first. As further

1 development has taken their woodland and
2 meadowland retreat, especially within the
3 last ten years, it has become increasingly
4 common to see deer in the neighborhood; and
5 within the last five years, be increasingly
6 impacted by their behavior. It is
7 heartbreaking that they have so little
8 natural habitat left in which to live out
9 their lives and raise their young, and I
10 can understand the horror that some feel
11 with the idea that we're really killing
12 some of them.
13 But at the same time, while I do not
14 care about growing tulips or hostas, I do
15 care about the investment we made in our
16 property over the years, and I do feel
17 increasingly stressed out that a constant
18 presence of deer in our neighborhood -- I
19 find it increasingly invasive and expensive
20 to me and my family habits; and more than
21 that, for the ultimate lifestyle that the
22 deer are going to be subjected to, if
23 nothing is done about their numbers.
24 MARY MILLS: 30 seconds, please.

1 LESLIE UNGBURG: For every passing
2 year for the last five years, I've spent
3 more and more money on fencing and other
4 remedial things.
5 I just -- I've written a lot here, I
6 won't get to say it all. I've been in car
7 and deer collisions, I've read that a herd
8 of deer can double itself in as little as
9 two to five years, and I've seen evidence
10 of this in my own yard. If the deer keep
11 multiplying in this way, doing nothing and
12 letting nature run its course will not help
13 anyone; either humans, plants or the other
14 natures that are worthy at least as of much
15 concern, as the deer or ultimately the deer
16 themselves.
17 MARY MILLS: Thank you. The next
18 four people please; Ann Druyan, Jeff Cox,
19 Derek Stewart and Lesli Sagan.
20 ANN DRUYAN: Hi, my name is Annie
21 Druyan, and I've lived at Tyler Road for 33
22 years, also known as unique natural area
23 number 102. And I heard these stories
24 about people who suffer from Lyme disease

1 and in various other ways because of the
2 presence of the deer. And I ask you, what
3 if you're wrong?
4 What if there is not a connection
5 between the deer and Lyme disease? I ask
6 this, because I read the environmental
7 impact statement, and I've been writing
8 about science in books and television and
9 motion pictures for 30 years. And the
10 report struck me as being very poorly done,
11 with all due respect to the gentleman, who
12 is representing Tim Miller here. It seemed
13 like a cut and paste job. And the science
14 seemed suspect, so I sent it to six experts
15 on biodiversity and deer, on Lyme disease
16 and deer and got a very interesting
17 response.
18 First of all, a number of -- one
19 letter directly from the author of the book
20 on Lyme disease that has just been
21 published by Oxford University Press last
22 month, he wrote a letter addressed to the
23 Village of Cayuga Heights trustees.
24 MARY MILLS: 30 seconds, please.

1 ANN DRUYAN: Upon reading reports
2 that the DES contains many inaccurate and
3 un-supportive statements about
4 relationships between deer, black-legged
5 ticks, incorrectly called deer ticks, and
6 Lyme disease. Harvard School of Public
7 Health, killing deer is not the answer to
8 reducing Lyme disease, says Harvard School
9 public health scientist.
10 Biodiversity makes salamanders and
11 other creatures thrive in areas with higher
12 deer populations. I agree passionately
13 with all of the people who have spoken
14 against the cruelty of killing these deer,
15 but I ask those of you who cannot have any
16 compassion for the deer to think what if
17 you're all wrong, what if this will not
18 solve the problem that you are seeking to
19 solve? Thank you.
20 JEFF COX: Hello, my name is Jeff
21 Cox. And ten years ago, I served on the
22 Cayuga Heights Deer Committee, which
23 primarily consisted of people who wanted
24 deer reduction. We met for two years every

1 other week and worked closely with Paul
2 Curtis from Cornell's Department of Natural
3 Resources to develop a plan sanctioned by
4 the community and privately funded by one
5 of its member. After our research was
6 finished, the survey was sent to every one
7 of the approximately 800 land owners, and
8 the response rate was high. While like
9 now, the majority of residents wanted deer
10 reduction. Only a third or less were
11 willing to kill deer. No such survey has
12 been done since then to determine whether
13 the community, as a whole, now favors
14 killing.
15 Without this information, it is
16 difficult to know that we are properly
17 represented by the proposed deer management
18 policy. It appears or might appear that
19 we're being bullied and taxed in certain
20 means of the minority view.
21 2006 was the last time the deer
22 population was studied, and the number was
23 determined to be 147. This number is close
24 to what was found by Cornell ten years ago

1 and indicates that the herd has not
2 actually grown; however, the issue on the
3 table has not really been the number of
4 deer, the issue is whether a minority of
5 residents who perceive deer to be an
6 intolerable problem to determine the policy
7 and budget that serves their interests, and
8 not necessarily that of a whole community.
9 After the killing, many deer still in
10 this community may still be the ones who
11 visit on the gardens of the people who most
12 vehemently want them removed. Deer
13 migration must continue to fill the space
14 left by killing. Also not being considered
15 are the people who actually enjoy deer or
16 those who will tolerate them as a pesky
17 neighbor and who consider paying more taxes
18 to kill deer an exorbitant, unacceptable or
19 an immoral solution.
20 Without an objective survey, whether
21 privately or publicly funded, we will not
22 know whether our community now favors
23 killing and is willing to pay more taxes
24 for them. Clearly, the need for those who

1 will not tolerate the presence of deer have
2 not been adequately addressed, and that is
3 why this problem has raised its ugly head
4 again.
5 However --
6 MARY MILLS: -- 30 seconds --
7 JEFF COX: -- the possibly divisive
8 solution, I'll say possibly, because nobody
9 is out in the streets yet, being forced on
10 our community by a minority view is likely
11 to create a greater problem for us than the
12 one caused by deer.
13 Is there not possibly a better
14 solution for this creative and affluent
15 community to come up with than netting and
16 bolting? I think Steve expressed a lot of
17 what the original deer study came up with
18 as a viable solution and the problem with
19 the serum.
20 I'm wondering if netting and bolting
21 had to -- had to have a variance in the law
22 to allow it to happen here. There's some
23 problem with the serum. They make good
24 serum in Canada, but apparently not in the

1 States. They keep the serum too long, and
2 it destroys some of these properties for,
3 you know, contraception. However, if we
4 could get a variance for netting and
5 bolting, which is illegal, why not
6 something that actually gets us the
7 chemicals that we need that could be
8 quickly and easily applied at much less
9 cost?
10 DEREK STEWART: Hello, my name is
11 Derek Stewart, I have lived in the Village
12 of Cayuga Heights for six years now, I live
13 up right on Overland. And I just want to
14 express my support for the deer remediation
15 program that's underway. There's been a
16 lot of talk about the tax that will go into
17 funding this effort, but I would argue that
18 we all right now pay a hidden tax in our
19 village.
20 I know a number of you have had car
21 accidents with deer. You're looking at
22 over $1,000 worth of damage to your car
23 that needs to be fixed and time involved in
24 that every time, that's a tax we have right

1 there. That's happened to myself; and then
2 on another issue is the Lyme disease, which
3 is a concern for myself. I have two
4 children, who really like to play outside
5 of our house, but this year, we have seen
6 more ticks in the area which can carry Lyme
7 disease, and I know it's been raised, but
8 it's possible that the deer may not carry
9 them, but as a father, I have to assume
10 that that's a possibility.
11 And when I go to get them checked, my
12 daughter had one on her back just the other
13 week, and we're still waiting for the
14 results to hear back about the possible
15 Lyme disease. It's a big concern for me,
16 and one of the -- another hidden tax that
17 we're dealing with with the deer, not to
18 mention anything about the gardens or the
19 effect to our property in the area.
20 I think -- as people, we really do
21 have a responsibility for managing our
22 environment. Many of us wear leather
23 shoes, many of us eat meat. And there are
24 things involved in getting those products

1 --

2 MARY MILLS: -- 30 seconds --

3 DEREK STEWART: -- that we like to

4 distance ourselves away from. Now that we

5 have the deer here, we have to deal with

6 them, and we have to deal with them in our

7 community. And I think this is the right

8 way to go, and I applaud the determination

9 of the committee. Thank you.

10 LESLI SAGAN: My name is Lesli Sagan,

11 I've lived here since 2006, and my husband,

12 David, has lived here since the early '90s.

13 We're both in favor of deer

14 remediation. There are many reasons for

15 this, and most people have gone over them

16 already, but I'd like to say that it's

17 clear that the deer are a problem. I moved

18 here from Schuyler County, I was in a rural

19 area. I never had a problem growing a

20 garden, I never had a problem growing

21 flowers, although I saw deer all the time.

22 Here, we all know, we put up fences,

23 and that is our hidden tax. I just spent

24 about $46 on a roll of fencing. I do not

1 think it is cruel to shoot deer or to
2 slaughter them or bolt them or whatever
3 word you chose to use. We are big, I eat
4 meat, I wear leather shoes. I understand
5 that sometimes animals die. And, frankly,
6 I think that it is much less cruel to shoot
7 a deer or bolt a deer than it is to let it
8 starve to death.
9 I also think that we need to manage
10 these deer, because there are at least two
11 that go through my yard daily with broken
12 legs. I don't see how we're going to avoid
13 sometimes culling deer, because some of
14 them need to be culled. Those that are
15 walking around with broken legs certainly
16 should be culled for their own good. I
17 think that it is cruel to let a prey animal
18 breed out of control, and I think that that
19 is what's happening here.
20 And I think that it is up to us as
21 the people who are here to take care of
22 that in the safest, sanest, humanist way
23 possible, and I do think that --
24 MARY MILLS: 30 seconds, please.

1 LESLI SAGAN: And I do believe that
2 includes killing some of these deer. Thank
3 you.
4 MARY MILLS: The next four people,
5 please: Ralph Janis, James Webster, Fair
6 Gouldin, Nancy Richards.
7 RALPH JANIS: My name is Ralph Janis,
8 I have lived at my current address in
9 Cayuga Heights for 27 years. I first moved
10 to Cayuga Heights 48 years ago, but the
11 first four years, I was in one of those
12 fraternity houses, and I was worried about
13 other issues, besides deer.
14 I want to share with you just two
15 observations, because so much has already
16 been said.
17 First of all -- well, actually, three
18 observations. One, I, too, want to applaud
19 the board of trustees for their efforts to
20 try to do something about what, I believe,
21 is a serious problem.
22 My second point is, somehow, nothing
23 is ever said about the fact that Cayuga
24 Heights is this weird, little island,

1 surrounded by thousands of square miles of
2 deer control projects. 120,000 deer,
3 according to the New York Times, were
4 killed in New York State last year legally.
5 Cornell University has just removed
6 whatever the population of deer it had at
7 the Plantations, we all know they did that.
8 I don't understand why there's been no
9 complaint about that.
10 We seem to be living in this weird,
11 little world, where -- where only Cayuga
12 Heights is doing something strange and
13 weird and awful. I don't believe that for
14 a moment, I believe that we're being
15 victimized, because we're the only place
16 that isn't --
17 MARY MILLS: -- 30 seconds, please --
18 RALPH JANIS: -- actively culling
19 deer. I would like to make one
20 observation, and for those of who I don't
21 agree with completely, you've made a very
22 good point, which I wish we would consider
23 at a little bit greater length. I think
24 much of the hostility, much of the anger,

1 much of the divisiveness would disappear if
2 we could return to the method of
3 sterilization.
4 We do that at the SPCA every day, and
5 I don't think anybody in this room objects
6 to it. I hope we could find -- that might
7 be a solution. Thank you.
8 JAMES WEBSTER: Would the timekeeper
9 please raise her hand?
10 I have a procedural question, first,
11 I hope the clock cannot tick until I'm done
12 with that. Am I correctly informed that
13 technically the subject of tonight's
14 meeting is comment on the issue of the
15 approval or not of the DEIS, is that
16 correct, as opposed to making substantive
17 suggestions about what to do?
18 MAYOR SUPRON: It's to give comments
19 on the DEIS.
20 JAMES WEBSTER: That's what I was
21 afraid of.
22 MAYOR SUPRON: As you see, people
23 will make all kinds of suggestions and
24 comments.

1 JAMES WEBSTER: I know. Okay, you
2 can start.
3 My name is James Webster, my wife and
4 I have lived on Iroquois Road since 1977.
5 On the one hand, there is a very serious
6 deer overpopulation in the village, and
7 indeed, the whole area, with many very
8 serious consequences to people and
9 properties, who -- all of which have been
10 mentioned today, I won't mention it again.
11 From -- and in that sense, the effort on
12 the part of, the successive board of
13 trustees and mayor to do something about
14 it, I entirely endorse and support.
15 On the other hand, it is very clearly
16 a divisive issue, not only politically, but
17 morally and ethically, and I must say that
18 both the board and the successive board to
19 the DEIS, in my opinion, completely fail to
20 make a plausible case that the proposed
21 remediation of mechanism will actually
22 succeed. And again, I don't need to go
23 into detail, many people have made points
24 about that and so on.

1 Therefore, there's a conundrum, it
2 seems to me, politically and realistically.
3 And the only possible solution, in my view,
4 therefore, is something that somehow cuts
5 the cord in the hut and takes a different
6 approach. I don't mean to deny the
7 attractiveness of sterilization as a
8 possible -- it could be thought to work as
9 a possible compromise.
10 MARY MILLS: -- 30 seconds, please --
11 JAMES WEBSTER: Thank you. But who
12 knows about that, and that would also be a
13 long-term, somewhat expensive solution.
14 So my suggestion is something that
15 you will probably think is frivolous, but I
16 do not mean it as frivolous. And that
17 although you may smile about it tonight, I
18 hope you'll remember the suggestion when
19 you wake up tomorrow morning, it's quite
20 simple and would cost almost nothing.
21 Repeal the leash law. Thank you very
22 much.
23 FAIR GOULDIN: My name is Fair
24 Gouldin. I've lived in Cayuga Heights

1 since 1996 and have had an interest in the
2 village's issue with deer since that time.
3 I have to say that my husband and I
4 have watched carefully, as the village
5 trustees have worked to -- to contend with
6 this very divisive issue. I have seen them
7 working scrupulously and astonishingly,
8 meticulously in the process of both
9 surveying the residents and in reviewing
10 possible solutions to this issue.
11 There has been great integrity and
12 irreproachable openness on the part of the
13 village deer remediation committee. I
14 think that the suggestions that they have
15 given us have been as well researched as
16 any -- anyone could ask for. I think it's
17 clear that the village's voice has been to
18 do something to control the deer
19 population.
20 It is time now to carry out the
21 democratic process, to go forward with the
22 -- with the remediation plan that the
23 trustees and the deer remediation committee
24 have called for.

1 MARY MILLS: 30 seconds, please.

2 FAIR GOULDIN: It's time to move

3 forward with this plan that has been

4 suggested to us, which clearly the majority

5 of the village population is in favor of.

6 Thank you.

7 MARY MILLS: Nancy Richards?

8 NANCY RICHARDS: I just want to say

9 that I agree with most of the people

10 speaking here tonight, and thank you very

11 much.

12 I've had two deer, one carried away

13 this morning. A few weeks ago, my husband

14 found one probably in the garden. The

15 Cayuga Heights police were nice enough to

16 come by, lend a hand, drag it down to the

17 road. My friend said she has a deer in her

18 garden, the bone was sticking out, and she

19 doesn't know if it's still there or not.

20 It's just -- I can't fence it in. I

21 have a narrow, long high stake lot. If I

22 fence it in, more deer are on the road. So

23 I think it's a problem, and I appreciate

24 the people working on this resolution.

1 MARY MILLS: Thank you. The next
2 four people: Susan Barnett, Vera
3 McLafferty, Paul Ginford and Hazel
4 Brampton.
5 SUSAN BARNETT: Hi, I've lived here
6 on Triphammer Road for about 17 years.
7 And I'd like to encourage the
8 trustees to stick to their plans to reduce
9 the deer population in the village to a
10 more natural level. This has been
11 thoroughly researched by both the village
12 and the outside consultants, and the
13 conclusion is clear that it would be better
14 for the health and safety of village
15 residents and our neighbors and better for
16 the ecosystem as a whole. Lyme disease and
17 deer/car collisions are dangerous, that is
18 clear.
19 It is also clear that having this
20 many deer is bad for the ecosystem, both
21 plant life and other animals, as the
22 Autobahn Society and other environmental
23 organizations have stated. Deer are hunted
24 down the road at Cornell, and up the road

1 in Lansing and all over the place. This is
2 nothing new or different.
3 I, therefore, ask the trustees to
4 stick to their plan and to not be
5 intimidated by the bullying tactics of the
6 richly-funded activists who are so
7 aggressively pushing their narrow-minded
8 agenda here.
9 I know it must be very tough to be
10 brave and do what we were
11 democratically-elected to do under these
12 circumstances when they misrepresent what
13 you're doing and why you are doing it, both
14 in print and online, but, please, do it.
15 MARY MILLS: 30 seconds, please.
16 SUSAN BARNETT: And please show us
17 that the democratically-elected government
18 is still in charge here, not those with the
19 most money or the loudest voices. I know
20 that there are many countries in the world
21 where that is not the case, and where those
22 with the most money always get their way,
23 but I hope that is not the case here.
24 Thank you.

1 VERA MCLAFFERTY: I just wanted to
2 express our concerns as a family, as Cayuga
3 Heights residents, with two points; that we
4 do believe that the deer overpopulation is
5 an issue and does affect our daily lives.
6 We live on Cayuga Heights Road, I'm a
7 mother of three young children. And while
8 the deer are very cute, it doesn't mean
9 they're not a danger.
10 I'm not a hunter, I do not typically
11 advocate guns. At the same time, Bambi has
12 ticks, and Bambi has antlers. There's
13 typically about seven, ten or more on our
14 front lawn every evening. I drive by a
15 dead deer on the side of the road probably
16 three times a week. I'm a safe driver in a
17 minivan, and on the way to evening sports
18 or music practices with my kids, I
19 encounter a deer in the road at least three
20 or four times a week, if not, more. We've
21 actually kept track.
22 It's only a matter of time before
23 there's another serious car accident,
24 regardless who that driver is. We moved to

1 Cayuga Heights about three years ago from a
2 large property in Trumansburg. There were
3 deer, but we were able to co-exist, because
4 the property was large, there was an
5 abundance of food for them, and you could
6 hear the coyotes at night. I think in the
7 nine years we were there, I found maybe two
8 or three ticks on our Labrador retriever.
9 When we moved to Cayuga Heights, we
10 started picking them off of our dog on a
11 daily basis. This summer, my children and
12 I watched our dog die a slow and awful
13 death from Lyme disease, as her organs
14 failed one by one. We now have been driven
15 to using toxic tick control on our other
16 dog, getting her vaccinations we don't know
17 are even effective.
18 MARY MILLS: 30 seconds, please.
19 VERA MCLAFFERTY: We use it more
20 often, because the ticks on her are so
21 prevalent.
22 I don't know when people will agree
23 that they are starting to be toxic, when
24 there's 20 in our yard every night or 40 or

1 60, but I'm insulted at the insinuation
2 that this is about tulips.
3 They do restrict our activities, my
4 son is afraid to play basketball in the
5 driveway because of the bucks that are out
6 there every day and the poop all over the
7 grass and the kids stay inside more often
8 than not because of that particular reason.
9 I wish there was a less expensive
10 way, but I do support the remediation
11 solution and voice my disdain for the
12 propaganda and fearful messages that come
13 from cayugadeer.org to our house on a
14 regular basis.
15 PAUL GINFORD: I have the feeling
16 we're just running in place, the problems
17 are getting worse. Among what I've seen
18 recently is the property across from me has
19 been, increasing numbers of the properties
20 have been -- it exposes the absolute lunacy
21 of the people who think that fences are a
22 solution to everything.
23 Obviously, as we know as scientists,
24 that there's a conservation law; the same

number of deer, smaller amounts of space, higher density that make the problems worse and everybody seems devastated. We also see the results. These fences are not coming down. It's a long-term impact on our neighborhood, the way it looks. It exposes the willful negligence of the people that preceded you as -- as trustees on this deer remediation committee. And I very much wish that people express that they had done their job before.

I'm very tired of being held hostage. What are we talking about here? A couple hundred deer, that's it. I'm tired of being held hostage to a couple hundred deer. I'm tired of being held hostage to few, a handful of non-resident invaders. And was mentioned by two people preceding me, they've been doing this in Lansing for years. What do you have against Cayuga Heights, why don't you go to Lansing and protest against the killing of deer in Lansing?

The One comment I have about the

1 report is there was a concern about the
2 noise from firearms. I'm not a hunter, I'm
3 not in favor of using firearms, but in
4 order to make my sentiments perfectly
5 clear, I might not have been clear enough
6 so far.
7 MARY MILLS: 30 seconds.
8 PAUL GINFORD: I'd like to say that
9 every shot that I hear will be music to my
10 ears, and I will reextend the invitation I
11 made to the trustees last year.
12 Tomorrow morning, 8 o'clock, my
13 property, there will be 20 deer there.
14 Bring your guns, you can bag 20 of them.
15 I'm glad you're writing this down. Come
16 back the next day, another 20. Two weeks,
17 you'll have 280 deer. Thank you.
18 HAZEL BRAMPTON: My name is Hazel
19 Brampton, I've lived on Christopher Circle
20 since 1961. We have our own herd of deer
21 there.
22 I just want to say that as I sat in
23 the last meeting on this subject in this
24 same room, it became evident to me why

1 we're involved in so many endless wars in
2 this country. Many people think the way to
3 solve problems is to pick up a gun, instead
4 of using their brains and negotiating and
5 figuring out other ways to solve problems.
6 This seemingly ever larger group gets more
7 powerful every day, so we find ourselves
8 with a local government, not unlike the
9 federal one, deciding to kill as leeway to
10 get things done.
11 I have attended several meetings on
12 this subject at the town hall, and I've
13 never heard the board discuss alternatives
14 to killing. That really -- they seem to be
15 obsessed by using guns to solve this
16 problem. It surprises me that the most
17 privileged group of people in this area
18 could be planning to kill local wildlife in
19 an illegal and most painful way.
20 Where are the educators --
21 MARY MILLS: -- 30 seconds --
22 HAZEL BRAMPTON: -- and those who
23 care for the wild things in the village?
24 What has happened to the knowledge that

1 fences keep out unwanted animals from yards
2 and gardens? Are fences too much work, too
3 ugly, too insulting to our neighbors? The
4 bottom line is that they work and, in my
5 experience, send animals elsewhere looking
6 for food.
7 MARY MILLS: Thank you. The next
8 four people, please: Brian Eden, Tamas
9 Bloomfield, Kora von Wittelsbach and Gail
10 Warhaff.
11 BRIAN EDEN: I'm Brian Eden, 147
12 North Sunset. I'm here to focus on the
13 values of biodiversity in our community,
14 not much mentioned here yet.
15 I have observed the deterioration of
16 forest structure and composition and the
17 failure to regenerate some species of
18 trees. Unfortunately, we have had no
19 coherent biodiversity policy in the
20 village. This has led to whitetail deer
21 becoming a very dominant species in the
22 local ecosystem. Some want to maintain
23 this dominance by privileging deer over all
24 other floral and faunal species.

1 Unfortunately, these lesser
2 appreciated living plants and animals lack
3 the human support network provided for the
4 past 50 years by the Disney corporation for
5 deer. We all should be stewards of our
6 natural environment in our neighborhoods.
7 We will not be intimidated by those who
8 refuse to recognize the values of living
9 things other than deer.
10 In other words, I'm not willing to
11 see the moral high ground on this issue. I
12 support the value of maintaining
13 biodiversity in the Village of Cayuga
14 Heights.
15 TAMAS BLOOMFIELD: Hi, I'm Tamas
16 Bloomfield. I've been a Cayuga Heights
17 resident for the last 12 years.
18 I'm glad that the speaker before me
19 mentioned biodiversity. My soon-to-be
20 daughter-in-law just got her Master's in
21 Forestry from Yale, and she has educated me
22 on how much of a menace deer and deer
23 overpopulation are to healthy forests and
24 biodiversity at large. The problem is is

1 that -- just -- I think that we're a little
2 bit susceptible to the allusion that when
3 we see deer traipsing through our yards,
4 oh, we're at one with nature, we live in
5 this very natural setting, and that's not
6 really the case. Without a lot of bears,
7 without a lot of wolves keeping the deer
8 population in check, things get out of
9 whack.
10 And this is really what is happening,
11 and there are going to be substantially
12 more bird population and other little
13 critters. Now, we don't worry about
14 keeping squirrels in balance, because there
15 are hawks and there are other predators
16 that keep other animals in balance. But
17 there's nothing doing that for deer, and
18 the idea that fences can solve all these
19 problems really just doesn't work.
20 My particular yard, also, is not at
21 all suited to having a fence. It's just --
22 the layout of the land, it's just --
23 there's no way to fence in your foundation
24 planting then when you have a U-shape. And

1 the deer come up three feet from our front
2 door and eat the plants that they told me
3 at Garden Center, deer really, really,
4 really don't like these. They didn't used
5 to eat these ten years ago, but now they
6 are so hungry.
7 MARY MILLS: 30 seconds, please.
8 TOMAS BLOOMFIELD: There's so many of
9 them.
10 Also, a year and a half, I spoke at
11 one of these meetings and the next day, I
12 had a brick through my window. So I would
13 like to think that that was just random,
14 but we've never, ever, ever, ever, ever had
15 such a problem on any other occasion and
16 our kids are already off at college, so
17 it's hard to imagine that it was any other
18 reason. Thank you.
19 KORA VON WITTELSBACH: Hello, I'm
20 Kora von Wittelsbach, and I'm a resident of
21 the village and a long-term resident.
22 I would like to say that I did not
23 move to Ithaca, Texas, but to Ithaca, New
24 York, and one of the reasons I like living

here is the wildlife. And I don't have children, but if I did, I would love them to see deer in our backyard. I consider -- frankly, I consider wasting money on deer culling, true serious mismanagement of my tax dollars. And I also think this is a diversionary issue. If we're so concerned about our health and our ethics, let's walk to work more. Apparently, 75 percent of Ithaca -- Cayuga Heights residents commute to Cornell in their cars. I couldn't believe it when I saw the statistics.

We're so concerned about the ethics. I look at my mirror every morning and look at all of you and all of us. First of all, these creature come way, way above, in my book. And I think the real problem for me right now, as a woman, I'm too young -- too old to be fondled, but I'm not too old to be mugged.

And I'm seriously concerned about the mugging, recent muggings in the limitrophe areas of Cayuga Heights, and I would like my money to be spent on the abrasion of the

1 Ithaca police and Cornell University police
2 in controlling this, so I can walk from my
3 Cornell office to my Cayuga Heights house
4 without feeling threatened and be worried
5 that my face will be smashed because of my
6 money.
7 MARY MILLS: 30 seconds, please.
8 KORA VON WITTELSBACH: So as somebody
9 said at Cornell, well, the curse is on the
10 land, and I do not wish to be part of this
11 land. If you're concerned about your
12 mother-in-law being eaten in the yard by
13 the deer, there are parts of the world
14 where wild animals live.
15 Go and spend a sabbatical there, you
16 will have a different perspective of your
17 tulips and your bad deer.
18 GAIL WARHAFF: My name is Gail
19 Warhaff, I live in Cayuga Heights, and I
20 have done so for some time. And I see a
21 number of my neighbors, who have spoken on
22 the opposite side of me on this issue that
23 I feel very strongly about.
24 I didn't come with a prepared speech,

1 I was not prompted or paid to come here,
2 and I really object to the remarks that are
3 being made about the wealthy lobbyists that
4 are paying people to come here. The people
5 I know here, who have spoken, have not been
6 either paid or coerced to come here.
7 One thing I would like to say is that
8 I've heard the term stewardship of the
9 earth and environmental concern voiced by
10 people ready to cull the deer herd. The
11 stewardship of the earth, which man has
12 been responsible for, has been dismal and
13 we're all feeling the consequences.
14 There are serious issues about -- to
15 me, about, for example, the sort of cars
16 that are driven, the speed at which we
17 drive around Cayuga Heights. My children
18 also went to this school. I'm much more
19 worried about people driving cars up Upland
20 Road than I am about the deer. And if I
21 drive at 15 miles per hour around Cayuga
22 Heights, which is a sensible, I think,
23 speed to be driving around here, even if I
24 did have an accident with the deer, I think

1 the bodywork on the deer would be more
2 costly than the bodywork on my car. And as
3 far as damaged properties are concerned,
4 I'm a neighbor of a lot of these people,
5 and I have no idea what they're talking
6 about.
7 I have a -- I'm a very keen gardener,
8 I have an acre of garden and no fences. I
9 go to Agway, I find out what deer don't
10 like, and, okay, they eat the odd things I
11 don't expect them to eat. On the other
12 hand --
13 MARY MILLS: -- 30 seconds, please --
14 GAIL WARHAFF: I grow a lot of things
15 that deer will not eat, and it's possible
16 to be a good gardener here and share your
17 garden with the deer. As far as the
18 methods used for culling the deer, I don't
19 believe that deer need culling. If we're
20 going to cull them, why not try an
21 alternative to shooting them, which is
22 problematic, as we all know, on many, many
23 levels, and why spend so much money on
24 this?

1 Thank you.

2 MARY MILLS: The next people, please:

3 Sally Grubb, Ellen Cohen-Rosenthal, Joe

4 Kreitinger and Mark Eisner.

5 SALLY GRUBB: Good evening, my name

6 is Sally Grubb. I've lived here about 20,

7 25 years on 104 Midway Road, just up the

8 road from here.

9 I want to applaud the trustees for

10 their efforts to move forward with a plan

11 to manage the deer. My concern is that in

12 the long term, it's not going to be

13 successful. There is one thing that could

14 be done that would help all of us in the

15 interim, and that is to take action to

16 revise the fencing ordinance.

17 I'm fully in favor of people being

18 allowed to put up deer fences on their

19 property, and I would urge anybody who is

20 similarly interested to contact me and let

21 me know, so that we can take further action

22 to persuade the trustees to change their

23 minds over the fencing ordinance.

24 Thank you.

1 ELLEN COHEN-ROSENTHAL: My name is
2 Ellen Cohen-Rosenthal. And until two weeks
3 ago, I loved the deer. But two weeks ago,
4 my 11-pound dog was attacked by a deer in
5 my backyard. The deer -- the dog suffered
6 a broken leg, was hospitalized for a week
7 and has serious lacerations on its back.
8 At a cost of $4,000, our dog is on the
9 mend.
10 Now, my husband said, well, we don't
11 have to fix the dog, but, of course, that
12 was not an option. And I'm beginning to
13 have greater sympathy for the remediation
14 plan, although I implore the idea of the
15 notion of a government killing; however,
16 I'm with Sally with regards to thinking
17 about changing the fencing law.
18 In order to fence my yard, I would
19 have to move the -- the current ordinance
20 requires a 15-foot -- I forget the word,
21 setback, which is not cynical. And there
22 is a lot of great fencing material out
23 there that might protect my family and my
24 animals. And I have to wonder, if a dog is

1 attacked by a deer, when will the first
2 child be attacked?
3 JOE KREITINGER: Hi, I'm Joe
4 Kreitinger. I live at 211 Hanshaw Road,
5 and I've lived in that location for almost
6 20 years.
7 I just have to say over the course of
8 20 years I've been gardening, and it really
9 has become quite intolerable with the deer
10 that are down in our yard. And just
11 recently, my wife came in with a tick on
12 her and we pulled one off of our dog. And
13 I think it's an ecological disaster. And I
14 hope you all understand the significance of
15 Lyme's disease. And my wife grew up in
16 Hudson Valley, and her father died from
17 complications of Lyme's disease. So you
18 should be aware of it, and it's a big deal.
19 And that's all, I support the
20 remediation.
21 MARK EISNER: I think I was next, but
22 I'll pass.
23 MARY MILLS: Vally Kovaur?
24 VALLY KOVAUR: Hi. I just got here,

1 so forgive me if I repeat what someone else
2 said. I'll be very brief.
3 I hate the idea of killing deer, and
4 I really hate the idea of killing deer with
5 my car.
6 MARY MILLS: Okay, that is all of the
7 resident people that have checked in to
8 speak, is there any other resident that
9 would like to speak?
10 MAYOR SUPRON: I'm not actually
11 trying to speak. I'm asking for a few
12 minutes break.
13 (RECESS TAKEN.)
14 MARY MILLS: Okay, everybody, shall
15 we get back to business?
16 Are there any other Cayuga Heights
17 residents that have not had the opportunity
18 and would like to speak? If no, then let's
19 start with our non-residents.
20 The first four people, please:
21 Charlene Temple, Scott Teel, Gabrielle
22 Vehar and Susan Lustik.
23 CHARLENE TEMPLE: Hi, my name is
24 Charlene Temple, I live at 246 Renwick

1 Drive.

2 I want to thank the board for the

3 patience, these are long meetings. And

4 this has been going on for months and for

5 years to discuss this issue, and I

6 appreciate the democracy that allows us all

7 to have different points of view.

8 I'm wondering, because I've been to a

9 number of meetings, what is going to

10 factually resolve all of our differences.

11 As someone said, of course, we all have

12 differences of opinion. And I'm wondering

13 if supposition has taken the place of

14 facts, I second what Jeff Cox said that

15 there was a survey done in the past where

16 the people were specifically represented by

17 the points of view that they wanted to

18 have, and I don't hear that that has

19 happened now. I hear that people have very

20 livid anecdotes that support their point of

21 view, and I don't know if they are the

22 minority or the majority of the village

23 residents, but I would really like to see a

24 non-killing resolution come to.

1 I'm sorry to see that deer have now
2 become predators. I enjoy them in my yard.
3 MARY MILLS: 30 seconds, please.
4 CHARLENE TEMPLE: I have not had any
5 complaints about them. And where I came
6 from -- from Boston, when I moved here in
7 1970, I never saw one deer. And I consider
8 it a part of the culture of Ithaca that
9 besides the culture that we get from the
10 universities and the people living here, we
11 get wildlife and beautiful geography.
12 And I'm grateful for that, so thank
13 you.
14 SCOTT TEEL: Hello, my name is Scott
15 Teel, I lived in Cayuga Heights until a
16 couple of months ago. The reason I don't
17 oppose it in Lansing is because I lived in
18 Cayuga Heights until a couple of months
19 ago, that's where I lived.
20 Cayuga Heights I always considered a
21 part of Ithaca as a whole, as well, when I
22 lived here. I live downtown now.
23 Something that -- you know, a couple of
24 people have mentioned, you know,

1 sterilization and stuff, something that
2 doesn't seem to be talked about here yet is
3 that there's kind of two different sides
4 here.
5 One of them says we don't want the
6 deer anymore, and we should kill them, and
7 the other side says well, if you think
8 there's too many deer, we're willing to
9 respect what you believe, but we just don't
10 want to do it this way, let's try something
11 else. And one side is willing to
12 compromise, we're willing to meet you
13 halfway to, you know, reduce the number of
14 deer, whether we believe it or not.
15 There are people saying that
16 sterilization doesn't work, well, I have an
17 article from the Suffolk County News, Fire
18 Island, New York a dart program. Everyone
19 from the state parks and the Humane Society
20 said it was a great program and it works
21 fantastic. We can't say that we tried it
22 here, although I believe that some people
23 have, because the vaccine was faulty,
24 that's not really trying it. You might as

1 well use water.

2 You know, what -- when it comes down

3 to being called narrow-minded outsiders,

4 for one thing, I lived here, again, until a

5 couple of months ago, so I've been doing

6 this for a while now. But narrow-minded

7 and misinformation and outsiders and stuff

8 like that, I'm willing to compromise with

9 you. We're willing to say, okay, you don't

10 like this number of deer, let's reduce it.

11 MARY MILLS: 30 seconds, please.

12 SCOTT TEEL: We'll do that for you,

13 but you won't compromise with us, you won't

14 come halfway to us. You will not listen to

15 us, that says that you believe you are

16 right and everyone else that doesn't agree

17 with you is wrong, and you're not willing

18 to budge on it. And that shows a lack of

19 respect that is ridiculous, as far as I'm

20 concerned.

21 I've asked now six times -- this will

22 be the sixth time that I'm asking for a

23 debate, a public debate with me, a polite

24 conversation back and forth. I have some

1 legitimate, honest concerns and questions,
2 and I'd like some answers. You won't
3 answer me here. I'm asking you again now,
4 have a debate with me, do it right here in
5 front of people. I'm not going to be rude,
6 I've always been very nice to you. I've
7 been very polite.
8 MARY MILLS: Thank you, Scott.
9 SCOTT TEEL: Debate me. Oh, if you
10 need tick control, by the way, there's a
11 great product called cedarside.com, it's
12 all natural.
13 GABRIELLE VEHAR: My name is
14 Gabrielle Vehar, and I live in Ithaca,
15 where I moved from Amherst, New York, a
16 town very much like Cayuga Heights, and
17 where I saw the damage that the deer issue
18 brought upon the environment.
19 Amherst started a bait and chew
20 program, because they were concerned with
21 the number of deer/vehicle collisions and
22 not so much their gardens. But the effect
23 was the same kind, and it involved both
24 Amherst council members and households

1 alike spewing the literal hatred at each
2 other. And it already has started to
3 happen here, it will end up in an uncivil
4 war of neighbor versus neighbor if we allow
5 this to happen not just the deer, but our
6 entire community. And it will be an
7 attack, whether the decision is for bait
8 and chew or net and bolt, it will affect
9 the environment in a way that a couple more
10 feet of fencing for a garden could never
11 do.
12 In Amherst, a deer sharpshooter shot
13 out the windows of a residential home while
14 his young boy and his father sat just down
15 below. Amherst is not as densely populated
16 as Cayuga Heights, we have many more
17 undeveloped areas and yet still the bullet
18 went astray. Cayuga Heights has declared
19 that they would use frangible bullets,
20 which explode upon contact, whether in a
21 deer, a window, a pet or in your child. Is
22 this the way we want to live?
23 Do we want our children to grow up
24 seeing the world as a completely hostile

1 environment, where a rifle or an explosive
2 net and bolt gun may go off at any time or
3 where a dead and bloody carcass may be
4 viewed out the window.
5 Our community is supposedly a
6 peaceful, educated one, and so is Amherst.
7 And yet as of last year, the number of
8 deer/vehicle collisions in Amherst was
9 reported to be increasing, despite years of
10 bait and chew, with more than a 1,000 deer
11 killed, vast sums of money spent and a near
12 bunches of tragic accidents, not to mention
13 a bitterly-divided community, and it has
14 still failed to develop a successful
15 strategy for dealing with the deer, because
16 it has still failed to implement
17 cost-effective, non-lethal methods with a
18 proven track record.
19 Is this the environment we want in
20 Cayuga Heights's future? I sincerely hope
21 not.
22 SUSAN LUSTICK: My name is Susan
23 Lustick. I've been a real estate agent and
24 actively involved in Cayuga Heights, and I

1 live in the Village of Lansing.

2 And I just wanted to mention having

3 been a real agent for so long and showing

4 so many houses, I want you to know, don't

5 worry your property values with the deer,

6 because often I show the house, the family

7 looks outside and say oh, honey, look,

8 there's a family of deer in the backyard,

9 and that sells the house. Let me tell you,

10 that sells the house, and then I go, well,

11 wait until you find out.

12 But anyway, the reason I came tonight

13 because I heard about the netting and

14 bolting, it disgusted me. I don't know a

15 whole lot about what's happened in the

16 Village of Cayuga Heights, I haven't read

17 all the documents I was supposed to have

18 read to come to this meeting. All I can

19 tell you is from my heart, that netting and

20 bolting sounds cruel and inhumane. We have

21 a zillion deer that live where we are.

22 They have relationships, they experience

23 fear, and to me, this looks like the

24 ultimate fear.

1 You group together a bunch of deer,
2 you throw over a net, some die, some don't,
3 but in the process, there's tremendous
4 fear. If you need to do something about
5 this problem, I beg you that you do it in
6 the most humane, deermane, whatever word is
7 appropriate way. I like the sterilization
8 technique, I like the dogs off the leash --
9 MARY MILLS: 30 seconds, please.
10 SUSAN LUSTICK: And I just ask you to
11 take that into consideration. Thank you.
12 MARY MILLS: The next four people,
13 please: Lowell Garner, James LaVeck, Neil
14 Golder and Levi Vetez.
15 LOWELL GARNER: Everybody hear me?
16 I'm Lowell Garner, I'm a Village of
17 Lansing resident for 26 years.
18 I am not funded by anybody in this
19 room, and I'm heartbroken over Ellen
20 Cohen-Rosenthal's dog that was injured by a
21 deer, and I want to thank you for letting
22 me speak tonight.
23 The past three years, I've watched
24 silently and with progressively more

1 outrage at each deliberation of the deer
2 remediation advisory committee on the
3 Cayuga Heights board. But now because of
4 the disclosure of the latest proposal and
5 intent, netting and bolting, presented in
6 the environmental impact statement, I am
7 compelled to speak out. There is not
8 adequate time for me to speak in depth
9 about the science here, so I will keep my
10 remarks specifically to the method of
11 slaughter proposed and in the EIS, as well.
12 The net and bolt technique outside of a
13 slaughterhouse lacks ways to minimize fear
14 of the condemned animals, two, lacks
15 effective and predictable restraint and,
16 three, lacks quick and accurate killing
17 that minimizes pain, making the slaughter
18 of these netted deer even more odious.
19 To expand about the fear, there is
20 mainstream neuropharmacology supporting the
21 assertion that fear and stress, and not
22 pain, are the most inhumane of all stimuli
23 we can inflict upon an animal. Even those
24 who aren't limiting -- by eliminating deer,

1 speak out about the increased stress the
2 animals experience with the net and bolt
3 technique.
4 Netted deer will agonize from the
5 most severe form of fear, I can't emphasize
6 this enough. From the time the deer are
7 netted until they are killed, these animals
8 will suffer. In terms of effect --
9 MARY MILLS: -- 30 seconds, please --
10 LOWELL GARNER: I will talk about the
11 EIS. I compared the EIS for Cayuga Heights
12 to a 2009 National Park Study EIS, which
13 had similar conditions for implementation.
14 The NPS EIS had rigorous outcome
15 indicators and at reassessment time
16 intervals that the Cayuga Heights plan
17 lacks, wishful words describing outcomes in
18 the Cayuga Heights' EIS, like potentially
19 and expected, are at the very least, in a
20 point to this community's intelligence.
21 JAMES LAVECK: I've been elected to
22 represent all the outsiders and invaders
23 that are present in our community, and I'm
24 going to speak to the outsiders and

1 invaders from Collegetown, the Town of
2 Ithaca and the City of Ithaca, passed down
3 from Collegetown.
4 Much is made of this division in our
5 community and how separate Cayuga Heights
6 is and how people from other parts of the
7 community have no say and are interfering,
8 and much has also been said about the topic
9 of deer feces. How are these things
10 connected?
11 In the DEIS, it said that deer feces
12 are deposited daily in the local water
13 shed, and essentially, the implication is
14 made that killing all of these deer is
15 going to save our water from pollution.
16 But I'd like to ask if everyone here,
17 how many people in our network of friends
18 and family have suffered from cancer? What
19 causes cancer? Have you ever heard of
20 textavalientchromium? Textavalientchromium
21 was found in the three million gallons of
22 water that Cayuga Heights took the money to
23 process through their sewage treatment
24 plant, which was never designed to process

1 industrial waste, into Cayuga Lake. When
2 environmental attorney, Helen Kowachi, came
3 and brought this to the attention of the
4 trustees, they did not follow up -- a
5 freedom of information request showed that
6 they did not investigate what she said, and
7 they also rescinded -- after she spoke,
8 they later rescinded, a headworks analysis
9 that they had scheduled that would have
10 shown that the water that went through the
11 sewage treatment plant did not have the
12 heavy metals removed.
13 So I ask you, is our heavy metals
14 deposited in the source of drinking people
15 for thousands of people, is that less
16 important -- does that not due any public
17 discussion? Instead, we're going to have a
18 protracted debate on the horrors of deer
19 feces.
20 You know, that's my question, as an
21 invader and outsider from Collegetown who
22 has lived in this town here for 25 years
23 and got my first job in Cayuga Heights.
24 Thank you very much.

1 NEIL GOLDER: So much has been said
2 and will be said, and I don't know that I
3 can really add very much.
4 I'm in favor of a non-lethal, humane
5 technique to reduce the deer population.
6 My name is Neil Golder, and I also live in
7 Collegetown. And I'm just going to read a
8 poem.
9 I've seen their hoof prints in the
10 deep needles and knew that they ended the
11 long night under the pines, walking like
12 two mute and beautiful women toward the
13 deeper woods.
14 So I got up in the dark and went
15 there. They came slowly down the hill and
16 looked at me, sitting under the blue trees.
17 Shyly they stepped closer, and stared from
18 under their thick lashes, and even nibbled
19 some damp tassels of weeds.
20 This is not a poem about a dream,
21 though it could be, this is a poem about
22 the world that is ours or could be.
23 Finally, one of them, I swear it,
24 would have come to my arms, but the other

1 stamped sharp hoof in the pine needles,
2 like the tap of sanity, and they went off
3 together through the trees. When I woke, I
4 was alone. I was thinking, so this is how
5 you swim inward, so this is how you flow
6 outward, so this is how you pray.
7 This not a poem I wrote, it's by Mary
8 Oliver. Thank you.
9 MARY MILLS: The next four people --
10 Lee Vetez, V-E-T-E-Z?
11 The next four people: Ann Serling,
12 Gayle Gray, Jenny Stein, Eric Huang.
13 Go ahead.
14 ANN SERLING: My name is Ann Serling,
15 I live on Cedar Lane. I've attended
16 several of these meetings, and each time, I
17 leave a little more disheartened. I can
18 only describe the initial proposal to bait
19 and shoot deer in the Village of Cayuga
20 Heights a sheer insanity.
21 I shudder to think of the
22 consequences that such an act would inflict
23 on my neighbors and their children. I
24 think, too, of the legal ramifications that

1 such an action could incur, if, God forbid,
2 a child or someone else were accidently
3 killed.
4 Now, you come forward with this next
5 proposal, this egregious plan to net and
6 bolt these creatures. I had to look away
7 from the video of this, and I wonder how
8 any of you could even stop for one moment
9 to consider such an atrocious act.
10 Mayor Supron had said, in a recent
11 newspaper article, that 75 percent of the
12 village supported killing the deer. Please
13 tell us where that statistic came from,
14 because I have talked to people in Cayuga
15 Heights. Not one, I repeat, not one has
16 ever been questioned as to their feelings
17 about these proposals.
18 Those in favor of killing the deer
19 have said that they are violate. For the
20 past 25 years, I have run on Cayuga Heights
21 Road almost every morning. In those 30,000
22 plus miles, I have on several occasions
23 seen deer, and they have seen me. I have
24 never had cause to be fearful. I have

1 never even been approached by these
2 animals. To categorize them as aggressive
3 or violent is a misrepresentation, you're
4 looking at the wrong animal.
5 I would implore this board to make
6 the right decision, and use sterilization
7 or raise the fences. Torture of any
8 species is never the right answer.
9 JENNY STEIN: I had some prepared
10 notes. I'm Jenny Stein, and I have
11 prepared notes.
12 But I can see that -- most of the
13 people -- many of the people are still
14 here, but I think this sort of symbolizes
15 the problem. And with the break, the
16 people could be allowed to leave, and then
17 those of us, who live outside of Cayuga
18 Heights, finally get our chance to say
19 something, and it's as if we don't matter
20 or we're not part of the environment or
21 we're not part of the community culture.
22 I was born in 1964 in Ithaca, New
23 York at the Tompkins County Hospital, which
24 is now Cayuga Medical Center. And, you

1 know, I've never ever, been treated so
2 disrespectfully by fellow citizens, and I
3 would argue that this program has already
4 given the community and the environment,
5 because it's unrecognizable from the
6 environment, that I grew up in, as a child,
7 and I would like you think of the children
8 now who, for ten years, are going to have
9 netting and bolting in our neighbor's yard.
10 The children -- not only in Cayuga
11 Heights, but the entire community, and are
12 we a community? If not, one needs to see
13 Cayuga Heights and make your own place and
14 call it Cayuga Heights, New York on your
15 letterhead or on your letters, I'm sure you
16 receive mail and address it in Ithaca, New
17 York, and please acknowledge that we have a
18 voice.
19 I see no reflection of it in the
20 entire process. I've been to almost every
21 single meeting, all but one meeting, and I
22 have not seen one recognition of the points
23 of view, the people who live one block over
24 the village line. I mean, it's incredible

1 and it's an egregious, egregious problem.
2 And that's why this is such a polarized
3 situation. And we also -- you know, I'm an
4 activist, dreaded word.
5 This community produced this
6 activist. So if you think I'm so
7 repulsive, you know, you need to think
8 about --
9 MARY MILLS: -- 30 seconds, please --
10 JENNY STEIN: -- who invaded and took
11 over our community. That's how I feel, I
12 think I've lived here longer than everybody
13 but Hazel Brampton or maybe -- I don't
14 know, maybe there's a couple others.
15 So I'm like the deer, I've been here
16 a long time, and I hope you'll respect me
17 as part of your environment.
18 ERIC HUANG: My name is Eric Huang,
19 and I'm a resident of Ithaca.
20 There's been repeated mention of
21 extern for biodiversity with great
22 attention paid to songbirds and
23 wildflowers. However, biodiversity is a
24 concept that encompasses much more than a

1 handful of species. It addresses all
2 species in the ecosystem; animal, plant,
3 those that can sing and those that cannot.
4 I had previously brought to the
5 attention of the trustees research that
6 shows reducing deer can lead to a reduction
7 of reptiles, amphibians and vertebrates
8 and, crucial to the health of any
9 ecosystem. Yet the DEIS shows that no
10 consideration has been given to these
11 species. Even if for the moment we just
12 consider birds, research has shown that
13 reducing deer can lead to the resumption in
14 ground nesting birds.
15 Other research has shown significant
16 decreases in bark origin birds, such as the
17 wood peckers. Yet another study has shown
18 decreases in species, such as blue jays,
19 northern cardinals and California --
20 Carolina wrens. The point is, as one
21 researcher concluded, management actions
22 taken to regulate deer density could have
23 the unintended affect of reducing local
24 animal diversity.

1 It is also revealing that requests
2 under the freedom of information law for
3 documentation of consideration of
4 biodiversity, and the approval for
5 development projects has returned zero
6 results to date.
7 MARY MILLS: 30 seconds, please.
8 ERIC HUANG: Therefore, if
9 biodiversity is indeed a sincere concern
10 for the trustees, I call on them to perform
11 the necessary field studies to measure and
12 quantify biodiversity in the village before
13 proceeding with this environmentally
14 impacting plan.
15 MARY MILLS: Marion Deats?
16 MARION DEATS: Thanks for giving me
17 the opportunity to express my sincere
18 thoughts, too. I'm a 38-year Ithaca
19 resident.
20 I live near Buttermilk Park. I think
21 that this -- the deer overpopulation
22 problems -- or issue is something that is
23 not just contained in Cayuga Heights. I
24 was recently diagnosed with Lymes disease.

1 I walk in Buttermilk all the time, and I
2 have dogs, so my heart goes out to the lady
3 whose dog was hit.
4 That being said, I really feel that
5 in a humane -- in a society that is a
6 caring and progressive forward looking
7 society, we need to use the resources that
8 we have.
9 I think that Cornell -- I just don't
10 understand why every avenue isn't looked
11 into through Cornell to research. We
12 talked about sterilization, are there other
13 avenues, are there other contraceptive
14 avenues that could be researched?
15 Why isn't there -- even -- we have
16 the perfect opportunity here to be in the
17 vanguard of research for sterilization and
18 mitigation. Cornell has a living
19 laboratory all around here. Cornell, as
20 being in the vanguard of veterinary
21 science, what an opportunity, and to -- to
22 research this and to put into effect some
23 of the sterilization and the contraceptive
24 research and practice that can be used.

1 Yes, there is perhaps an abundance of
2 deer. I am phobic about hitting a deer
3 with my car, for the two reasons, the two
4 obvious reasons; hurting a deer and hurting
5 my car. But why can't we move forward in
6 as much in a humane and as much of an --
7 MARY MILLS: -- 30 seconds, please --
8 MARION DEATS: -- intelligent way as
9 we can? I advocate even how -- what a
10 great opportunity to be in the
11 international limelight with research for
12 cutting edge -- cutting technologies on
13 humane and non-lethal ways of reducing deer
14 population.
15 Has every avenue been explored?
16 That's my question.
17 MARY MILLS: So that was the list
18 that people had signed up for. Are there
19 any other people that would like to address
20 their opinions and views?
21 Please say your name for us.
22 VICTORIA CAMPBELL: My name is
23 Victoria Campbell, I'm a resident of
24 Ithaca.

1 Really, there's so many things I
2 could say, but just to keep it short and
3 simple, I've repeatedly heard and, you
4 know, the research that I've done on the
5 situation, I fail to see a really good
6 group of science. I feel like there's a
7 lot of biological questions that have not
8 been answered.
9 What is the deer population, and what
10 is the biodiversity number of different
11 species, how will eliminating deer effect
12 that? What about the corridors that the
13 deer should be using going in and out of
14 Cayuga Heights? Why are they not -- if
15 they're starving, why aren't they moving
16 on?
17 Those are really important questions.
18 If those are not addressed before any
19 action is taken, the whole deer population
20 might come up again in another ten -- five,
21 ten years. So I think those are really
22 important things, and I think money would
23 much better be used towards looking at some
24 of these biological studies. Thank you.

1 MARY MILLS: Are there any others?

2 MAYOR SUPRON: If there are no other

3 comments, we'll ask one more time if any

4 residents or non-residents wish to speak,

5 and if not, we'll close the public hearing.

6 Thank you very much for coming.

7

8 * * *

9

10 C E R T I F I C A T I O N

11

12 I hereby certify that the proceedings and

13 evidence are contained fully and accurately in the

14 notes taken by me on the above cause and that this

15 is a correct transcript of the same to the best of

16 my ability.

17

18

19 Marisa Nold

20 _____

21 Marisa Nold

22

23

24

Letter 1

DAVID T. BARR
3 TRIPHAMMER LANE
ITHACA, NEW YORK 14850

10/10/09

"non-toxic"

BUT ILLEGAL

Attn: Jim Gilmore, Mayor
Cayuga Heights, New York 14850

RE: BAIT AND SHIP VS BAIT AND SHOOT

Several Saturdays ago, Joy and I had the pleasure of sitting in the Ithaca College President's box at the football game with Widener of PA.

Seated next to me was our state senator, George Winner of Elmira. We had an in-depth discussion about the possibility of getting a special dispensation from the Conservation Department to Bait/Net and transport by cattle truck, our deer to the Adirondacks, Catskills or elsewhere.

George was very receptive to the possibility of acquiring this relief, but the mayor has to get in touch with him!

This humane solution should calm the waters in the Heights and allow us to go forward without complaint or demonstration!

Respectfully submitted,

David and Joy Barr
3 Triphammer Lane
Ithaca, NY 14850

P.S. THERE ARE MANY DEER GAME FARMS AND HUNTING PRESERVES ACROSS THE STATE AND COUNTRY THAT WOULD BE VERY HAPPY TO RECEIVE OUR DEER!!!

12/7/10

Village of Cayuga Heights
MARCHAM HALL
836 HANSHAW ROAD
ITHACA, N.Y. 14850

Telephone
607-257-1238

Office Hours
9 A.M. - 4 P.M.

Honorable George H. Winner, Jr., New York State Senator
New York State Senate, 53rd District
228 Lake Street, P.O. Box 588
Elmira, New York 14902

Dear Senator Winner, 10/15/09

On behalf of my neighbors and constituents, and at the request of my friends Dave and Joy Barr, I respectfully make the following request:

Background Information:

1) The Village of Cayuga Heights, adjacent to Cornell University in the Town of Ithaca, has been discussing what to do about our deer overpopulation problem for over a decade. Plans were implemented at the turn of this decade that solely included sterilization to lower herd population. The DEC, Cornell University Veterinary School, Village of Cayuga Height's Administration and Residents all corroborated. It failed to have an impact at great expense.
2) The administration and newly elected officials have decided to tackle this issue again, and we've come up with a plan to booth sterilize and euthanize the deer to a more natural population, such as those in rural settings. The problem with this plan is it's very costly to our roughly 4.000 residents, creating a tax burden of approximately 5%, and a cost of about $900,000 over 10 years.
3) We would intend to turn over all harvested deer venison to the Southern Tier Foodbank
4) We are under pressure by groups largely living outside our municipality, not to harm or affect any of these deer. They have been fighting us at each step of the way, and PETA and Defenders of Wildlife may be involved, as well as one very wealthy individual living in our Village allegedly underwriting almost full-time local activists. We are concerned with the ongoing legal expense and time involved with combating this movement, although we are determined.

(Page two/Senator winner letter)

Our Request:

We would like a "SPECIAL DISPENSATION TO TRANSPORT A MAJOR PORTION OF OUR DEER SAFELY ELSEWHERE TO THE CLOSEST NYS/DEC SANCTIONED LOCATION"

We understand current DEC regulations do not allow transporting deer by truck from one location to another, due to concerns such as:

a) It could spread wildlife disease if unhealthy deer are put in other environments. WE WOULD ONLY SHIP HEALTHY ANIMALS.
b) Deer may not be able to feed themselves in unknown environments. WE SUGGEST TRANSPORT AT BEST TIME OF YEAR, IE SPRING.
c) Encroaching new populations deposited would upset deer populations natural to existing environments. DEER POPULATIONS ALREADY UPSET HERE.
d) Some deer would be injured during capture and transport. WE WOULD ENDEAVOR TO BE AS SAFE AND HUMANE TO THE ANIMALS AS POSSIBLE.

I EMPHASIZE, this notion of transport is not sanctioned by my Board as they have cast it off as "illegal", but at one of my more prominent constituent's suggestion, I appeal to you Senator Winner, to consider this a special situation allowing for the possibility of a "Special Dispensation" under your and the DEC's sanction.

I spoke with your office recently and at their suggestion, I send this request for your consideration. This is not a perfect solution. Should it be granted under specific guidelines, we would still need to enact a long-term solution, but my and my constituent's hope is that transport would allow us to preserve maintenance of a lower deer population, lessening the need to euthanize as a method to bring our herd numbers down. Any action we take will require the Village of Cayuga Heights Trustee's support, which I would seek if you see a possibility here.

Thank you for your consideration and vigilance in Albany!

Sincerely,

Jim Gilmore, Mayor

cc. Dave & Joy Barr, Village of Cayuga Heights

Letter 2

Public Meeting on Deer- 12/6/2010

Monday, December 6, 2010 4:35 PM

From: "Ron Bors" <ronbors@yahoo.com>
To: "Ron Bors" <ronbors@yahoo.com>

MY NAME IS RONALD BORS, AND I HAVE LIVED AT 121 TEXAS LANE IN THE VILLAGE FOR 35 YEARS.

I HAVE BEEN GREATLY CONCERNED ABOUT THE CURRENT ECONOMIC DOWNTURN IN OUR ECONOMY, AND PARTICULARLY ABOUT THE HIGH UNEMPLOYMENT RATE. HOWEVER, WHEN I OPENED MY MAILBOX A FEW DAYS AGO, I FOUND AN 8 PAGE NEWSLETTER DEALING WITH THE SUBJECT OF TONIGHT'S MEETING. SO YOU CAN IMAGINE MY RELIEF WHEN I REALIZED THAT THOSE PAID POLITICAL ACTIVISTS ARE STILL ON THE PAYROLL OF A CERTAIN WEALTHY CAYUGA HEIGHTS FAMILY.

WHEN I MOVED TO THE VILLAGE, WE DID NOT HAVE A DEER PROBLEM. MY FAMILY HAD A WONDERFUL VEGETABLE GARDEN, AND WE WERE ABLE TO FEED OUR CHILDREN WITH MANY VARIETIES OF NUTRITIOUS HOMEGROWN FOODS. AS THE DEER HERD SLOWLY INCREASED, WE FOUND OURSELVES SHARING OUR VEGETABLE GARDEN. AS THE DEER HERD GREW TO AN UNMANAGEABLE LEVEL, WE SADLY HAD TO ABANDON OUR VEGETABLE GARDEN.

I WOULD LIKE TO COMMEND THE CURRENT MEMBERS OF THE BOARD OF TRUSTEES, FOR CONTINUING TO PURSUE A RATIONAL COURSE OF ACTION WITH OUR GROSS OVERPOPULATION OF DEER. YOU KNOW FROM THE PAST TWO VILLAGE ELECTIONS, AND FROM ALL OF THE PUBLIC MEETINGS, THAT A SUBSTANTIAL MAJORITY OF VILLAGERS ARE IN AGREEMENT WITH THIS PROPOSED ACTION.

PLEASE HOLD FIRM IN YOUR RESOLVE TO BRING THE DEER HERD BACK TO A REASONABLE SIZE.

At a meeting of the village trustees, Professor Paul Curtis, the advisor to the Deer Remediation Committee, said, "If there weren't too many deer in the village we wouldn't be having this meeting." That is true tonight, and it defines the problem the trustees are working to solve.

As you know, the trustees recommended reducing the number of deer in Cayuga Heights by a phased program of sterilization and culling. The dEIS does a very good job of commenting on this plan. I urge you to read it if you haven't already.

In contrast, the so-called "alternatives" put forward by caygadeer.org do not address the overpopulation problem and would make it worse. They clearly want the village to do nothing, and to let the environmental damage continue until the herd size is limited by disease and starvation.

Cayugadeer.org has engaged in a scare campaign based on the use of firearms to cull the herd. But when a culling technique that does not require firearms is mooted, they immediately denounce it. This proves that their sole interest is the deer and not the welfare of people who live in the village.

They seem incapable of honest and rational debate. They have waged a campaign of defamation and demonization of the village trustees. To conclude I want to propose a round of applause for our Mayor and trustees for their tenacity and courage in dealing with the deer issue.

Peter S. Bottorff
2109 N Triphammer Road
Cayuga Heights

Mary Mills

From: Markus [copendango@yahoo.com]

Sent: Friday, December 03, 2010 4:52 PM

To: Mary Mills

Subject: Deer solution

My name is Markus and i'm an avis outdoorsman. I have been reading about the ongoing deer problem you are facing. I am from Painted Post NY, and in Erwin NY we face the same problem. I have moved to Spencer recently. I hunt on 130 acres in Candor. I have been hunting all my life and I do know that your net and kill procedure will in doubt anger most residents. I know you are going to do it any way you feel fit but take a look at how Erwin NY does it. They do a lottery and draw in a number of Archery hunts which DO limit the herd on a yearly basis. It is an effective way to manage the herd without disrupting the community. Sign me up for the first hunt. Please. I could preobably take care of the herd within a few weeks, just saying.

Michelle Poppensiek

From: walter gates [waltercgatesjr@yahoo.com]
Sent: Saturday, December 04, 2010 11:27 AM
To: Mary Mills
Subject: 12/6 hearing

Deer are not present for your viewing pleasure; they are not little 'Bambi' creatures. Over population of deer can cause accidents, carry disease, cause starvation and slow death, ruin natural vegetation, and strip natural resources. With no natural controls for excess population [hunting, bobcat, cougar] that 'ideal' population should be controlled by harvesting by sharp-shooters for facilities to feed hungry people in need.
Lorna J Gates
429 Savage Farm Drive

Mary Mills

From: walter gates [waltercgatesjr@yahoo.com]
Sent: Saturday, December 04, 2010 11:31 AM
To: Mary Mills
Subject: Dec 6 public hearing

I support any proposal that will lead to a substantial reduction in the number of deer in Cayuga Heights. I have seen no suggestion of collecting new-born and putting them down; I wonder why.
walter gates
429 Savage Farm Drive

Letter 7

Mary Mills

From: Richard Hale [rich@richhale.us]
Sent: Wednesday, December 08, 2010 4:25 PM
To: Mary Mills
Subject: Deer remediation program

Mayor Kate Supron:

As we were unable to attend the public hearing on Dec. 6, my wife and I would like to fully endorse the proposed program to reduce significantly the deer population in Cayuga Heights, by whatever means is most appropriate and effective. Please let us know if there is anything we can do to further support this action.

Sincerely, Richard and Janet Hale, 153 North Sunset Drive

Mary Mills

From: Thomas D tom Hall [hallfrog2@hotmail.com]
Sent: Tuesday, December 07, 2010 9:36 AM
To: Mary Mills
Subject: Comment on DEIS draft report

From: Thomas D. Hall
Sent: Tuesday, December 07, 2010, 9 AM
To: 'mmills@cayuga-heights.ny.us'
Subject: DEIS comment

Dear Ms Mills,

Prior commitments prevented me from attending the Dec. 66 meeting on the Deer Management Plan Draft Environmental Impact Statement. Please share my comments with the Village Trustees and Mayor. I have been a resident of Cayuga Heights for 11 years. I have read the DEIS and find that it is a helpful assessment of our situation in the Village. I found it well executed and clear. I hope the final EIS will build on this excellent and appropriate report.

I encourage the CH to proceed with the Deer Management Plan and to move as quickly as possible toward reducing the herd by 90% to bring the herd down to local carrying capacity level.

Below I explain why I hold this view, VERY STRONGLY, and offer some rebuttals to the misguided resistance from "Ithacans for Safe, Ethical and Rational Approaches...."

I have deer in my yard regularly. Over the years I have had to continually "upgrade" so-called "deer resistant" plants. Still, each year I find deer both eating more of existing plants, and increasingly eating plants that "deer do not like." The "do not like" category comes from both nursery people and authoritative gardening books. The continual intensification of deer eating nearly all my plants is very frustrating AND expensive. I have had to build more and more "cages" to protect plants, use more deer sprays, and replace plants, and most frustrating, give up on growing some plants altogether. In recent years, I have had to reinforce cages because hungry deer have knocked cages down to get at plants.

But the DEIS highlights much more serious problems than my personal inconvenience. Every year the deer are smaller, more ragged in appearance, and slower toward the end of winter. Their food supply is dwindling. This is why they are eating plants that "deer do not eat." While frustrating and expensive, this is not the only problem. As the report notes deer have exceed the carrying capacity of natural (and planted) environment of CH. They are increasingly destroying the local ecology, endangering local, rare species, and generally reducing botanical diversity, and destroying habitats of other animals, including birds.

I also have observed that deer are becoming less afraid of humans and more aggressive. Ten years ago simply knocking on a window or making a noise or opening the garage door would scare them away. Now I need to go outside run at them or throw something at them, or when it is not cold "shoot" them with a squirt gun with a 30 foot range. Even then it requires more effort to drive them away.

The habituation to humans and increasing scarcity are behind the attacks on dogs recently reported in many sources.

"Ithacans for Safe, Ethical and Rational Approaches...." recently flooded mailboxes with an 8 page diatribe against deer herd reduction. This mailing angers me for several reasons. Most notably they do not identify who they are, nor do they do so on their web site. What are they hiding? Do they own stake in deer repellent and fencing industries?

At best their arguments are misguided, at worst downright harmful.

Start with a key point from the DEIS: doing nothing will only insure more conflict, more damage, and more dead animals, both deer and other animals whose forage the deer are destroying.

Their argument about costs is nonsense. Those arguments do no include the cost to home owners in protecting their plants. If I take about 10% of what I spend annually on protection from deer damage and multiply by about 25% of the households in CH the total costs exceeds what the pamphlet claims the cost of reduction will be. I have noticed on walks around the village, more and more people are putting up cages and many fences. Thus my assessment, if anything, severely understates the costs of deer damage for local property owners. The latter has given rise to further controversy. Add to this the deterioration of quality of life in CH as more and more people are forced to give up gardening or end up in legal wars with CHV over fencing regulations. All together how do we measure the cost of a severely degraded ecology and loss of plant and animal populations that many residents appreciate? The costs incurred by citizens to protect their property are, in fact, a hidden tax. This tax is far higher than the paltry sum the deer reduction will cost. The rise in taxes would be cheaper!

The "Ithacans for Safe, Ethical and Rational Approaches" folks, unwittingly, are undermining their own goal of protecting deer. As the ecology degrades more and more deer will starve over the winter. If deer are going to die, then a quick method is far more humane that slow starvation.

Starvation leads to "desperation" or aggressive food seeking. There will be more deer – auto encounters. How long before there is a fatal – to human(s) -- accident? How humane is it to kill deer with an auto – not to mention the danger and costs of such encounters? How long before deer move from attacking dogs to attacking small children who are typically attracted to "cute" animals?

What about the degradation of the local ecology and loss of plants and animals. I, like many people in CH, have bird feeders. I do this both for personal satisfaction, but more because many bird populations are in severe decline. As Cornell Laboratory of Ornithology (and many other scientific organizations) have documented, a major cause of bird population decline is loss of habitat. Deer are NOT an endangered species, they ARE and ENDANGERING species.

Given all the harm and anger, how long before some resident, out of frustration, take matters into her or his own hands and starts killing deer with poison, traps, bow & arrow, or guns? All this is against the law, but if the CHV does not do something, someone will be pushed beyond endurance. Such action will have severe costs in danger, in lowered quality of life, and vast increases in costs to law enforcement.

To sum up: The issue is not whether to reduce the deer herd, but how to do so in the most humane way possible. I strongly prefer the "net & bolt" method, with a follow up to dress the meat and donate it to local food banks. I recognize that the food bank option faces some very complex legal and health issues. But if possible it would put the culled deer to good use.

Net & bolt is far more humane than starvation, death by auto, or murder by irate citizens. Also, and not trivially, the quality lives of the remaining deer would be vastly improved, and CH's ecodiversity maintained.

Discussion has gone on long enough, over 10 years! The time for action is now! Please move forward on deer herd reduction with all due deliberate speed.

Sincerely
Thomas D. Hall

Thomas D. [tom] Hall Ithaca, NY Cayuga Heights resident & taxpayer

December 6, 2010
To: Trustees of Cayuga Heights:
Re: DEIS; Deer "Management" Plan

There has been repeated mention of a concern for biodiversity with great attention paid to songbirds and wildflowers. However, biodiversity is a concept that encompasses much more than just a handful of species. It addresses all species in an ecosystem, animal, plant, those that can sing and those that cannot.

I have previously brought to the attention of the trustees, research that shows reducing deer can lead to a reduction in reptiles, amphibians, and invertebrates, members crucial to the health of any ecosystem. Yet the DEIS shows that no consideration has been given to these species.

Even if for the moment we just consider birds, research has shown that reducing deer can lead to a reduction in ground nesting birds. Other research has shown significant decreases in bark-foraging birds such as woodpeckers. Yet another study has shown decreases in species such as Blue Jays, Northern Cardinal, and Carolina Wren when deer are reduced.

The point is, as one researcher concluded: "*management actions taken to regulate deer densities could have the unintended effect of* ***reducing*** *local animal diversity.*"

It is also revealing that requests under the Freedom of Information Law for documentation of consideration of biodiversity in the approval of development projects, has returned zero results.

Therefore, if biodiversity is indeed a sincere concern for the trustees, I call on them to perform the necessary field studies to measure and quantify biodiversity in the village before proceeding with this environmentally impacting plan.

Eric Huang, Ithaca

Greenwald K, Petit L, and Waite T, 2008. Indirect effects of a keystone herbivore elevate local animal diversity. J. Wildl Manage 72(6):1318-1321.

Casey D, Hein D, 1983. Effects of heavy browsing on a bird community in deciduous forest. J. Wildl. Manage. 47: 829-836.

McShea WJ, Rappole JH, 2000. Managing the abundance and diversity of breeding bird populations through manipulation of deer populations. Conserv. Biol. 14:1 161-1 170.

McShea WJ, 200. The influence of acorn crops on annual variation in rodent and bird populations. Ecology 81: 228-238.

A. Rutherford et al., 2010. Regional-Scale Assessment of Deer Impacts on Vegetation Within Western Connecticut, USA. School of Forestry and Environmental Studies, Yale University. J. Wildl Manage 74(6):1257-1263.

Mary Mills

From: Jean Poland [jp126@cornell.edu]
Sent: Monday, December 06, 2010 3:33 PM
To: Mary Mills
Subject: DEIS comment

Dear Ms Mills,

I am unable to attend tonight's hearing on the Deer Management Plan Draft Environmental Impact Statement. Please share my comments with the Village Trustees and Mayor.

I am a resident of Cayuga Heights. I have read the DEIS and find that it is an accurate and helpful assessment of our situation in the Village. I hope the final EIS will build on this excellent and appropriate report.

I have deer in my yard regularly, sometimes it seems hourly. They are indeed a nuisance and I have done all I can to use "deer resistant" plants. When I first moved to Cayuga Heights that worked. As the herd increased, the deer expanded what they would eat, most likely of necessity. That the deer eat all my plants is very frustrating, but the DEIS highlights more serious problems. I have observed over the past several years that the deer are smaller, more ragged in appearance, and slower toward the end of winter. Their food supply is dwindling.

A personal encounter – during a snowstorm a deer tried to come through my basement window, I think to eat a plant that was in the window.

We are all aware of the stories of deer attacking dogs and, I fear soon, children.

I encourage you to proceed with the Deer Management Plan, and if possible, to move faster on the culling aspect, to protect our environment and ultimately the people who live in and drive through Cayuga Heights.

I know this issue is controversial and takes much personal energy. Thank you for dealing with it.

Jean Poland

Mary Mills

From: Charlotte Shull [Roonie35@aol.com]
Sent: Sunday, December 05, 2010 10:37 PM
To: Mary Mills
Cc: Beatrice Szekely
Subject: Proceed with Deer Remediation Plan

To: The Cayuga Heights Village Board via Village Clerk of Cayuga Heights

From: Charlotte and Arthur Shull, 110 Highgate Place

We are strongly in favor of implementing the plan to reduce the herd of deer in our village.

Thank you for all the effort Involved in solving this village problem.

Mary Mills

From: widding@aol.com

Sent: Sunday, December 05, 2010 10:03 AM

To: Mary Mills; Beatrice Szekely

Subject: Proceed with Deer Remediation Plan

To: The Cayuga Heights Village Board via Village Clerk of Cayuga Heights

From: Fred and Mary Widding, Cayuga Heights residents since 1968

We fully support the findings of the environmental impact statement prepared by Tim Miller Associates which concluded that there are no negative impacts from reducing the herd of deer in OUR village.

Please proceed with plans to cull and sterilize the herd of deer in appropriate numbers which will restore balance to our village's ecosystem.

Please consider the opinions from those of us who are village residents as having more decision bearing weight over those individuals and groups living outside of our village.

We thank you and the Deer Remediation Advisory Committee for your problem solving thoroughness resulting in a reasonable Deer Remediation Plan to restore our village's quality of life and safety.

HARVARD SCHOOL OF PUBLIC HEALTH

Department of Global Health and Population

To: Village of Cayuga Heights Board of Trustees

December 14, 2010

Subject: Draft Environmental Impact Statement – Cayuga Heights Deer Management Plan

Dear Board of Trustees,

I am a scientist and teacher at the Harvard School of Public Health in the Department of Global Health and Population.
http://www.hsph.harvard.edu/research/tamaraawerbuchfriedlander/index.html.
One of my main contributions to science is my research on the ecology of the vector that transmits the Lyme disease bacteria, which appeared in peer reviewed publications in scientific journals.
The essence of my findings is also described in the home page of my school:
http://www.hsph.harvard.edu/news/features/features/kiling-deer-not-answer-reducing-lyme-disease.html.

After reading your DEIS pertaining to potential outcomes of management programs to reduce tick populations by killing deer, I was surprised at the lack of a scientific basis, moreover at the incorrect assumptions about the relationship between deer and the so called "deer tick"; the scientific name of blacklegged ticks is *Ixodes dammini*, the name given by Dr. Andrew Spielman, a colleague in our school, who discovered that this is the vector of the disease.
The life cycle of the tick is quite complex, it is only The adult tick that takes a blood meal from deer, lays eggs and then dies. Deer do not carry the agent of Lyme disease; the white-footed mice do.

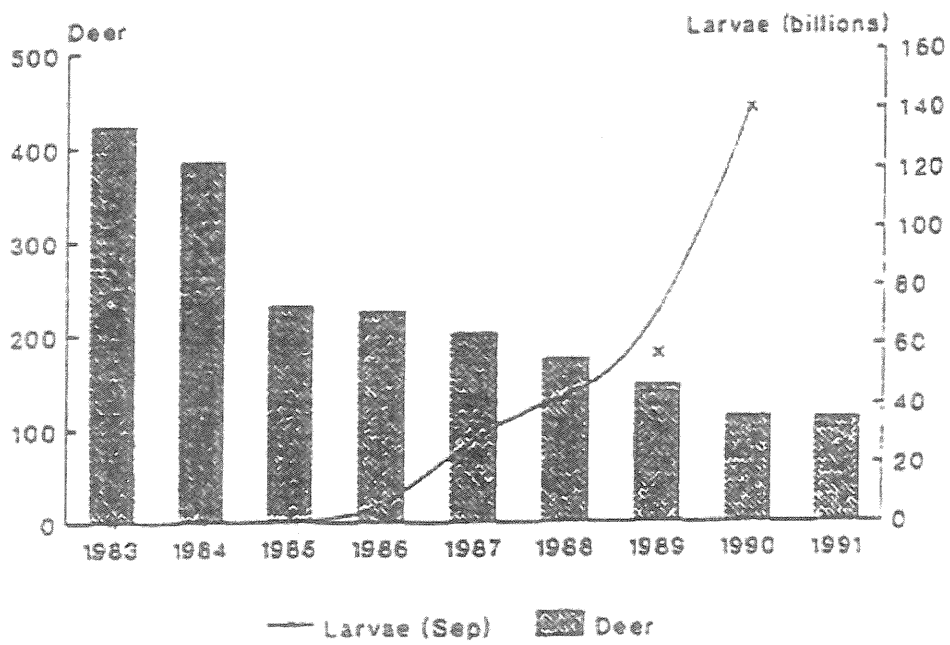
In Crane Beach [in Ipswich, MA], where I conducted my study, people thought that if they killed deer they would reduce the number of ticks, and thereby control Lyme disease. Deer were reduced [from around 400 in 1983 to just over 100 in 1991], but Lyme disease kept

665 Huntington Avenue Boston, Massachusetts 02115 Fax: 617 432-6733

growing. The question was why? We killed deer but people still got Lyme disease.

So I did a study using a mathematical model to capture the life cycle of the tick. Because the ecology of Lyme disease is so complex, it is very hard to look at deer and tick, mouse and tick, one by one. You have to link all the factors together in a way that lends itself to mathematical analysis.

The following figure shows the reduction in deer number throughout the years, and the line shows the increase in larvae ticks in Ipswich, Mass.



The larvae pick up the infection from infected mice, and those that do not die, molt into infected nymphs which are the ones that transmit the infection.

So there is **NO LINEAR** correlation between killing deer and the tick population.

On Monhegan Island it was possible to get totally rid of the tick population because **ALL** deer were killed and no other animals were there to take over the empty niche left by the deer to support the adult tick.

So in summary, there is NO scientific justification for a deer killing program in your community of Cayuga Heights, NY. There are certainly alternative ways for reducing the risk of Lyme disease.
As we saw using data from Ipswich Mass. where there was an attempt to reduce the risk of Lyme disease by killing deer over a period of about ten years , I was able to show with a mathematical model why this intervention **did not** work.

Dr. Tamara Awerbuch
Department of Population and International Health, Harvard School of Public Health
655 Huntington Ave
Boston MA 02115
Phone: 617-432-2505
Fax: 617- 432-6733

Mary Mills

From: Kristina M. Baier [kmb255@cornell.edu]
Sent: Monday, December 13, 2010 2:55 PM
To: Kate Supron; Mary Mills
Cc: Lisa M. Narloch
Subject: Comment on DEIS for Cayuga Heights' Deer Management Plan
Importance: High

Dear Mayor Supron and Trustees,

We were absolutely horrified to learn that Cayuga Heights is considering net-and-bolt as means of controlling the deer population. This is course of action is inhumane and illegal. We are opposed to your deer-killing program. We believe that it will have a negative impact on not only Cayuga Heights, but also the greater Ithaca/Tompkins County community, and that it will degrade our traditions of rational public policy and non-violent conflict resolution. My family moved from Baltimore to Ithaca precisely to get away from all of the violence and the crime. We never thought that we would see this level of inhumanity here in our beloved Ithaca!!! We are appalled that net-and-bolt is even a topic being debated in this community. I encourage you to reconsider and to entertain a more feasible option such as the use of fences.

I will leave you with these two final thoughts:

> *"I hold that the more helpless a creature, the more entitled it is to protection by man from the cruelty of man."*
> *"The greatness of a nation and its moral progress can be judged by the way in which its animals are treated." -- Gandhi*

Regards,

Kristina Baier and Lisa Narloch

Public Hearing on the DEIS, 12/6/10
Angie Baker, Ithaca

In a recent interview with WSTM, Mayor Supron made statements designed to continue to deflect the truth about how unnecessary, unfounded and extreme this plan to torture and kill the deer of Cayuga Heights is.

She said, "There are people who say, well, the deer were here first." This objection is one of the least voiced.

She went on to say, "But we live in a managed ecosystem, and therefore when it gets out of balance, we have to manage the ecosystem." What Mayor Supron and the trustees refuse to consider is that humans are also part of that ecosystem. Yet, responsibility for this so-called deer problem is being placed only on the deer.

Mayor Supron concluded: "And we just have too many deer." Show the data behind that statement. There is no data to back that statement up. There's only a supposition, and that put forth by Paul Curtis, who stands to benefit financially by enactment of this deer remediation plan.

Paul Curtis has also co-authored with White Buffalo, a company whose sole service is the slaughter of wildlife, and who the Cayuga Heights trustees are looking to to execute their plan, a publication entitled "Managing White-Tailed Deer in Suburban Environments — A Technical Guide". In this guide, DeNicola, the owner of White Buffalo, and Paul Curtis, et al, in effect, disparage all but execution of deer as the most optimal means of control.

Mayor Supron, and those who would put such an unnecessary plan as this into effect, are then, being lead down this path of violence, carnage and community division by a group of opportunistic people, who of course will provide all the assurances the board would like to hear.

Along the same lines, the document recently produced by the Miller Consulting Group also contains no definitive data, and is, in fact, basically nothing more than a duplication of the narrative already put forth by the trustees.

Another glaring issue with this plan is the complete lack of diversity among those who sat on the Deer Remediation Advisory Committee (DRAC). The members of that committee, to a one, were, from the start, unanimously in favor of killing the deer, unanimously in favor of excluding all other options.

There are many non-lethal, cost-effective, and successful options the trustees refuse to consider, implement or allow.

Mary Mills

From: Edita [edita@friendsofanimals.org]
Sent: Wednesday, December 15, 2010 1:09 PM
To: Mary Mills; Kate Supron
Cc: 'Lee Hall'
Subject: Friends of Animals' Comment for the Record on the DEIS for Cayuga Heights' Deer Management Plan

Via e-mail: clerk@cayuga-heights.ny.us, mayor@cayuga-heights.ny.us

Cc: Lee Hall, Vice President – Legal Affairs, Friends of Animals leehall@friendsofanimals.org

Subject: Friends of Animals' Comment for the Record on the DEIS for Cayuga Heights' Deer Management Plan

Date submitted: 15 December 2010

To Mayor Supron and the Cayuga Heights Village Trustees,

I am the New York Director of Friends of Animals, an international advocacy group founded in New York. Since 1957 we have been working to raise community awareness regarding the environmental, ethical and psychological benefits and the ethical importance of living in respectful harmony with the rest of the biocommunity of which we humans are, ecologically speaking, a part. I write on behalf of Friends of Animals, and especially our thousands of members in New York State, to oppose the proposal in full and its components: killing, surgical sterilization, and "ongoing maintenance" through further "further sterilization and culling" of the community of deer in Cayuga Heights.

The estimated 160-200 white-tailed deer in Cayuga Heights belong to an indigenous species with whom the human community can and should co-exist.
It is ecologically irresponsible for leaders of a community of 3,273 people to claim that only 30 deer or less should be allowed to live in their native habitat.

The possible unnatural social and biological effects of the sterilization scheme are unknown. We do know that deer-control generally drives a kind of evolution in reverse, contradicting the natural survival advantages of the strongest, healthiest deer. Nature itself balances deer herds best, according to available food, terrain, and weather, as well as the presence and health of carnivorous animals. If nature allows for the presence of 160-200 deer in Cayuga Heights, then that is the number of deer the terrain can suitably sustain. That deer thrive in Cayuga Heights is a benefit, not a problem.

There is, however, a problem involving suburban development. The impulse to blame other species for problems they didn't create should be challenged, for the real problem in Cayuga Heights, as in many communities, is one of our own making as we usurp more natural spaces through residential, recreational, and commercial development, causing animals to concentrate into increasingly smaller areas.

Moreover, if there is tension related to deer in Cayuga Heights, the best answers begin by acknowledging that hunting (which generates biological responses that increase deer births) as well as the treatment of natural predators as nuisance animals do not reduce that tension.

Controversially--and, we believe, incorrectly--the Draft Environmental Impact Statement cites a lack of hunting in residential areas as a contributory factor to a thriving deer population.

A reframing of the issue is necessary. We urge you to implement changes in the community that would inform residents and lessen any perceived conflicts with deer. Educating landowners as to some simple tips is sensible and can have long-term positive results. Examples: planting daffodils rather than azaleas; planting high bushes to decrease visibility into gardens.

Helpful changes might also include revisions to the current fencing ordinance so that residents can protect their gardens from deer if desired. By restricting residents and connecting itself with a plan that would allot substantial payments to an animal-control firm, Cayuga Heights would continue to exaggerate the perception of a conflict in need of buying a solution.

Most of all, cultivating respect for nature is urgently needed in Cayuga Heights. The idea of deer as a problem needing draconian, expensive solutions is sweeping the country and needs to be challenged itself.

Anthony DeNicola, the president of a firm that carries out deer culling activities, downplays the safety issues surrounding deer-control plans.
Anthony DeNicola has a vested interest in deer control; the name Anthony DeNicola appears in many similar Draft Environmental Impact Statements (including plans developed in jurisdictions outside of New York). The "personal communication" of Anthony DeNicola to Tim Miller Associates, the firm which prepared the Impact Statement, should be seen in light of this business owner's interests.

The DEIS outlines a morally and ecologically unjustifiable course of action, one that undermines the enlightened reputation of Cayuga Heights. This plan for aggressive domination of the deer has a degrading effect upon the entire community, as both a practical matter in terms of physical safety for children and others, and psychologically. Cayuga Heights should resist the plan to codify a slaughter and near extinction of one community of indigenous animals that many people in the Cayuga Heights area and beyond, including our New York members, respect and appreciate.

Mayor Supron and Cayuga Heights Village Trustees: your decision on this controversial proposal not only affects the legacy you offer Cayuga Heights; it involves deer living in New York as part of a greater community of animals--a community we have an interest in protecting. On behalf of the staff, members and supporters of Friends of Animals, I urge you to meaningfully address the impacts brought to your attention, and to set aside the deer-control plan.

Please include this comment in the official record.

Very truly yours,

Edita Birnkrant
NY Director
Friends of Animals
1841 Broadway, Suite 350
New York, NY 10023
Phone: 212-247-8120
Fax: 212-582-4482
E-mail: edita@friendsofanimals.org
Website: www.friendsofanimals.org

12/15/2010

Michelle Poppensiek

From: Jeanne Elizabeth Blum [jeanneblum@yahoo.com]
Sent: Saturday, December 11, 2010 2:18 AM
To: Kate Supron
Cc: Mary Mills
Subject: Cayuga deer massacre

TO: Mayor Kate Supron, Village of Cayuga Heights

Your legacy, what you will be remembered for, is killing innocent deer, in a time when animal cruelty and abuse is abhorred. This is a terrible thing to do and concerned people all over America are speaking out against what you plan to perpetrate. Simply put, shame on you for your cold hearted, unenlightened, cruel attitude towards these graceful gentle animals. I suppose you wear fur too, and use sticky glue paper traps for rats and mice.

Jeanne Elizabeth Blum
www.WomanHealThyself.com
www.TaoOfPiercing.com

Village of Cayuga Heights Board of Trustees
Cayuga Heights
Ithaca, NY 14850

December 13, 2010

RE: Draft Environmental Impact Statement Regarding Deer Population Control

We are five members of the faculty of Cornell Law School and all residents of Ithaca, two of us living in Cayuga Heights. We write in our individual capacities as citizens, informed by our knowledge of the law. We wish to express dismay with the draft environmental impact statement ("DEIS") regarding the current plan to slaughter most of the deer in Cayuga Heights.

New York law requires that an environmental impact statement "must analyze the significant adverse impacts and evaluate all reasonable alternatives" [6 NYCRR 617.9(b)(1)]. For four chief reasons, we believe that the DEIS fails this basic requirement.

1. The DEIS parades assertions but does not provide adequate support on such vital matters as the determination of the current deer population of Cayuga Heights based on a reliable field study, the acquisition of community-specific biodiversity data, the analysis of the likelihood that deer will migrate into Cayuga Heights from surrounding areas, or the likely impact of contraception with vaccine or surgical sterilization, relaxing the fencing ordinance, or the combination of these and other non-lethal alternative methods of reducing the level of deer-human impact. The EIS thus *lists* alternatives, but in violation of state law, it fails seriously to *consider* those alternatives. Further, the very choice to define the goal of the action itself as being to reduce the deer population, rather than to reduce the impact of deer-human conflict, appears to be a device used to avoid responsibility for taking a "hard look" at the numerous non-lethal alternatives, some of which, such as a more flexible fencing ordinance, are being successfully used in neighboring municipalities.

In the Environmental Assessment Form (Appendix A of the DEIS), the examination of viable alternatives with demonstrably lower negative impacts is repeatedly circumvented by the circular declaration that "any modification of the plan would result in not lowering the deer population, which is the goal of the action." With due respect, the issue at hand is not a widespread objection amongst the citizenry to the very existence of the deer, but to the impact caused by conflicts with the deer. By reducing the alleged problem to "too many deer," the DEIS opens the door to sidestepping the need to analyze and quantify the various dimensions of deer-human conflict and of proposed solutions. Doing so would lead to a more realistic understanding of the issue, a more meaningful evaluation of alternatives, and a more effective evaluation of the success or failure of the program, all of which would serve the underlying purposes of our state's environmental laws and the best interests of the community.

2. The DEIS nowhere considers the impact on the deer themselves. It calls the "net and bolt" method of slaughter a form of "euthanasia," a particularly odd term to describe the killing of healthy animals. As for the method itself, even those who practice it admit that it causes great suffering and therefore cannot plausibly be termed "humane." The DEIS does not consider the evidence that captive bolts fired at netted deer frequently miss their target, causing prolonged deaths. Moreover, the plan is inherently cruel, both to those animals targeted for unnecessary slaughter and to those marked for survival who will be forced to watch their herd-mates systematically massacred in front of them, whether the killing is carried out with firearms or captive-bolt devices. Exacerbating this cruelty is the fact that it will be repeated, year after year, and will thus subject large numbers of gentle living beings to terrible physical pain, emotional agony, and death.

3. Numerous people in our community have publicly expressed the pain and anxiety that they feel at the prospect of individual deer whom they have come to know being violently killed. Some of the people likely to be traumatized by the violent plan will be children. Others may be those with pre-existing mental health conditions connected to previous exposure to violence that could be exacerbated through inadvertent witnessing the sights or sounds of the killing process or even by knowledge of being in close proximity to locations where mass killing is being carried out. The DEIS callously dismisses such actual traumatization as mere "community controversy," which, it states "is not a criteria [sic] for determining significance." Yet the emotional wellbeing of community residents is an aspect of "human health" that must be specifically and objectively assessed in the DEIS. "Human health" is expressly included in SEQRA's definition of "environment." [See 6 NYCRR 617.2(l).] Additionally, "the creation of a hazard to human health" is listed in the SEQR regulations as an "indicator of significant adverse impacts on the environment." [See 6 NYCRR 617/7(c)(1)(vii).]

4. Discharging deadly weapons in close proximity to homes and roadways–as the deer-killing plan entails–poses danger to the people of our community. It is impossible to eliminate this danger completely, and it will affect more people than those who reside in the village, including those who live in neighboring municipalities as well as those who drive through the village's many roadways. The precise location of the killing will apparently remain undisclosed; the DEIS lists it as the entire Village of Cayuga Heights. Thus, people in the vicinity will be unable to protect themselves and their loved ones–both human and nonhuman–from potential harm. A bullet meant for an innocent deer can foreseeably wound and kill an innocent human, dog, cat, or other fellow inhabitant of this generally peaceful village, town, and city.

* * *

Hence, we encourage the trustees to step back and reassess the likely long-term effects of the proposed deer-slaughter plan on both Cayuga Heights and the larger Ithaca community. The trustees have a final opportunity now to bring us all together with a creative, non-violent solution, and we hope they take it.

Should the trustees proceed with implementing the currently proposed plan, we

will continue to express our opposition and encourage others to do the same. Should a legal challenge become necessary, we will lend our support to it. The current deer-slaughter plan would damage our community for many years to come. There is still time to reconsider, and in doing so, preserve the good will and sense of unity our community will doubtless need in the challenging times ahead.

Respectfully,

Sherry F. Colb
Professor of Law and Charles Evans Hughes Scholar, Cornell University*

Michael C. Dorf
Robert S. Stevens Professor of Law, Cornell University*

Robert C. Hockett
Professor of Law, Cornell University*

Steven H. Shiffrin
Charles Frank Reavis Sr. Professor of Law, Cornell University*

Laura Underkuffler
J. DuPratt White Professor of Law, Cornell University*

---

* Titles and affiliation listed for identification purposes only.

12/6/10

Ten years ago I served on the Cayuga Heights Deer Committee which mostly consisted of people who wanted deer reduction. We met for two years every other week and worked closely with Paul Curtis and other people at Cornell's Dept. of Natural Resources to develop a plan that was sanctioned by the community and privately funded by one of its members.

Two extensive surveys were done during that period to determine what residents actually wanted. The final survey was sent to every one of the approx. 800 stakeholders and the response rate was high. While, like now, the majority of residents wanted deer reduction, only 1/3 were willing to kill deer. No such survey has been done since then to determine whether the community as a whole now favors killing. Without this information, it is difficult for the community to know that it is properly represented by its policies and that it is not being bullied and taxed to serve the needs of a minority interest.

2006 was the last time that the deer population was studied and the number was determined to be 147. This number is close to what was determined by Cornell 10 years ago using night cameras on bait sites--and indicates that the herd has not grown. Without an scientific update there is no way to state that the herd is growing. The current deer management budget proposal is based on a population of 170 deer—this may or may not be the right number. The issue on the table has not really been the number of deer, the issue is whether a minority of residents who perceive deer to be an intolerable problem can determine the policy and budget that serves their interests but not that of the whole.

If deer are allowed to live in this community, and the present proposal allows 30 or so to be neutered, those 30 deer may still be the ones who visit on the gardens of the people who most vehemently want them removed. Deer migration will continue to fill the spaces left by killing. Also not being considered are the people who actually enjoy deer or who will tolerate their presence as a pesky neighbor but who consider paying more for their removal an exorbitant, unacceptable or immoral solution. These same people might prefer to see their $1000+ that will be gathered by taxation used for improved roads and other community services.

The present administration has been elected to serve the interests of this community as a whole but without a survey (with the compilation process including a member of Cayuga Deer) it appears that only their private interests are being served at the expense of the majority who clearly expressed that killing was unacceptable--and as we know now, costly. Clearly the needs of those who cannot tolerate the presence of the deer are not being addressed and that is why this problem has raised its ugly head again. However, the solution proposed is likely to create a greater problem for our community than the one caused by the deer.

Submitted by:

Jeff Cox
26 Spruce Lane
Cayuga Heights

Michelle Poppensiek

From: sedeming00@aol.com
Sent: Friday, December 03, 2010 8:08 AM
To: Kate Supron; Mary Mills
Subject: Net and Bolt

I am very upset that the net and bolt method is being considered in Cayuga Heights as a means of deer population control. This method is EXTREMELY cruel, inhumane and barbaric, and has proven itself to be an ineffective means of population control. I urge you to please drop ANY plans to implement net and bolt and investigate other methods that are more effective and humane.

Thank you.

Sharon Deming
Sterling Heights, MI

Received
Village of Cayuga Heights
DEC 06 2010

Letter 21

Catherine Drew
15 Brookhollow
Pittsford, N. Y.
14534
December 3, 2010

Dear Kate Supron, Mayor,l

I am completely shocked that your community is planning to engage in "net and bolt" practice in order to slaughter deer. This is an illegal practice and has been declared inhumane by veterinarians and animal rights organizations. I live in a neighborhood where deer do roam freely through woods and backyards. They are gentle creatures that eat only plants and they deserve to be treated in a humane way. I am writing to protest your community being allowed to break the law and behave in such a savage manner.

I can only hope that the people of your community choose to obey the law and behave in a way that does not inflict fear and abuse on the deer population.

Catherine Drew

Catherine Drew

December 15, 2010

Reaction to the Cayuga Heights Deer Remediation Plan DEIS

I am an out-of-town resident who has spent time in Ithaca and had decided to move my family there.

I chose Ithaca to relocate to because I know many people there and had spent time there on and off over the years. It seemed to be an ideal community in which to raise our children.

I was drawn by the cultural richness of the area and a perceived peaceful and progressive attitude towards developing the town and solving its problems.

After two years of searching, I finally found a lovely home in Cayuga Heights with a large backyard, edged up against a woods, that fulfilled our dreams.

At the time, I was unaware of the deer-killing plans being pursued within Cayuga Heights.

As it grew closer to the time that I planned to move my family, I began following local politics. This is when I became aware of the controversy surrounding what was said to be a deer problem in Cayuga Heights and the plans to deal with the deer population within in the village.

As I understand it, elected officials have decided, without consulting the residents in any kind of survey or referendum, to put food in some secret places within the small community to lure the deer there and then have a hired team of sharpshooters to shoot them all. This was quite astounding.

Then I recently found out that this local government is now planning an even more violent method of exterminating the deer, by trapping the dear in groups in nets and then shooting them close range with some kind of bolts whilst the animals struggle ensnared in the nets. Is this possible?

This is not the kind of environment I want to bring my children up in. This is a negative environment condoning violence and denying the residents of their democratic rights. These are not values I sought when I chose Ithaca. These are not the examples I want my children to follow.

I'm also wondering about the safety of these programs within an area so small and with so many homes so close together. Is it possible to do this safely? I don't think so. Even if I was reassured by the government implementing this plan that it would be safe, it would not be possible for me to feel secure.

I therefore no longer feel the environment of Ithaca, and especially Cayuga Heights, is a suitable environment in which to raise my children. The cultural environment will be so severely compromised as to make it impossible for me to justify our complicity (as community members and taxpayers) in this extreme and violent culture.

I have heard that this final phase of the process is a study to assess the impact on the environment of the community that such a deer-killing plan will have. I hope that during this process, those reviewing the plans are able to see how drastically this program will alter the community in a negative and unalterable way, and I believe the cause of reason will prevail.

But if reason does not prevail, I will sadly soon be looking for a buyer for my lovely new home. It seems unlikely I will be able to recoup my investment, however, as I understand that real estate prices will decrease if this plan is put into effect, both because of the divisive and fearful atmosphere, and also because of the increase (5% per year over 10 years) in the already very high property taxes that will be levied to fund this deer-killing program.

Regardless of the financial losses I might incur, if the deer-killing plan is allowed to proceed, I will not bring my children into such an environment of violence and fear, and into an environment in which I cannot feel secure in letting them out to play.

Frithjof Hungnes

Received
Village of Cayuga Heights
DEC 1 2010

Comment on DEIS for Cayuga Heights' Deer Management Plan

Submitted by:
Lowell Garner
10 Pembroke Lane
Ithaca, NY

To:
Kate Supron, Mayor, Village of Cayuga Heights
836 Hanshaw Rd.
Ithaca, NY 14850

December 16, 2010

Comment on DEIS for Cayuga Heights' Deer Management Plan (CHDEIS)

My comments will draw from my practice of medicine of 25 years, educational background and most recently course work at Cornell University in landscape architecture, plant science and integrative pest management. The major source for supportive information will derive from the National Park Service Rock Creek White-Tailed Deer Management Plan DEIS (NPS) completed July 2009 that has detailed references.
http://parkplanning.nps.gov/showFile.cfm?projectID=14330&docType=public&MIMEType=application%252Fpdf&filename=ROCR%2DDeer%2DDEIS%2DJuly%5F2009sm%2Epdf&clientFilename=ROCR%2DDeer%2DDEIS%2DJuly%5F2009sm%2Epdf
Overall, it is my assertion that the CHDEIS has not met the standards required under NY SEQR process particularly in the presentation of accurate data supportive of its conclusions. The format I will use to support this is as follows: I will bold the page in the CHDEIS when the topic I take issue with first appears. The specific statement will be placed in italics, followed by a 'Comment' section that includes personal knowledge as well as referenced sources. Additional pages in the CHDEIS that are later mentioned, which allude to the same topic, will be discussed in this section. This may be followed by further commentary as it relate to the NPS document mentioned above. I have made every attempt to restrict my comments to the CHDEIS.

Pg1-1 of the CHDEIS:
...A study committee was subsequently formed with a view towards reducing the deer population. Efforts were made at deer sterilization in the early 2000s, but ultimately did not result in long term herd reduction.

Comment: The Cayuga Heights plan acknowledges that sterilization appeared to work. It is an acknowledged fact that faulty serum was used as followup so that there was ultimate failure of the contraceptive approach (stated clearly on pg 2-6 of CHDEIS: "...that study, a two year research trial (using surgical sterilization by tubal ligation) was undertaken in the Village and that did reduce the size of the deer herd. That study morphed into a year of contraception, which failed in 2005 due to a faulty vaccine." The misinformation that contraceptive modalities have repeatedly failed has been repeatedly stated to buttress arguments for lethal management of deer. Tubal ligation is permanent and is 100% effective. Because tubal ligation is non-lethal (except in cases of perioperative mortality) it would be acceptable to most who object to lethal means. It more than likely would require a phased–in plan approach, which is already part of the CHDEIS. Because Cornell has probably one of the biggest experiences in the country on this, there is no reason not to pursue this further. Although twice the cost, it remains as effective as killing. Control of fertility is constantly evolving and no provision in the CHDEIS is included to continually reassess this option.

From the NPS:

APPENDIX C. REVIEW OF WHITE-TAILED DEER FERTILITY CONTROL

...The use of reproductive control in wildlife management has been assessed for several decades. Its use has gained more attention, as the public has become more involved in wildlife management decisions. Interest in reproductive control as an innovative alternative to traditional management methods, has led to the current state of the science (Baker et al. 2004). Often, the use of reproductive control is promoted in urban and suburban areas where traditional management tools, such as hunting, are publicly unacceptable or illegal due to firearm restrictions (Kilpatrick and Walter 1997; Muller, Warrnen, and Evans 1997)

CURRENT TECHNOLOGY

The area of wildlife contraception is constantly evolving as new technologies are developed and tested...

IMMUNOCONTRACEPTIVES

...Curtis et al. (2002) demonstrated approximately 85-90% efficacy for both GnRH and PZP immunocontraceptive vaccines in white-tailed deer. Over a 13-year period on Assateague Island National Seashore, contraceptive efficacy in PZP-treated horses ranged from 92 to 100% (Kirkpatrick and Turner 2008).

NON-IMMUNOLOGICAL REPRODUCTIVE CONTROL METHODS

...Leuprolide acetate: Leuprolide is one GnRH agonist that has been studied. Tests reveal that when it is administered as a controlled-release formulation, it results in 100% pregnancy prevention in treated female elk and mule deer (Baker et al. 2002, 2004, Conner et al. 2007). In addition, the treatment is reversible, and the effects last only for a specific period of time (90-120 days) (Baker et al. 2004; Trigg et al. 2001). Advantages of leuprolide acetate are that it is 100% effective in preventing pregnancy, is safe for human consumption (Baker et al. 2004), can be delivered remotely (Baker et al. 2005), does not result in physiological side effects, and short-term behavioral effects are minimal (Conner et al. 2007).

... Surgical sterilization is an invasive procedure generally performed on females. Successful implementation is generally 100% effective in preventing pregnancy and this method is common in managing domestic animal fertility.... Conditions that may contribute to successful use of sterilization to reduce abundant deer populations include small population size and demographic closure (or nearly so) (Merrill et al. 2006).

Pg1-1 of the CHDEIS:

At the present time, the estimated population of deer in the 1.8 square mile Village of Cayuga Heights ranges between 160 and 200.

Comment: On page 68 of CHDEIS Appendix A Professor Paul Curtis asserts "The last reliable population estimate I conducted for the deer herd in the Village of Cayuga Heights was in the spring of 2006." This again is cited on page 1-7 of the CHDEIS. I believe this is now the Winter of 2010- 4 years later. We have no idea what the current population is. It is well known that deer populations can fluctuate significantly due to environmental conditions such as food availability (e.g. acorns) and weather. To assume a 10% rise per year (and his letter states just that apparently based on a *single* data point of a 7% increase from 2005 to 2006), it can only be conjecture at best.

From the NPS: I took the data from Rock Creek below and calculated the % variation from year to year of *seven* data points. Which single point should we have used below to have estimated the future deer population?

TABLE 2. DISTANCE SAMPLING RESULTS IN ROCK CREEK PARK

Year	Deer per Square Mile	Standard Error of the Mean(±)	calculated %var.YTY
2000	62	11.6	NA
2001	63	6.9	1.6
2002	60	8.0	-5.0
2003	98	17.3	63.3
2004	75	7.8	-23.5
2005	52	6.9	-30.6
2006	58	8.9	11.5
2007	82	10.21	41.4

Source: K. Ferebee pers comm. 2007b, 2008f

Had we chosen 3 of the years (2002,2004,2005) no action would have been even warranted! It is clear depending what year was chosen for examination, this would have critically influenced the preferred plan. This same comment is applicable to remarks on pg1-7 "...based on projections by the DRAC", which continues to use Dr. Curtis' best 'guess'.

Pg1-2 of the CHDEIS:
...water contamination through substantially higher levels of untreated wastes in stormwater runoff.

Comment: This is conjecture only and nowhere in the CHDEIS is this contamination documented. Page 3-4 of the CHDEIS reasserts this conjecture. No mention of fecal waste contamination ever appears in the entire NPS document although it talks about stormwater and surface water repeatedly. Historically, the Village has been careless in its duty to protect the watershed for other causes. It therefore surprises me in light of these prior experiences that the Village cannot supply more information.

Pg1-2 of the CHDEIS:
... It is expected that this program will, once implemented, result in a reduced and stable deer herd in approximately three to five years.

Comment: No data has been supplied to support this assertion.

Pg1-4 of the CHDEIS:
...The smaller deer population will likely reduce deer/car accidents

Comment: there is no data provided in this report as to the traveling speed of vehicles involved in deer collisions. In data that includes this variable, on average 85% of vehicles are traveling 35mph of more. The Village speed limit is 30mph. Enforcement of the Village speed limit will not only result in fewer collisions but also enhance pedestrian, bicycle, and domestic and wild animal safety. The table below in Appendix D supports the contention that the roads at highest risk for

speeding in Cayuga Heights also have the most accidents. Page 3-3 of the CHDEIS restates this point without pointing out the deficiency of this observation.

Location	2003	2004	2005	2006	2007	2008	Total
Burleigh					1		1
Cay Hgts Rd	1	1	1		2	4	9
Comstock					1		1
Devon Rd		1	1				2
E Upland				1		1	2
Hanshaw Rd	1	1		2	2	1	7
Highland Rd	1		1			1	3
Kinewoods Rd	1					1	2
Lowell Pl						2	2
N Triphammer	2	8	2	2	6	4	24
N Sunset	1				1		2
Parkway Pl		1					1
Pt Grove Rd		2	1	2	1	2	8
Rt 13	2	6	7	5	8	3	31
The Parkway			2	1			3
Shelcon Rd				1			1
Triphammer Rd	2	4	1	2	5	2	17
Tyler Rd				2			2
W Remington			1	1		1	3
Warwick Pl						1	1
Wycoff Rd	1						1

Pg1-4 of the CHDEIS:

...It is expected that in the long term, local vegetative diversity and wildlife habitat will improve...

Comment: The word 'expected', without the performance of controlled exclosure experiments for a suburban landscape, is wishful at best, considering that surface water runoff from suburban landscape is known to contain significant herbicidal loads.

Pg1-4 of the CHDEIS:

...Culling activities are likely to involve the discharge of firearms in the VCH. Mr. Anthony Denicola, the owner of a firm that carries out deer culling activities, advises that in 15 years of such work and the culling of some 9,000 to 10,000 deer, there has never been an incident of harm to people, nontarget animals or property in connection with said activities (personal communication, 9/28/10)...

Comment: Mr. DeNicola stands to benefit significantly in both recognition and financially as a private consultant if this plan goes forward (although it may not be obvious since White Buffalo, Inc. is currently seeking tax exempt status as a public charity according to its own website). To not corroborate his statistics of 'no incidents', is abandonment of responsibility by the government body that is supposed to protect its electorate. Has a search been done to see if any civil or statutory actions have been taken against him or White Buffalo, Inc? Have organizations been contacted that have utilized his services to see if any untoward outcomes have been associated with lethal action? "No record of incidents" is by his account. In fact, I contacted the Kansas Department of Wildlife and Parks after reading about an incident, which possibly could disturb some public officials, should they consider hiring him. I was told they keep no

such records. There are no national clearinghouses that even keep these statistics; some states do (e.g. NY) and some don't.

Pg1-5 of the CHDEIS:
...While the culling of deer, as proposed by the Village, may be experienced as a potential significant impact to the social conscience of a portion of the VCH community...

Comment: The lethal option introduced (not mentioned publicly prior to the CHDEIS), to be done in conjunction with sterilization, is trapping and use of a penetrating bolt, sometimes referred to as netting and bolting. This lethal method will not only create greater public dissent due its brutality but will amplify neighbor-to neighbor conflict due to significantly less property restrictions of where the technique will be permitted. No 500' sign-off is required. This will place a burden on the community as well as public safety departments. This is evidenced by the fact that a Freedom of Information request was necessary to find out that net-and-bolt was being considered as late in the EIS process as 2 weeks ago. Clearly they did not want the community to have a chance to dissent.

Pg1-5 of the CHDEIS:
...The result of a successful sterilization and culling program will be a stabilized deer herd of approximately 30 animals.

Comment: This statement assumes that Cayuga Heights is essentially an exclosure, which it is not.

Pg1-6 of the CHDEIS:
...No significant unavoidable adverse impacts have been identified in connection with the proposed deer management plan....

Comment: One of the major purposes of a DEIS is to present all possible alternatives to determine whether or not a particular alternative imposes a significant adverse impact that could be avoided. There is ample evidence that lethal methods will produce significant community resistance. The NPS document has a whole section devoted to this. Specifically it states:"...There may be some unavoidable adverse effects to visitors relating to the implementation of the sharpshooting or capture and euthanasia, if the visitors happened to be near areas where this was occurring and were disturbed by these actions."

Pg1-6 of the CHDEIS:
... lack of food will either result in wasting disease or result in increased deer population in areas outside the VCH...

Comment: This misinformed statement's purpose is to confuse the lay expression "wasting disease" with Chronic Wasting Disease, which is clearly implied above to be due to lack of food, rather than a transmissible disease (spongiform encephalitis), which has yet to be documented in our area as well as

to cause additional public concern. As for preventing an increased deer population in outside communities, this was never a stated in the CHDEIS as an objective. In fact, the successful outcome of the CHDEIS is directly dependent upon the assumption that Cayuga Heights is a relatively closed system- you can't have it both ways.

Pg1-8 of the CHDEIS:
...This is the most cost effective method of reducing the size of the deer herd...

Comment: Nowhere in the CHDEIS is an "apples-to-apples" cost-benefit analysis provided taking into account preparatory, implementation, and outcome phase costs. To assert this without and actual accounting, is an uncertain statement at the very least and very possibly quite erroneous at the worst. (see NPS page 65 for an example of such a comparison; many such examples appear throughout the document so their summary conclusions have data to support them). Pages 3-9 through 3-10 of the CHDEIS devote a discussion to socioeconomic considerations and offer no CH data other than its annual budget. Pages 4-6 through 4-7, a section dedicated to analysis, offers nothing more than "it is possible that the costs associated with the high density deer population (ecological damage, vehicular accidents, tick borne diseases, landscape loss, etc.), as discussed in Chapter 3 will be substantially reduced as well." The expression 'It is possible' is not an acceptable conclusion to embark upon a plan in this time of fiscal triage.

Pg 2-4 of the CHDEIS:
...Cayuga Heights is not a forest but rather an ecosystem heavily influenced by a pattern of residential development and an associated suburban landscape. Ideal deer population densities are likely different in the suburban setting than an undeveloped forest...

Comment: The CHDEIS repeatedly supports its plan with historical and current data that utilize the forest ecosystems as its gold standard. To use this data as assumptions for suburban Cayuga Heights, as its own DEIS admits, can be nothing less than suspect.

Pg 3-3 of the CHDEIS:
...These areas are important aesthetically in the Village, contain old growth forest and hold other valuable ecological characteristics. They provide habitat to the local deer herd. The impact of browsing on these natural areas is not known...

Comment: One of the key points in making the case for deer population control is the loss of biodiversity. Here we have a forested "control" as part of the Village, to use in conjunction with data from many other forested deer population control plans throughout the U.S. and have the opportunity to determine comparability to our region (let alone a suburban environment which they are attempting to

compare a forest to), and no attempt has even been made! This is a glaring oversight.

Pg 3-3 of the CHDEIS:
...It is not known how many people support the plan of the Village versus how many people oppose it...

Comment: Because trapping and penetrating bolt gun is the desired lethal means and only recently announced 2 weeks ago, the Village resident survey done in the 1990's is not applicable. Many of the public are still unaware of the implications of net-and-bolt and have not been surveyed as to their views. This has the potential to mobilize a significant objection from the community with public safety becoming even more of an issue than frangible bullets (besides the simple fact that a majority of the community may be against the action, and the fact that the Village board has repeatedly stated that they are acting at the wishes of their community). The lack of recognition for the possibility of intense community opposition as indicated on page 4-6 of the CHDEIS, has led to the gross underestimation of allocation of personnel and money to the CH police, of the effect on public safety, and of the costs of a probable legal challenge.

Pg 6-1 of the CHDEIS:
6.1 No Action Alternative
Under this alternative, no management of the deer herd would take place. The DRAC has determined that No Action will result in continued growth of the deer herd. Given the complaints about the deer population and the ongoing impacts of ecological damage, deer/vehicle incidents, landscape destruction and tick borne diseases, the No Action alternative will simply exacerbate the current situation. It is possible that if the herd grows significantly, lack of food will either result in wasting disease or result in increased density of the deer population outside the VCH. If the No Action alternative is selected, certain activities associated with sterilization and culling as identified earlier in this DEIS will not occur. While the costs of the deer management program would not be expended from the Village budget, the ongoing costs of ecological damage, vehicular accidents, landscape loss and replacement and Lyme disease treatment would remain similar to existing conditions or potentially increase as the density of the herd increases. The No Action alternative would likely have far more adverse impact than the proposed action.

Comment: The whole purpose of the CHDEIS from its inception was to reject this alternative. The assertions within this statement have been previously commented upon in my aforementioned comments, and are generally unsubstantiated.

Pg 6-1 of the CHDEIS:
6.2 Sterilization Only. No Culling
Under this alternative, no culling would take place and greater numbers of deer would need to be sterilized in order to stabilize the herd at the numbers recommended by the DRAC. This option is slower and more expensive than

culling alone or the combined approach of culling and sterilization. It would take three to five years to stabilize the herd, and herd reduction would not be evident for five to six years, based on projections by the DRAC.

Comment: Once again, unsupported projections of population control are asserted to dismiss this as an option. As presented previously, tubal ligation combined with pharmocologic or immunologic contraception might provide a more effective method that would produce earlier stabilization of population density.

Pg 6-2 of the CHDEIS:
6.3 Firearm Culling Only, No Sterilization
This is the most cost effective method (in the short-term) to reduce deer herd and also the most controversial…

Comment: It is not the most controversial. See the next section. Of particular note is that sterilization was not combined with this technique to make this an unacceptable alternative, as emphasized by "in the short-term".

Pg 6-2 of the CHDEIS:
6.4 Sterilization and Culling by Trapping
At the present time, trapping and killing deer is not permitted under the wildlife regulations of the State of New York. However, if relief could be secured from that provision via the deer management permit, an alternative to using firearms to cull deer would be to trap deer and use a captive bolt gun. This device kills the animal instantly allegedly without causing pain. A captive bolt gun has a steel bolt that is powered by either compressed air or a blank cartridge. The bolt is driven into the animal's brain. It has the same effect on the animal as a firearm with a live bullet. A captive bolt gun is safer than a firearm and is considered to be an effective form of euthanasia by the American Veterinarian Medical Association. This is a slower process than culling and more labor intensive. Multiple traps could be employed and deer could be culled over an extended period with minor disruption to the local community.

Comment: Firstly this alternative is misrepresented by the title of the section, perhaps giving the reader the impression that trapping will be combined with translocation. This is not the case. Rocket-assisted nets are typically combined with a penetrating bolt gun (used in the slaughter industry) to kill the animal. The following are comments I presented at the Village meeting of 12/6/10:
The net and bolt technique outside of a slaughterhouse 1) lacks ways to minimize fear of the condemned animals. There is mainstream neuropharmacology supporting the assertion that fear and stress, not pain, are the most inhumane of all stimuli we can inflict upon an animal. Temple Grandin has written extensively on this subject. Even those who earn their living by eliminating deer speak about the increased stress the animals experience with the net and bolt technique. Netted deer will agonize from the most severe form of

fear. I can't emphasize this enough. From the time the deer are netted until they are killed these animals will suffer; 2) lacks effective and predictable restraint- the key to killing swiftly is an effective restraint, otherwise there are too many 2nd attempts. A net does not provide effective restraint. There must be extreme precision of bolt placement to effectuate a first-kill. A terrified struggling deer will have its face frequently shattered before subsequent attempts are successful in producing death; 3) lacks quick and accurate killing that minimizes pain making the slaughter of these netted deer even more odious than any other technique suggested until the present time. Though the bolt device is "effective" as a form of euthanasia by the American Veterinary Medical Association Guidelines (as in guidelines; not standard of care) on Euthanasia, the AVMA has never endorsed this method as the preferred technique in the slaughter of whitetail deer.
To bring this point home further: It is "effective" to give cancer patients *intermittent* pain medication to control suffering associated with their disease. It is neither acceptable, desirable, suitable, adequate, applicable nor any other word one might use. However, *continuous* administration of pain medication is essentially the only method used today, and if it is not, there better be a justifiable reason other than convenience. Those that make their living from killing deer attest to the fact that net-and-bolt is the most stressful of all techniques. In the NPS's final EIS document on Catoctin Mountain Park http://www.nps.gov/cato/parkmgmt/loader.cfm?csModule=security/getfile&pageid=127892 they emphasize this point.

Pg 7-1 of the CHDEIS:
...The labor and energy that will go into sterilization and culling activities will be irreversible and irretrievable...

Comments: And "Irreversible and irretrievable" both in financial cost and life as well.

General Comments:
1) There is potential for significant conflict of interest issues with respect to Drs. Anthony DeNicola and Paul Curtis both individually and in collaboration with one another. This id not disclosed in the CHDEIS and integrity demands this.

2) Throughout the CHDEIS there is mention of tick-borne disease and in particular Lyme as a reason to pursue deer population control. Not in a single sentence, in the entire 400 page NPS EIS can one find mention of tick-deer interaction as a reason to pursue deer population reduction (see below). The CHDEIS page 2-10 assertion that "Studies also show that the number of ticks in a local area is generally linearly correlated with the number of deer present. Recommended mitigation of deer-borne diseases includes fencing, reducing tick habitats... Educating the public includes practicing 'due diligence' in clothing for outdoor wear and learning to check for ticks after being outdoors" have disappointedly proven false time and again. All studies to date that have looked

at this, have supported the conclusion that reduction is helpful are quite isolated systems or where other mammalian hosts other than deer are lacking. The single paper (out of hundreds that show otherwise) cited in the CHDEIS on page 3-5 was an isolated offshore island that states clearly this fact. In a telephone conversation (12/9/10) I had with Dan Sealy, Acting Chief of Natural Resources & Science of the National Capital Region at the Center for Urban Ecology, he stated in no uncertain terms, that the NPS never uses Lyme's incidence or tick densities as threshold indicators for deer population intervention since there is no correlation. Current medical literature on prevention recognizes this issue as well. Gary P. Wormser, MD, from New York Medical College in Valhalla and an expert on Lyme disease is caused by *Borrelia burgdorferi*, transmitted by the bite of the tick species *Ixodes scapularis and Ixodes pacificus* has written extensively on this (Wien Klin Wochenschr. 2005 Jun;117(11-12):385-91). He states: Deer elimination or exclusion, application of topical acaricides to mice or deer, and application of systemic acaricides to deer are more complex approaches. However, none of these methods for reducing tick numbers, nor any of the recommended personal prevention measures, such as reducing the amount of exposed skin, use of tick repellents on exposed skin or clothing, and frequent tick checks to remove attached ticks expeditiously, has been demonstrated to decrease significantly the incidence of Lyme borreliosis in humans. It is also erroneous for CH to use countywide data (a rural region) to support its contention that Lyme is a public health issue for its residents, as it does in Appendix D of the CHDEIS, as well as to omit the travel histories of CH's residents affected by this disease.

3) A glaring deficiency (pgs 2-7 through 2-10 which encompasses Specific Recommendations) of this CHDEIS is that there is no provision or statement that the plan's efficacy will be reviewed at periodic intervals to evaluate methods currently in use in light of new concepts, especially non-lethal modalities. The NPS document emphasizes the importance of this point repeatedly. In addition, there is no mention anywhere in the CHDEIS of adaptive management considerations for any of the alternatives (NPS page 73)

4) Frequent requests from the community, even those in favor of the lethal alternative, have been made for 8' fencing- the village refuses to consider this an option for individual property owners (see page 3-6 of CHDEIS) and it continues to be ignored as an alternative in the CHDEIS.

5) One of the main intents for a DEIS is to invite interested stakeholders to comment. There is no list of stakeholders in the CHDEIS other than mention of the public and CayugaDeer.org. nor is there record of solicitation other than public notice. The NPS document contains a fairly large list, some of which could be used to identify similar entities locally that would have an interest in this plan. I have included the list below:

LIST OF RECIPIENTS OF THE DRAFT PLAN ENVIRONMENTAL IMPACT STATEMENT

This plan/EIS will be sent to the following agencies, organizations, and businesses, as well as to other entities and individuals who requested a copy.

CONGRESSIONAL DELEGATES

Eleanor Holmes Norton, District of Columbia Delegate
Christopher Van Hollen, Jr., 8th Congressional District, Maryland
Donna F. Edwards, 4th Congressional District, Maryland
Barbara Mikulski, U.S. Senate, MD
Benjamin L. Cardin, U.S. Senate, MD

FEDERAL AGENCIES

Chesapeake and Ohio Canal National Historic Park
Smithsonian National Zoo and National Zoo Police
State Department—Embassies
U.S. Department of Agriculture, Wildlife Services
U.S. Environmental Protection Agency
U.S. Geological Survey
U.S. Fish and Wildlife Service, Chesapeake Bay Field Office
U.S. Navy, Naval Observatory
U.S. Park Police
U.S. Secret Service

DISTRICT OF COLUMBIA AND LOCAL GOVERNMENTS

Advisory Neighborhood Commissions
Commission of Fine Arts
D.C. City Council
D.C. Department of Environment, Fisheries and Wildlife Division
D.C. Department of Health, Animal Disease Prevention Division
D.C. Department of Recreation, Office of Planning and Policy
D.C. Department of Transportation
D.C. Fire and Emergency Services
D.C. Historic Preservation Office, State Historic Preservation Officer
D.C. Metropolitan Police Department
D.C. Office Of Planning
D.C. Office of Tourism and Promotion
Maryland Department of Natural Resources, Wildlife and Heritage Service
Maryland National Capital Park and Planning Commission – Montgomery County
Metropolitan Washington Council of Governments
National Capital Park and Planning Commission
Washington Metropolitan Area Transit Authority

ORGANIZATIONS/OTHER

AAA Potomac
Adjacent Property Owners
American Automobile Association, National Office
American Recreation Coalition
Animal Welfare Institute
Arizona Bowhunters Association
Audubon Naturalist Society Central Atlantic States
Audubon Naturalist Society of the District of Columbia
Blair Road Garden Association
Chesapeake Bay Foundation, District of Columbia Office

Chesapeake Bay Program Office, NPS
Chevy Chase Citizens Association
Crestwood Citizen's Association
Defenders of Wildlife
Earth Justice
Fort Reno Garden Association
Fort Stevens Garden Association
Friends of Animals
Friends of Montrose and Dumbarton Oaks Park
Friends of Peirce Mill
Friends of Rock Creeks Environment (FORCE)
Friends of the Earth
Glover Park Garden Association
Glover Park Citizens' Association
Golf Course Specialists Inc
Green Peace
Hillandale Citizens Association
Hillwood Museum
Humane Society of the United States
Interstate Commission of Potomac River Basin
Izaak Walton League of America
Jonathan Woodner C., Woodner Apts.
Mamie D. Lee Garden Association
Maryland Native Plant Society
Maryland Ornithological Society
Meadowbrook Riding Stables
Melvin Hazen Garden Association
National Park Foundation
National Parks and Conservation Association
National Wildlife Federation
National Zoological Park, Smithsonian
Nature Conservancy
Oak Hill Cemetery
Peabody Garden Association
People for the Ethical Treatment of Animals (PETA)
Potomac Appalachian Trail Club
Rock Creek Garden Association
Rollingwood Citizens Association
Sierra Club, DC Chapter
The Northwest Current
The Shoreham North
The Washington DC Examiner
Tilden Gardens
Trail Riders of Tomorrow (TROT)- 50
Walter Reed Army Medical Center
Washington Area Bicycle Association
Washington City Paper
Washington Humane Society

Cayuga Heights is acting in apparent isolation in spite of a multitude of agencies that may have a direct interest.

Summary:
The CHDEIS in its present form does not specify the current deer density, does not document the impact on biodiversity other than by stating the general impressions of the public or by inference, does not acknowledge that Lyme disease has no correlation to deer density in this open suburban setting, nor does it allow placement of fences (exclosures). The Village has tried to circumvent the EIS scoping process and comment by its introduction of the alternative of trapping and use of a penetrating bolt gun by announcing its preference for such, for the very first time, in this DEIS. In addition, the CHDEIS represents a costly plan, one that is particularly inhumane and will pit neighbor against neighbor Therefore, the CHDEIS should not be approved in its present form and withdrawn.

Cornell University with its vast talent in ecology, horticulture and plant science, veterinary medicine, and natural resources should help guide our decisions along with all stakeholders. In an email I received today from the Acting Chief of Natural Resources & Science of the National Capital Region at the Center for Urban Ecology, Dan Sealy, he says, "I would encourage those working toward a solution to make sure the goals of the effort are clear and achievable based upon the best science you have available."

The CHDEIS goals while clear, may be poorly chosen, unachievable and at their very best, based upon anecdote, questionable documentation, and lacking in state-of-the-art science.

Respectfully submitted 12/16/10,

Lowell Garner

food&waterwatch

Food & Water Watch • 1616 P St. NW, Suite 300 • Washington, DC 20036
www.foodandwaterwatch.org • T: +1.202.683.2500 • F: +1.202.683.2501

Village of Cayuga Heights, New York
Deer Remediation Advisory Committee
Marcham Hall
836 Hanshaw Road
Ithaca, NY 14850

December 16, 2010

Dear Madam or Sir:

The Village of Cayuga Heights has recently proposed an aggressive deer population control program in response to an increased deer population. The proposal is justified in part by the purported public health risk from runoff tainted with deer waste.[1]

I am the executive director of Food & Water Watch, a national consumer organization that studies both municipal water systems and the impact of large livestock operations on the environment. Food & Water Watch has written extensively on the damage that excessive animal waste can have on local watersheds and the concomitant impact on clean municipal drinking water.

Certainly animal waste can pose risks to drinking water supplies, but the slight risks posed by waste from wild deer can be easily mitigated by less aggressive, less risky and less expensive approaches than the net-and-bolt strategy currently favored by the Deer Remediation Advisory Committee.

First, the focus on deer as the key source of microbiological contamination risk may be misplaced. It is far from clear that deer are the primary source of any runoff contamination. Some localities have found that waterfowl were the primary source of wildlife waste runoff.[2] Using U.S. Department of Agriculture data, Food & Water Watch recently reported that Tompkins County contains nearly 3,600 dairy cows on the largest class of farms that produce 145 million pounds of untreated manure every year.[3]

Determining the existence and source of any manure or wildlife waste runoff must be the first step in developing an appropriate policy to mitigate the risk of water contamination. The U.S. Environmental Protection Agency recommends tracking the bacterial source of non-point microbiological contamination before putting a plan in place.[4] Inexpensive alternatives to assess the source of any runoff pollution include antibiotic resistance analysis that can pinpoint the risk from deer.[5] Until native deer are determined to be the source of any waterborne bacteriological

---

[1] Cayuga Heights Deer Management Plan DEIS. November 1, 2010, at Existing Conditions page 3-4.
[2] US Environmental Protection Agency. *National Management Measures Guidance to Control Nonpoint Source Pollution from Urban Areas*. EPA-841-B-05-004. November 2005, at 2-15.
[3] U.S. Environmental Protection Agency. "Risk Assessment Evaluation for Concentrated Animal Feeding Operations." EPA/600/R-04/042. May 2004 at 9. *See* Food & Water Watch. "Factory Farm Nation." November 2010.
[4] US Environmental Protection Agency. *National Management Measures Guidance to Control Nonpoint Source Pollution from Urban Areas*. EPA-841-B-05-004. November 2005, at 2-13.
[5] Ibid. at 2-15.

contamination, it would be ill advised to pursue an expensive and dangerous program to limit the deer population.

If wild native deer are determined to be the source of any runoff contamination, there are many less expensive, less dangerous and more effective policies that can provide greater protection to municipal water sources. The most effective strategies to reducing contamination from runoff are to improve the grade, contour, buffer and foliage surrounding waterways to provide natural filtration and reduce the speed of water runoff.

The New England Interstate Water Pollution Control Commission recommends habitat modification (including landscape changes and tree branch pruning), preventing human feeding of wildlife (especially waterfowl), monitoring wildlife populations in and around water supplies, deterring wildlife from vulnerable watershed areas and reducing available food sources.[6] These strategies have the added advantage of addressing the extant deer population but also any future deer that may enter the community and repopulate the area after any short-term deer population control strategies.

There are a host of additional legitimate criticisms to the proposed strategy to control the native deer population. The proposal includes a waiver from New York state rules to use "net-and-bolt" methods that are usually banned because they are inhumane.[7] It would be expensive, intrusive and potentially dangerous to local citizens and pets to deploy explosive nets within the village residential areas. Short-term population control mechanisms over native deer only address the current deer, not the long-term existence of whitetail deer in Western New York. Although the current deer might be controlled, more deer will likely come to the village.

It is especially disingenuous to use the legitimate concern of water contamination to justify a policy that is considerably more draconian than necessary to protect the village water supply. There are a host of more affordable, more effective, and less dangerous and aggressive policies to protect the village's water supply than the proposed net-and-bolt so-called strategy offered by the Deer Remediation Advisory Committee. Stopping the spread of dangerous pathogens and chemicals in our water is a legitimate concern for all governments. But using those concerns as a scare tactic neither serves the people of Cayuga Heights nor protects the water resources of the area.

Sincerely,

Wenonah Hauter
Executive Director
Food & Water Watch

---

[6] New England Interstate Water Pollution Control Commission. *What do you know about microbial contamination?* Available online at http://www.neiwpcc.org/whatdoyouknowabout.asp. Accessed December, 2010.
[7] Cummings, Anne Marie. "Deer control method sparks debate." *Tomkins Weekly*. November 22, 2010.

December 10, 2010

Comments on the Cayuga Heights Deer Management Plan (DEIS)

Much of my research and teaching has been devoted to the issue of violent, traumatic events and experiences, both in my thirteen individually authored books, my two edited or co-edited volumes, and numerous articles. (References are available through Google.) I would make specific mention of four books in this respect: *Representing the Holocaust: History, Theory, Trauma* (Cornell U.P., 1994); *History and Memory after Auschwitz* (Cornell U.P., 1998); *Writing History, Writing Trauma* (Johns Hopkins U.P., 2001); and *History and Its Limits: Human, Animal, Violence* (Cornell U.P., 2009). These studies have made me particularly alert to the at times unacknowledged consequences of violent or traumatizing behavior, both on individuals and on communities.

I am writing today both from the standpoint of my professional expertise on this subject matter and as a concerned citizen who is opposed for many reasons to the controversial deer killing plan now being proposed by the mayor and current board of trustees of Cayuga Heights to "cull" a large percentage of the deer in the village and to sterilize a relatively small number of others that would come to form, for a time, a sort of ambulatory zoo.

In the state-required environmental review process (SEQR) the trustees of the village were required to consider whether or not their proposed action would have a significant negative impact on the "aesthetic, agricultural, archaeological, historic, or other natural or cultural resources; or community or neighborhood character." They were also required to weigh the significance of negative impacts on human health, including mental health. In their evaluation of the culling/killing plan, the trustees do not provide cogent and specific reasons why it is needed, and they summarily determine that the impact with respect to the factors enumerated above would not be significant. I could not more strongly disagree.

ORIGINS OF THE DEER KILLING PLAN

The current proposals had their origins in the frustration of a number of gardeners (and others concerned with protecting their landscaping) that began in the late '90s. In 2002-2003, after years of study and gauging public opinion, a deer sterilization program was implemented, with some signs of success, but was replaced by a contraceptive vaccine that failed, and was later found to be defective. The Cornell researcher carrying out the program thereafter terminated it. By 2007, proposals were put forth to loosen the tight restrictions on fencing

height and placement that were put in place decades ago to maintain open, "park-like" character of the Village, a characteristic that largely slipped away over the years through the effects of increasing development. In 2008, following the introduction of proposals to allow more and higher fencing to keep out the deer, the mayor was challenged in a three-way election in which he was defeated by only 1 vote.

Within a few months of taking office, the new mayor and several new trustees announced their intention to implement a plan to kill many of the deer in the village, based on claims that the deer posed an imminent threat to public safety and therefore could be killed by village police on the order of the trustees without public input. When this came to light, and the claims of imminent danger were challenged as being unsubstantiated, citizens demanded more transparency, leading to the withdrawal of this pre-emptive killing plan, and the initiation of a more public process. However, the Deer Remediation Advisory Committee (DRAC) that was put in charge of this process was the same one that had conceived of the initial plan behind closed doors and was still admittedly biased in favor of a kill program. This bias was never corrected by adding sufficient additional committee members to represent the true diversity of opinion in the village. As this committee began to hold public meetings, the dismissive approach taken with respect to proposed information about safe, practical and cost effective alternatives to a killing program contributed to a climate of cynicism and acrimony. This ushered in a new era of controversy in a community previously known for being open and trusting and, with respect to the Village government, quite apolitical.

Since protecting gardens and landscaping may not seem to rise to the level of seriousness required for such an extreme course of action as a backyard mass slaughter program, the largely discredited argument based on the deer posing an imminent threat to public safety was expanded and reformulated multiple times as one justification after another was put forth and then disputed from the fall of 2008 to the following spring, during which the DRAC committee held meetings and public forums. The various justifications, nearly all of which have been called into question on the basis of the trustees failing to substantiate them with verifiable Cayuga Heights-specific data or convincing scientific rationales, have included the idea that the population of our local herd is rising to a level that threatens the well being of the local ecosystem; that the deer are devastating biodiversity; that deer-vehicle collisions pose a substantial risk of life-threatening injury to village drivers; that deer are causing an alarming increase in the rate of Lyme disease infection; that deer are growing more aggressive and now are

attacking companion animals and perhaps soon will be attacking humans; that deer feces are vectors for disease and are causing a significant level of water pollution.[i]

Often absent from the presentation of these dramatic justifications for a mass killing program is the far more prosaic one those familiar with the community believe has provided the principal motivation for the trustees who advocate most strongly for mass killing of deer: that deer need to be killed because they are eating flowers, shrubs and garden vegetables. This idea is most often accompanied by a significant subtext: the kinds of fences that successfully address these problems in other municipalities are simply unacceptable in Cayuga Heights.

IMPACT ON COMMUNITY AND NEIGHBORHOOD CHARACTER

A blatant effect of the killing plan has to be taken with the utmost seriousness: it adversely changes the character of the community in undeniably significant ways. It is already provoking tension among neighbors and pitting them against one another in a fashion that is far from neighborly. This tension and even animosity can only grow if the plan is implemented. We have here a major cost in the social environment and well-being of the community. Neighbors who formerly made a point of greeting one another or even stopping for a chat may now not even notice one another or pass by with a perfunctory greeting. I live only a few houses from the mayor, Kate Supron, and she herself remarked to me that our encounters, when they occur, do not have the quality of cordiality or neighborliness, even when there is no manifest sign of the hostility that one may nonetheless, at some level and however subconsciously, feel. The basic point is that a deep-seated controversy poisons the atmosphere of a community and permeates its daily life. When something like this occurs, the only option is to table the issue that is causing the divisiveness and animosity, and in the case of "culling" there is no pressing community need that warrants moving forward with a plan to annually carry out the mass slaughter of deer in our neighborhood backyards.

There has been no recent poll of residents although the current mayor was reported in the press as stating that 75% of residents support the culling/killing plan -- a number which seems to have no basis in recent elections (where her margin of victory against a last-minute write-in protest candidate was much slimmer) or in any other indicators so far as I have been able to determine.

There has also been no estimation of the actual number of deer in the village based on a scientifically credible field study since 2006. And to my knowledge, there has never been a similarly credible study carried out to assess the impact of deer on biodiversity in the village. These inconvenient truths notwithstanding, references to the purported scale of the deer population and the scope of their impact on the environment at times give the mistaken impression that Cayuga Heights resembles stereotypes of the streets of old Calcutta. The various impressionistic if not biased statements about the condition in Cayuga Heights, which seem to be accepted as fact by the mayor and at least some of the current board, but which seem fantastical to many of us, do not provide a solid basis on which to establish a lethal program. This is one more instance of a deleterious change in the structure and practice of governance which is undermining trust in the community. Our longstanding tradition of rational discussion and fact-based public policy is eroding before our eyes.

Costs –

The fact that there are a number of people who are strongly opposed and extremely upset by the proposed killing program is amply demonstrated by the comments in public meetings and the media. For many critics of the killing plan, the primary issues concern values and the effects of the plan on the village of Cayuga Heights as well as on Ithaca as a whole. But another negative impact both in itself and in its implications for alternative uses of funds is the very high cost of the plan – upwards of a million dollars in a rough estimate that can only err in the direction of being too low, perhaps much too low. At a time when taxes are increasing at all levels of local government and important programs which support the families and children of the region are being cut, this use of tax dollars seems not only nonsensical but offensively out of touch with the current economic realities. Many in the community believe these funds could well be put to other uses, and the village government could return to concentrating on issues that are not so inherently divisive and more supportive of the community as a whole.

Not all residents of Cayuga Heights are well off economically, and the overly conservative estimate of a 5% increase in taxes would cause hardship to some residents who may be struggling to pay their bills. Some who can afford the increase might leave because of the nature of the plan itself. Some critics of the plan who have devoted much time and energy to the betterment of the community (for example, Karen Kaufmann and Sandip Tiwari) have indicated in public an intention to move out of the village if the plan is implemented. Others of us, for the first time, find ourselves uncomfortable and ashamed to be in a community that we have, until now, considered one of the most idyllic,

beautifully natural, open and relaxed that we have known. It should be obvious that a plan that may drive away some of the most civic-minded and hard-working members of a community clearly does significant damage to that community and undermines the character for which it has been noted.

As many commentators have observed, the program is short-sighted since it applies to a community that has no way of preventing deer from other areas entering it to replace the deer that are to be killed. Cayuga Heights is not a bounded ecosystem like the Galapagos Islands. It is surrounded by municipalities and open land that have significant (larger) deer populations. Even some advocates of the kill program admit that any annual killing operation will have at best short-term effects and would have to be repeated endlessly into an indefinite future, with mounting costs as well as mounting acrimony. Indeed, residents from communities in other states who have tried such solutions have written to the local paper to testify that this has been the experience in their communities.

These points indicate the inflexible, perhaps dogmatic nature of a commitment to a project that seems destined to fail, to divide the community, and to cost much money in the process.

Impact of Introducing Systematic Culling/Killing –

A statement made by a woman resident at a public meeting, apparently in defense of the killing of deer, remains in my mind, for it actually served to demonstrate the danger and misguided nature of such action. She said, in response to her child's question about how one could possibly bring oneself to kill animals like deer, that she answered: one can kill and cry at the same time. What she apparently did not realize is that the crying and related responses can continue much longer than the killing, even when the killing is done at a self-protective distance by hired hands. Children may well experience very negative effects with respect to their sense of what a parent or authority figure feels willing and able to do. We may simply be too self-centered in our dealings with animals with whom we should see ourselves as sharing a world. But anthropocentrism itself may prove to be not a hard enough shield to safeguard oneself and, even more so, one's vulnerable loved ones from the lasting effects of violent and callous behavior. I think the child asked the right question, but the parent's response to it did not meet its demands. Indeed, if the "culling" program is implemented, it is difficult to estimate the impact of dead or dying deer on vulnerable witnesses, notably children, and it is utterly unrealistic to think that any such program will not be fallible and allow for injured deer to be

seen, heard, or even encountered by unwitting passers-by. (Apparently, the plan is for the killing actions to take place in undisclosed places at unannounced times, which might also harm unknowing passers-by.) Even frangible bullets would be dangerous in a highly populated area. And the net-and-bolt option, which is apparently and rather incredibly being seriously considered, would result in utterly panicked deer in nets being assaulted with captive-bolt guns that are difficult enough to manage with accuracy in a slaughterhouse where the animal is fixed securely in place. (A trustee actually told one of us at the Dec. 6 public hearing that someone would be on either side holding a deer about to be shot, as if this procedure could be in the least effective with a large animal that is panicked and struggling for its life!) One could adduce other reasons why it is highly contestable and even facile to conclude that there would not be significant impact on a community or neighborhood from such activities, and the restrictions and policing that would be necessary to contain risk as well as the likelihood of protesters are an added cost of the plan that is very difficult to estimate in both financial and human terms.

A related point is that the introduction and normalization of systematized mass killing itself is likely to produce a significant and manifestly negative change in the character of a community. In this case it also raises a question about a community's structure of governance. It is well known that a portion of the community find the proposed plan both morally objectionable and extremely upsetting, even potentially traumatic, but elected officials are choosing to go forward with little apparent consideration of visible and vocal opposition. This itself is a very important change in the character of the community in terms of its culture of governance. Only a few short years ago, the mayor and the trustees would not implement a plan that had blatantly divisive effects and that contravened the basic values of a significant portion of the community. To "blow off" that portion of the residents both marks a failure of practical wisdom and means that a community threatens no longer to be a community but instead becomes a house divided against itself in which one group temporarily holding power rides roughshod over another group in a matter of major significance.

Distrust and Division –

Besides the general effect of prevalent suspicion and mistrust, one impact on critics of the plan is disillusionment and the sense that there is no real democratic exchange, respect for the views of others, and a willingness to compromise on issues that are for some very basic. The mayor and trustees periodically allow residents to put forth very short "sound bites" of public comment at meetings and then proceed without willingness to seriously engage with the possibility of other solutions. Indeed, when another effort was made this fall to bring forward

a change in the fencing regulations that would address gardeners' concerns, one of the village trustees opposed it explicitly because he felt that if it passed the support for the deer-killing proposal would dissolve. Another trustee, who later obtained a variance for her own non-compliant fence, gave what I found to be utterly incoherent reasons why a more flexible fencing policy should not be democratically made available to the entire community.

In the case of certain board members and supporters of the killing plan, a sense of malaise may be one reason for the euphemisms to which they apparently feel constrained to resort. Such euphemisms cover reality in a rose-colored veil and block the recognition of what one is actually doing. Culling is killing. The plan is not a "remediation[ii]" proposal unless one believes there was some golden age to which the village can now magically return. (What calls for remediation at this point are damaged relations between neighbors.) Netting and bolting are not "normal livestock slaughter procedures for euthanizing deer[iii]," since animals in slaughterhouses are not caught in nets, raised up with other animals flailing wildly about, and shot at with bolts when not securely fixed in place. "Euthanizing" is entirely inappropriate for the kinds of action envisioned, and references to a decisive "solution" are both jarring in their historical resonances and misleading in their contemporary import. The only viable "solution" is to come up with ideas that do not set neighbors against one another and create an atmosphere of hostility and mistrust, including mistrust of those one is supposed to see as one's trustees. History provides many examples, some of them very recent, of the adverse political and social effects of resorting to misleading language and even of framing as facts what are mere surmises or even departures from the truth.

The lack of hard data and clear outcomes in this plan, indeed its seemingly inevitable failure as well as its exorbitant cost, cannot diminish suspicion or create good will. This is especially the case when there are obvious, less costly, and viable alternatives to the plan, one of them being flexibility with respect to the fencing policy that allows those who want to protect certain plants or areas to be able to do so. Mayor Supron and some of the trustees have attempted to denigrate the significance of opposition or protest in the community through a vague generality about the inevitability of oppositional voices, as if a backyard mass slaughter program were on the same level as any other "controversial[iv]" project, for example, painting one's mailbox a bizarre or off-beat color. But as the effect of the mere proposal of this program on our community has demonstrated, the life or death of other beings may well touch on basic values that affect one's relations with neighbors and the overall character of the community in profoundly significant ways.

Sincerely,

Dominick LaCapra
624 Highland Rd, Cayuga Heights
Bowmar Professor and Prof. of History
Cornell University

Co-signed by Jane Pedersen
502 Cayuga Heights Rd, Cayuga Heights

---

[i] Cayuga Heights Deer Management Plan DEIS Executive Summary, page 1-2

[ii] Cayuga Heights Deer Management Plan DEIS Existing Conditions, page 3-6

[iii] As reported in an article in *The Ithaca Journal* of December 3, 2010, page 3A, based predominantly on material provided by Mayor Kate Supron and also stated in the DEIS, Appendix H

[iv] Cayuga Heights Deer Management Plan DEIS, Executive Summary: page 1-5

December 16, 2010

Village of Ca
DEC 1

Letter 26

To: Cayuga Heights Mayor and Board of Trustees

Comments on Cayuga Heights Deer Management Plan Draft Environmental Impact Statement (DEIS)

Our names are Jenny Stein, James LaVeck and Eric Huang. We are all residents of Ithaca and we are offering our comments on the DEIS in our capacity as concerned citizens and on the basis of knowledge we have gained through our attendance at, and videotaping of, over 35 meetings of the Cayuga Heights Board of Trustees, all the public meetings of the Deer Remediation Advisory Committee, all the SEQRA meetings regarding the deer issue, and every public forum held on the deer issue since the existence of a government-sponsored plan to kill most of the deer of Cayuga Heights came into public awareness in August of 2008. Since that time, we have attended meetings to observe, to record documentary footage, and to express our opposition to such a killing plan, which inspired us to found a citizen's group called CayugaDeer.org. By profession, we are documentary filmmakers and educators who specialize in subject matter related to the journey of awakening conscience and the ethics of the human-animal relationship.

Issue #1: Request for correction of misinformation propagated by the Village government that significantly impacts the ability of the public to make accurate assessments of alternatives that may have less negative environmental impact than the proposed deer killing plan.

At the October 28, 2009 public hearing held to solicit community feedback on the Draft Deer Remediation Plan, I, James LaVeck, spoke during the allotted time and then handed in to the trustees the document reproduced on the following pages, which is self-explanatory. Following submission of this document, through my start-to-finish attendance at every meeting of the trustees since that time, I was quite surprised not to see any evidence that the information put forth in this document was either investigated or acted upon by the trustees, or that steps were taken to correct the significant misinformation that, in my opinion, was propagated amongst the public as a result of the situation described below.

On August 25, 2010, I filed a Freedom of Information Law Request to assess the status of the concerns that I and many other citizens had submitted for the record, both orally and in writing, at the 10/28/09 SEQRA hearing. Once again, none of the many documents my videotape record showed being handed in to the trustees at this hearing were returned in response to this request, increasing my concern. Finally, on On November 12, 2010, through another Freedom of Information request, I resubmitted the document below and requested any documentation indicating that the information it brought to light had since been investigated or acted upon by the trustees. Once again, to my surprise, no such documents were returned by the village.

Therefore, I am now bringing this matter to the attention of the trustees for the third time, and requesting once again that they investigate the validity of this information. Should they confirm it to be accurate, I am requesting they take immediate action to correct the substantial and significant misinformation that has been propagated amongst the people of this community as a result, such propagation having occurred, for example, through a mailing sent out by the Deer Remediation Advisory Committee in March of 2009 summarizing various options for addressing deer-human conflict. I also hope that the trustees will take seriously the implications of this in terms of the validity of the information upon which their currently proposed plan is based.

The SEQR process was created with the intent to facilitate informed decision making, and the clear requirement that decision makers take a "hard look" at alternatives with less environmental impact than the proposed plan of action. This requires access to qualified experts who can be trusted to supply accurate information about complex issues. When information offered by experts is misleading or inaccurate, the effect in the integrity of the decision-making process and especially the environmental review process can be devastating.

As documented in video record, on November 20, 2008, Dr. Paul Curtis, a professor with Cornell University's Natural Resources Department, made a presentation at a public meeting of the Cayuga Heights Deer Remediation Advisory Committee (DRAC). During this presentation he discussed his previous involvement in a deer population reduction program in Cayuga Heights and offered his analysis of various options for addressing the Cayuga Heights trustees' desire to reduce the current population of deer in Cayuga Heights. During this presentation, which included projection of slides and photos, Dr. Curtis also answered questions from trustees, members of the DRAC, and members of the public.

At the time of Dr. Curtis's presentation, members of the DRAC were comparing several potential methods of reducing the deer population in Cayuga Heights, including sterilization, immunocontraception, and killing. It was during his comments on the costs and efficacy of immunocontraception methods used successfully for two large scale management oriented deer contracepive projects, that Dr. Curtis made numerous statements whose accuracy has come under question. The numerous inaccuracies in Dr. Curtis's presentation had the cumulative effect of making it appear that the immunocontraception methods described for these two projects were grossly more expensive and grossly less effective than they have been documented to be in peer-reviewed publications that are quite well-known in the wildlife management field. These inaccuracies take on real significance in the context of Dr. Curtis's role as the principle scientific expert consulted by the trustees, and the central role played by Dr. Curtis's theories in the development of the trustee's proposed plan.

In response to Dr. Curtis's remarks at this November 20, 2008 presentation, we have reviewed the published literature and have sent Dr. Curtis's remarks to Dr. Jay Kirkpatrick, one of the scientists who had significant involvement with both of the above mentioned deer contraceptive projects. We requested that Dr. Kirkpatrick respond to each remark. With some reluctance he agreed to do this with the understanding that he is not advocating any form of management at Cayuga Heights. As a condition for responding to these remarks, he also made it perfectly clear that, while he has no interest in the Cayuga Heights issues, he does have an interest in making clear that deer contraception has been successful and that the real issues are social, cultural, economic and political, but not scientific. We chose Dr. Kirkpatrick from among several scientists who could have done this review because of his extensive experience with wildlife contraception over a 40 year period.

If the scientific expert upon whose research, consultation and advice the trustees based their plan presented information this inaccurate about an alternative approach with a lower cost and lower environmental impact than the one the trustees adopted with Dr Curtis's advice, and if Cornell research programs connected to Dr. Curtis are slated to receive over $270,000 dollars of funding from the Village of Cayuga Heights under the plan he helped develop, are the trustees not obligated to reconsider their entire plan as well as question the validity of all claims made and information supplied by Dr. Curtis?

James LaVeck
City of Ithaca

Originally submitted 10-28-09 at VCH SEQRA Hearing on Draft Deer Remediation Plan

Dr. Kirkpatric responds to representations made by Dr. Paul Curtis

To whom it may concern:

Below are excerpts from the video transcript of Dr. Curtis's 11-08 presentation to the Cayuga Heights Deer Remediation Advisory Committee. My comments on relevant transcript excerpts are in red, while Dr. Curtis's and other event participant's comments are in blue.

Cayuga Heights Mayor Gilmore: In what communities has sterilization worked?

Dr. Paul Curtis: Depends how you define "worked."

Mayor Gilmore: Effectively, measurably lowered deer populations to tolerable levels?

(Note: based on Dr. Curtis's reply, it is clear he understood Mayor Gilmore to be asking about immunocontraception, not sterilization)

Dr. Curtis: None that I'm aware of. Okay, the two studies that are often touted as the *[makes air quotes with his hands]* "success stories" for immunocontraception are Fire Island National Seashore, out on Long Island – they've done an immunocontraception program out there with PZP for about 10 years, and they have suppressed the growth, the population growth has been lowered dramatically. Numbers, depending on how you look at the data, are maybe slightly down, but not a huge amount.

Dr. Kirkpatrick comments: *See Rutberg and Naugle, 2008. Population-level effects of immunocontraception in white-tailed deer. Wildl. Res. 35:494-501. This published paper reports on a 60+% decline in the deer population on Fire Island communities where immunocontraception has been used for 16 years, not ten years as Dr. Curtis stated. 60+ % is a "huge" amount by anyone's standard.*

Dr. Curtis: The way they census deer out there – I've got some questions on their numbers, they do browse, pellet surveys, and that whole method is questionable to start with – that's what they're using.

Dr. Kirkpatrick comments*: On the Fire Island project the population study work was carried out by Brian Underwood, of the USGS at Syracuse, using distance sampling methods, not the methods described by Dr. Curtis.*

Dr. Curtis: So, at least they suppressed the herd, but they haven't really reduced it. They've still got way more deer on the landscape than they want, after 10 years of the program and spending well over a million dollars out there.

Dr. Kirkpatrick comments: *Again, 60+ % reductions were documented in peer-reviewed*

publications. No population goals were ever set for the Fire Island project, by the NPS or the Dept. of Commerce for a second project at the National Institute of Standards and Technology (NIST), in MD. . Who then, is the "they" Dr. Curtis referred to as having "way more deer on the landscape than they want? Certainly not the citizens of Fire Island National Sea Shore. The costs at the Fire Island Sea Shore Project, which I directly tracked myself for the first two years of the project ('93 and '94), never exceeded $10,000 for each year. There is simply no factual basis that a million dollars was spent.

Dr. Curtis: The other place they cite as a success is the National Institute of Technology and Standards [sic] down in Virginia [sic]. There's a semi-captive herd in fence, again PZP *[an immunocontraception vaccine used by Dr. Kirkpatrick]* was used for many years. There's actually some relatively good data, the deer numbers were reduced a bit there. But again, there's still more than the goal density.

Mayor Gilmore: They're fenced in?

Dr. Curtis: They're – at least part of the facility is fenced.

Mayor Gilmore: Part of it.

Audience member: Where was that?

Dr. Curtis: The National Institute of Technology and Standards. I think it's Front Royal, Virginia.

Dr. Kirkpatrick comments: NIST is located in Gaithersburg, MD, about 90 miles from Front Royal. It is the typical urban deer situation, with highways, dense residential areas and continued commercial development surrounding it. The herd at NIST can leave or enter the facility at will through the many gates. One buck, for example, showed up at Dulles Airport, 40 miles away. Hence, in this context, the use of the term semi-captive is extremely misleading. The use of this term ignores fundamental white-tail deer social organization and behavior. These animals live in matriarchal family units and if they are not harassed and adequate nutrition is available, will spend their entire lives in a one-half to one square mile area. But their doing so does not make them 'semi-captive'.

Deer Committee Chair Kate Supron: What's the life expectancy of a doe, if they're not hit by a car?

Dr. Curtis: At least 12 years, some will get a little bit older. So that's, again, why we don't see the immunocontraceptive vaccine as being a good solution, because that means we're going to have to handle that deer six or eight times in her lifetime – *minimum* -- to shut down her reproduction. That's why you're better off doing the spay the first time and not have to worry about it for 12 years.

Dr. Kirkpatrick comments: Immunocontraception was developed with a goal of no handling of the animals, for ethical reasons. An animal can be darted six or eight times in her life without capturing her. This issue, of handling, or no handling is an animal welfare issue and not a scientific one.

Kate Supron: And when – at what age do they breed, and for how long?

Dr. Curtis: It's variable. Depends on – it depends on quality of habitat. So where you've got a really good quality of habitat here, some of the earlier born female fawns – maybe as many as 20% of the earlier born female fawns – will breed as fawns. Invariably almost all the yearling deer – the year-and-a-half-old deer – will breed, and usually most yearling deer will have a single fawn the first birth. And then once a deer is two-and-a-half years old or older, and a full doe, then she will typically have two fawns every year for the rest of her life. And occasionally, when resources are real good, the winters are mild, she may have three. We occasionally see triplets. So, if you start looking again at the population growth equation, you've got annual first breed – fawns or yearlings for the most part. You've got a long-lived animal that's going to live 12 years, and so to keep the population stable, for a 12-year-old female deer, only one of her female fawns needs to survive during her lifetime in order to keep the population stable. And what are the chances of that? Not very good.

Dr. Curtis: So what have we learned from immunocontraception? Both the vaccines effectively inhibit reproduction for individual deer. They're very costly, given the field protocols you gotta do.

Dr. Kirkpatrick comments: The immunocontraceptive costs $24/dose (the cost of production); $2.15 for the dart; fifty cents for the adjuvant. Labor is the only other significant cost. Dr. Allen Rutberg, at Tufts University School of veterinary Medicine and the lead author in the scientific publications describing these two projects, did an exhaustive analysis of labor for deer contraception. Contraceptive darting time per deer ranges from lows of 2.7 - to highs of 17 hrs per deer. If you use an average of about 10 hrs per deer, and you want to treat about 100 deer, and you pay the darter $15/hr, the cost is about $15,000 per 100 deer, which is somewhere in the neighborhood of what we found at Fire Island (except the time per deer was lower there). (see Rutberg. 2005. Deer contraception; What we know and what we don't know. Humane Wildlife Solutions. A. Rutberg (ed). Humane Society Press, Washington DC, Pp. 23-42).

Dr. Curtis: And a couple of other things we saw – with the PZP vaccine, because the female deer weren't becoming pregnant, we saw a lot of increased activity. The buck continued to try to breed those deer up until March, when photoperiods shut down their estrus cycling. Normally with deer -- typically the majority of adult does would get pregnant right on their first estrus in November – first week in November is about the

peak around here. For those does that don't become pregnant on the first breed, they'll cycle again in December, and most of the does at that point will get pregnant and conceive on their second breeding. And then usually by the time that you're at the end of December, there aren't any fertile does left. But with the PZP-treated female, because they can't become fertile, photoperiod keeps that cycling going. And so they cycle based on day length, and they cycle again in January, and they cycle again in February, they cycle again in March. So you've got bucks chasing does all winter long, that you wouldn't normally have. So that could mean potentially deer running in front of cars. We know most deer-vehicle accidents occur during the peak of the rut in November. There's good data that show that. And a lot of these things need to be looked at, I think, if we're going to get into using these vaccines in a management phase over the long term.

Dr. Kirkpatrick comments: The study referred to here was done at Front Royal, at the Smithsonian's Conservation and Research Center (see McShea et al. 1997. The effect of immunocontraception on behavior and reproduction of white-tailed deer. J. Wildl. Manage. 61:560-569.) What was discovered was that (1) treated deer did extend their breeding season, (2) older bucks did all the normal early breeding and then quit, (3) younger bucks (spikes and fork horns) followed the estrous does around but not in any form of frenzy, (4) the following summer, the non-pregnant treated does were significantly heavier than the non-treated does with fawns. A subsequent study showed that by fall, weight differences disappeared (see Walter et al. 2003. J. Wildl.Manage. 67:762-766). The point here is, that a "frenzy" of activity does not result from the extended breeding season. And in fact, there is published data to show that, in treated populations (NIST in this case) deer-car accidents decline as population declines. (see Rutberg and Naugle 2008. Human-Wildlife Conflicts 2:60-67.) If immunocontraception and the extended breeding season resulted in more car-deer collisions, why did the rate go down at NIST?

End of video transcript excerpts/comments

Jay F. Kirkpatrick, Ph.D.
Director
The Science and Conservation Center
2100 South Shiloh Road
Billings, MT 59106
406-652-9719 fax (406) 652-9281
jkirkpatrick@montana.net

Biography of Jay F. Kirkpatrick, Ph.D.

Dr. Kirkpatrick grew up in rural Bucks County, Pennsylvania and earned the Ph. D. in reproductive physiology from the College of Veterinary Medicine at Cornell University in 1971. For 23 years he taught physiology at Montana State University-Billings and for seven of those years he served as Dean of the School of Arts and Sciences. Along the way of this career Dr. Kirkpatrick worked as a ranger for the National Park Service for seven years, in Rocky Mountain National Park, was a senior scientist for Deaconess Research Institute, and carried out post-doctoral studies at the veterinary schools at the University of Pennsylvania and the University of California at Davis, and at the Center for Reproduction in Endangered Species at the San Diego Zoo. He also held an academic appointment as adjunct associate professor in the Department of Population Health and Reproduction, School of Veterinary Medicine, University of California at Davis from 1992 to 2005, and is currently the Director of the Science and Conservation Center at ZooMontana, in Billings. Dr. Kirkpatrick has served on the National Animal Damage Control Advisory Committee for the Secretary of Agriculture. He is a member of the Contraceptive Advisory Group for the Association of Zoos and Aquariums, and has served on the Montana Wolf Management Council.

For the past 38 years Dr. Kirkpatrick has carried out research on fertility control for wild horses and other wildlife, for the purpose of developing non-lethal and humane methods of controlling wildlife populations, and on non-capture methods for studying reproduction in free-ranging wildlife species through the use of urinary and fecal steroid hormones. His work has included wild horses, African elephants, white-tailed deer, water buffalo, bison, elk and more than 100 species of captive exotic animals in zoos. Dr. Kirkpatrick is probably best known for his contraceptive research with the wild horses of Assateague Island, for the study of reproduction in the bison of Yellowstone National Park, and more recently for African elephant contraception in the Republic of South Africa.

He is the author of more than 100 scientific papers and book chapters, of which 54 relate to the biology of wild horses or fertility control of this species. He is also the author of *Into The Wind: North America's Wild Horses.* In 2001, the reproductive biology laboratory of the new veterinary center for Kruger National Park, in South Africa was dedicated in his name. In 2002, he was the recipient of the National Park Service's Researcher of the Year for the Northeast Region, for his contraceptive work with the Assateague wild horses, in 2004 he was awarded the Montana Academy of Science's Mershon Award, for outstanding contributions in the field of science in Montana, and in 2005, Dr. Kirkpatrick was inducted into the Wild Horse and Burro Exposition Hall of Fame.

He is best summarized by a comment by Dr. Ron Keiper, Distinguished Professor of Biology at Penn State University, himself a noted wild horse researcher. He says, "*Dr. Kirkpatrick is a champion of wild horses. To their cause he has brought the cold eye of*

science and the warm heart of compassion. To him wild horses have value simply because they are magnificent creatures that have survived all that nature and man has thrown at them."

Dr. Kirkpatrick lives with his wife Kathie in Billings, Montana, with their two dogs Angus and Farley and cat Savannah.

Issue #2: Request for description of the action (deer killing program) sufficiently detailed for the public to evaluate the environmental impacts that will result

Cayuga Heights' Deer Management Plan DEIS Executive Summary: page 1-5 puts forth a budget of $750,000 over the course of the first five years of the deer killing plan. While carrying out calculations about the cost of the mass killing of deer is in itself disturbing, based on the claimed current level of deer population of 160-200, the target population number of 30, and the estimated figures given for the costs of either sterilizing ($1,100 each) or killing ($500 each) deer, along with a generous allowance for the cost of killing deer immigrating in from other municipalities after most of the deer are killed in the Village, it appears that no more than roughly $150,000 to $250,000 could conceivably be needed to carry out these activities, leaving $500,000 - $600,000 of the total budget allocated to 1) contingencies, 2) the salary of a "deer management director", and 3) an item described as "modeling/tracking study." A "Draft Plan Cost Analysis" document developed by the Village government and obtained through an October 15, 2009 Freedom of Information request, included two years of salary for a deer management director at $30,000 per year. Factoring this in, between $440,000 and $560,000 of the $750,000 put forth in the DEIS will be left to cover contingencies and an item described as a "modeling/tracking study." Based on the Draft Plan Cost Analysis document, the "modeling/tracking study" is an activity for which $275,000 is budgeted over the 10 years of the projected plan, of which $225,000 would be expended in the first five years. According to statements made by Trustee Robert Andolina at an 8/24/09 meeting, these funds are budgeted to pay a "PhD from Cornell" to carry out these vaguely specified duties.

"Draft Plan Cost Analysis" for Cayuga Heights' deer management program, received through 10/15/09 Freedom of Information Request

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Sterilized Deer	$ 36,000.00	$ 3,600.00	$ 3,600.00	$ 3,600.00	$ 3,600.00	$ -	$ -	$ -	$ -	$ -
Culled Deer	$ -	$ 70,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Deer Management Professional	$ 30,000.00	$ 30,000.00	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Modeling/Tracking/Study	$ 50,000.00	$ 50,000.00	$ 50,000.00	$ 50,000.00	$ 25,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00
Contingency	$ 50,000.00	$ 50,000.00	$ 50,000.00	$ 50,000.00	$ 50,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00	$ 10,000.00
Indirect Cost Rate (CALS)	$ 12,900.00	$ 8,040.00	$ 8,040.00	$ 8,040.00	$ 4,290.00	$ 1,500.00	$ 1,500.00	$ 1,500.00	$ 1,500.00	$ 1,500.00
Total Program	$ 178,900.00	$ 211,640.00	$ 111,640.00	$ 111,640.00	$ 82,890.00	$ 21,500.00	$ 21,500.00	$ 21,500.00	$ 21,500.00	$ 21,500.00
PV Program	$ 804,210.00									
	0.00%									
Sterilized Deer	30	3	3	3	3	0	0	0	0	0
Culled Deer	0	140	0	0	0	0	0	0	0	0
Cost to sterilize per deer	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00	$ 1,200.00
Cost to cull per deer	$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00
CALS Research Indirect Charge	15%									

In order for the public to be able to evaluate the potential environmental impact of an action, the description of the action offered must be of sufficient detail for us to be able to clearly understand what sort of activities will be carried out in the community, where and when they will be carried out, by whom, and for what purpose. As the DEIS is written, this information is completely omitted for activities substantial enough to comprise 30% of the project's budget. Further, in a July 16, 2009 email (returned in a group of documents received in response to a November 23, 2009 Freedom of Information request), Paul Curtis, the principal scientific advisor to the trustees and architect of the deer killing plan, said "Immigration is extremely difficult to measure, and little is published on this topic. The situation in VCH would provide a unique case to actually measure immigration rates if a known number of adult females were tagged, and all other deer were removed. I don't think such a field experiment has ever been conducted previously." This confirms how fundamentally the deer killing program is an "experiment," which only emphasizes the obligation of the trustees to include detailed information about the nature and purpose of the activities to be performed under the rubric of "study." These activities are of such a scope to require the disbursement of a substantial portion of the budget, yet no details

whatsoever are specified. Further, based on the limited information available, these activities appear to bear no essential relevance to the accomplishment of the goals set forth in the DEIS for the action.

The omission of this information is inexplicable, particularly given the level of interest local citizens have demonstrated in this part of the Draft Deer Remediation Plan prior to release of the DEIS. At September 13, 2010 Board of Trustees meeting, Catherine Stein, a VCH resident, asked specifically what the $275,000 listed in the "Draft Plan Cost Analysis" for "Modeling/tracking study" would actually pay for. No explanation for the duties to be performed for this sum of money, or the justifications for the inclusion of such research duties in a tax-payer publicly funded program were offered to Ms. Stein at that time by Mayor Supron or any of the other trustees. At the next meeting of the trustees, on October 12, 2010, another VCH resident, Guy Tabacchi, inquired as to what these funds were intended to pay for, and again, Mayor Supron would not answer this question in a public forum. At the next meeting of the Trustees on November 8, 2010, Catherine Stein again raised this issue, and again, was not given an answer. Furthermore, two Freedom of Information requests produced no further details about the basis for this figure.

We therefore request that the trustees take the necessary steps to supply the public with the detailed information which has been omitted from the DEIS for unknown reasons and is clearly necessary to understand the nature of the activities associated with the major budget item of "modeling/tracking study." We further request that that the public then be given sufficient time and the opportunity to comment on this new information prior to the preparation of a final Environment Impact Statement, pursuant to New York State environmental law.

Issue #3: Request that data be collected to make a realistic assessment of ecological dynamics in the Village in order that a scientific assessment of the impact of the deer population on other species may be developed and tracked over time, and that once this data is collected and analyzed, full consideration be given to alternatives for promoting "biodiversity" that have less negative impact than the proposed deer killing plan

In the DEIS, it is claimed that the presence of deer is having a negative effect on "biodiversity" in the Village, to the point that over 400 species are specifically listed in this context, the clearly intended implication being that killing most of the deer in the village will have a correspondingly positive effect on these species and hence, enhance the Village's "biodiversity." No Cayuga Heights-specific data is offered to support this argument. Further, in the DEIS it is acknowledged that deer are a keystone species, emphasizing their centrality in the Village's ecology and indicating that their removal will have numerous and complex implications. To assume that this action has no significant impact, or that the impact will only be "positive," is nonsensical. Additionally, as others have pointed out, the use of the term biodiversity in the context of an almost completely developed 2 square mile municipality borders on being absurd, or even disingenuous.

This fundamental misuse of basic biological concepts notwithstanding, in reading the DEIS, it is clear that the trustees have failed to consider at all an alternative to the wholesale prevention of species loss with far less extreme negative impacts than an annual backyard mass slaughter of deer. Freedom of Information Law requests submitted on 8/25/10 and 11/12/10 returned no documentation of: 1) Any efforts the Village has made in the last 5 years to assess the presence of any of the over 400 species of concern listed in the DEIS at any sites slated for development, or 2) Any cancellation or even modification of even one development project for the purpose of protecting even one of the over 400 species of concern listed in the DEIS that are implied, without the presentation of Cayuga Heights specific data, to be threatened or in some way harmed by the presence of deer in the village.

It is well documented that human development of the landscape is exacting a heavy price on, and even devastating, the environment worldwide. Therefore, until a systematic scientific study of the ecology of the Village is conducted over a series of years, it is not even possible to say whether the number of species is increasing or decreasing in the Village, what effect deer may be having on whatever change is occurring, and why other factors, such as development projects and climate change are not dramatically more responsible for undesirable changes than local deer. In the meantime, in the absence of even the most basic location specific data collection and scientific analysis, it seems clear that regulating development and/or fencing in environmentally sensitive areas would be viable alternative approaches to reducing species loss and to actively fostering species diversity than the proposed plan. Furthermore, such efforts could bring positive results without any of the destructive impacts that come along with implementing a divisive, violent program that results in destroying most of the members of an indigenous species.

Issue #4: Request that full consideration be given to alternatives addressing the risk of Lyme disease that have less negative impact than the proposed deer killing plan.

In the DEIS, it is stated that decreasing the risk of Lyme disease is one of the objectives for the implementation of a program to kill the majority of the deer who live in the Village. (Cayuga Heights Deer Management Plan DEIS Executive Summary: page 1-6). Numerous recent scientific studies have conclusively refuted the idea that killing deer is an effective approach to reducing the incidence of lyme disease. Indeed, neither the Tompkins County Health Department nor the American Lyme Disease Foundation recommend the killing of deer as a strategy for reducing the risk of Lyme disease. Instead, our local health department recommends preventive practices including such things as the use of proper attire when walking in tall grass and developing a greater ability to recognize tick bites to insure prompt treatment. The fact that the Village trustees have been publicly discussing the risk of Lyme disease for over two years now in the context of promoting a deer killing program, and in that time, have not implemented a Village-wide education program about Lyme disease based on our local health department's guidelines, is testimony to how little consideration the trustees have given to this low-cost, yet highly effective alternative to a deer killing program. We hereby request that the trustees take action to redress this deficit and make a serious evaluation of this alternative to the deer killing program that offers true preventive value and that will clearly have negligible negative impacts in comparison to a deer killing program.

Issue #5: Request that full consideration be given to alternatives for reducing the rate of deer-vehicle collisions that have less negative impact than the proposed deer killing plan

In the DEIS, it is stated that decreasing the rate of deer-car collisions is one of the objectives for the implementation of a program to kill the majority of the deer who live in the Village. (Cayuga Heights Deer Management Plan DEIS Executive Summary:'page 1-2). Roadside wildlife warning reflector technologies are being used all over the world, and studies show them to be effective. According to the traffic engineer of Owego, NY, the "Strieter Lite" system reduced deer-vehicle collisions by nearly 100% in the areas it was installed. During early meetings, this technology was summarily rejected by the Deer Remediation Advisory Committee for "aesthetic" reasons, which seems unjustifiable in comparison to the importance of potentially preventing automobile accidents. Another alternative, the Roadside Animal Detection System, uses sensors to detect large animals approaching a roadway, and sends out a warning signal alerting drivers to reduce their speed. One study found that these systems can reduce collisions up to 82%. Since 2008, the trustees have been informed and regularly reminded of the existence of these options, and yet, the DEIS offers no serious consideration of this

low-impact, reasonably priced and highly effective alternative to the annual mass slaughter of the local deer herd. Local citizens have also frequently suggested at meetings that speed limits be lowered, speed bumps be installed, and that speed limits be more strictly enforced. These viable alternatives are also given no serious attention in the DEIS.

We urge the trustees to carefully consider the requests we have made and the information we have brought to light. We believe the evidence and argument against a deer-killing program in Cayuga Heights is overwhelming, and that our entire community will be well-served by the abandonment of this divisive and violent proposal. In contrast, the numerous non-lethal alternatives presented over the last two years by many people in our community offer a wonderful opportunity to bring us all together behind an approach that focuses on reducing deer-human conflict, rather than eliminating deer from our environment.

Sincerely,

Jenny Stein

Jenny Stein, 41-year resident of Ithaca

James LaVeck

James LaVeck, 25-year resident of Ithaca

Eric Huang

Eric Huang, 9-year resident of Ithaca

Mary Mills

From: Carl F Moravec [cfm2@cornell.edu]
Sent: Friday, December 10, 2010 6:01 PM
To: mayor@cayuga-heights.ny.u
Cc: Mary Mills; Carl F Moravec
Subject: From the DEER, please give us an option...

Hi, (Dec. 10, 2010)

If you please, please **"TRAP"** the excess deer from Cayuga Heights (I know this is possible), release them to other lands / landowners in Tompkins County who pre-sign up to accept one / two or more deer
to be released onto their private owned property. The DEC cannot be against this?

The deer will have to adapt – they are good at that.

They may not make it in their new surroundings, BUT they will have a 2nd chance.

This has to be a better option than a bullet (bolt) in the head with zero chance of survival.

The Heights will have less deer.

Tompkins County property owners only who are willing (maybe include State Land) will "adopt"-A-Deer.

Costs: Deer cages (maybe Cornell will loan some to you?) Else, buy some-to be used year after year as the need arises.

Costs: Someone to bait & check & transport the deer to their new homes in the county.

Costs: Far less than sterilization/killing(culling).

+Plus: Move the deer cages/traps around – Use where ever the biggest concentration is.
+Plus: I think the public will go for this? This is a way to make everyone happy including the deer!

Depends on someone asking for 'Deer Drop – off points with Tompkins County – I'll take a couple 'transplants!'.

Please give them a 2nd chance – I feel it's a far better solution than what is currently in store for them.

Please give the deer a chance to live and survive in the wild, as that is where they belong.

Carl Moravec

Mary Mills

From: Victor Nee [victor.nee@cornell.edu]

Sent: Sunday, December 05, 2010 8:46 PM

To: Dominick C LaCapra

Cc: Carol Warshawsky; Kate Supron; Mary Mills; Steve Shiffrin; Bob & Ginny Powers; Victor Nee; Jane V Pedersen

Subject: Re: "Deer Management" Plan--for distribution to the Village Trustees!!

Dear Kate and Village Trustees,

We also share the views expressed below. The argument for culling the Village deer population is neither persuasive nor cost-effective. Deer from the surrounding area will only replace those culled at considerable expense to the taxpayer and residents of the Village.

Research suggests that the "net-and-bolt" method causes unnecessary suffering in wild animals who will be active and struggling at the time of shooting.

Moreover, clearly deer are driven in greater numbers into Cayuga Heights as wooded areas have been disappearing in the face of the type of development we have seen in the Sapsucker Woods area. We need to have more discussion of the broader context surrounding the increase of the deer population.

As a social scientist, Victor nee finds it tempting to write an article about a Village that spends a considerable sum of taxpayers' money to hire professionals to kill deer with the so-called "net-and-bolt" method. A detailed investigation of the role of a small, motivated group, its disregard for village opinion, a careful account of the method of killing, and the lack of visible results would make a worthy project for social journalism of general interest beyond the Village of Cayuga Heights.

Sincerely,

Victor Nee and Brett de Bary

On Dec 5, 2010, at 10:53 AM, Dominick Lacapra wrote:

> Dear Kate and village trustees,
> We very much agree with the message you have just received from Carol Warshawsky. It expresses the common sense many of us share. You are obdurately pursuing a plan that is very costly, will not work. and will cause suffering to animals and dismay to those who find the plan senseless and callous. Cayuga Heights is not a bounded ecosystem like the Galapagos Islands. Trapping in nets one or more terrified deer and shooting bolts at them is not in the least "normal" slaughterhouse procedure. And the entire PR campaign has been characterized by the use of obfuscating euphemisms. Please reconsider what you are doing and go in the direction of what would indeed be a project of "remediation," including the remediation of tense hostile feelings in the village.
> Sincerely,
> Dominick LaCapra and Jane Pedersen
>
> On 12/5/10 12:27 AM, Carol Warshawsky wrote:

Cary Institute
of Ecosystem Studies

Box AB, 2801 Sharon Turnpike
Millbrook, New York 12545-0129
Telephone 845-677-5343
FAX 845-677-5976

Telephone (direct dial) 845-677-7600, ext. 136
E-mail: ROstfeld@caryinstitute.org

Senior Scientist
Richard S. Ostfeld, Ph.D.

6 December 2010

To: Village of Cayuga Heights Board of Trustees
Subject: Draft Environmental Impact Statement, Cayuga Heights Deer Management Plan

I am a research scientist who has devoted much of the past twenty years to understanding the ecology of Lyme disease and other tick-borne infections (see http://www.ecostudies.org/people_sci_ostfeld.html). I have carefully read all sections of your DEIS pertaining to the potential impacts of management options on ticks and tick-borne disease. The DEIS contains many inaccurate and unsupported statements about relationships between deer, blacklegged ticks (incorrectly called "deer ticks"), and Lyme disease. For example, page 2-10 incorrectly states that linear correlations exist between deer and ticks. A comprehensive review of the scientific literature on the relationship between numbers of deer and numbers of ticks reveals that the majority of studies find no statistical correlation at all (see: Ostfeld, R.S. 2011. Lyme disease: the ecology of a complex system. Oxford University Press, New York.). The lack of a correlation derives from the following facts: (1) deer do not infect ticks with Lyme bacteria, and actually reduce the infection prevalence in tick populations; (2) adult blacklegged ticks feed on at least 27 different species of mammals and are not specialists on white-tailed deer; (3) when deer populations are culled, ticks crowd onto the remaining deer, resulting in similar total numbers of tick meals; and (4) even when deer affect the number of eggs laid by adult ticks and resulting abundance of larvae, numbers of larvae do not predict numbers of nymphs (nymphs are responsible for transmitting Lyme disease to people).

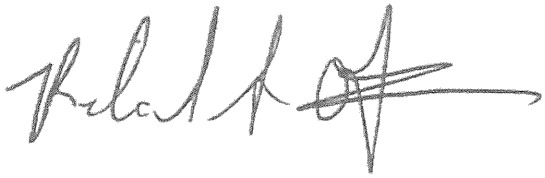
On page 3-5, the document cites the Monhegan Island (Maine) study to project what might happen in Cayuga Heights. This is misleading. On Monhegan Island, the deer herd was hunted from 100 to zero individuals. No other host animals for the adult stage of the tick were present on the island. Therefore, with no other host on which to

complete their life cycle, the blacklegged ticks declined dramatically. But when deer have been culled on mainland sites, management never achieves extirpation of deer, and the remaining deer plus many other hosts support adult ticks. Therefore, control of ticks is weak to nonexistent. Moreover, although mention is made of deer thresholds in the non-peer-reviewed literature, no scientific data support the existence of a deer density threshold below which ticks decline to low numbers. Scientific literature on which my statements are based can be found in the book cited above.

I refrain from commenting on other arguments concerning the benefits of culling deer. However, to the extent that the justification is based on the notion that reduced Lyme disease incidence will result, the document is deeply flawed.

I would be happy to address questions should any arise.

Sincerely,



Richard S. Ostfeld, PhD
Senior Scientist

Tufts UNIVERSITY

CUMMINGS SCHOOL OF
VETERINARY MEDICINE

Center for Animals and Public Policy

15 December 2010

Village of Cayuga Heights Trustees
836 Hanshaw Road
Ithaca, NY 14850

Re: Draft Deer Management Environmental Impact Statement

Dear Trustees:

I am a scientist with 20 years' experience dealing with urban deer issues and carrying out research into non-lethal methods of suburban deer population control. I have several concerns and comments regarding the information that the Trustees are using to make decisions about a deer management plan for the Village.

In building a case for taking action, the DEIS makes clear that it is the impacts of the deer, rather than their numbers, that should shape management actions. However, the objectives of the proposed management effort are expressed only in terms of deer numbers. No targets are set for reductions in deer-vehicle collisions, reductions in impacts on ornamental plantings, reduction in Lyme disease rates, or restoration of biodiversity. Indeed, because the Village appears to have no information at all on deer impacts on ornamental plantings or on biodiversity that are specific to the Village itself (or even plant inventories within the Village's small natural areas), such targets are currently impossible to set. Likewise, although the DEIS waves the Lyme disease flag, it presents no site-specific data related to Lyme disease incidence or risk, and consequently concedes any prospect for measuring reduction in disease risk associated with the proposed deer management action.

In my view, accurate deer population numbers are important for the development of management plans mostly because they define the scope of deer population management. Because there has been no population assessment for four years, there remains much uncertainty about the number of deer present, and hence about the outcome of any deer reduction effort. Extrapolation of wildlife population growth rates into the future is purely speculative, and the further into the future one extrapolates, the more speculative it is. In Cayuga Heights, where deer population estimates apparently were stable between 2002 and 2006, there is certainly no sound basis to postulate a 10% increase over the four years that followed.

From a population management perspective, the DEIS commits a serious oversight in completely omitting any reference to less invasive methods of controlling fertility in deer. There are two

200 Westboro Road, North Grafton, MA 01536
TEL: 508.839.7991 | FAX: 508.839.3337

injectable immunocontraceptive vaccines that have been shown to be effective in deer: the porcine zona pellucida (PZP) vaccine, which I and my collaborators have been working on for more than 20 years, and GonaCon®, an EPA-registered vaccine that was developed by the USDA's National Wildlife Research Center. Safety, effectiveness, and population impacts in suburban deer have been extensively documented for PZP in particular, and recent technological advances have eliminated the need for annual retreatments (see especially Turner et al., "Controlled-release components of PZP contraceptive vaccine extend duration of infertility *Wildlife Research* 35:555-562 (2008); Rutberg and Naugle, "Population-level effects of immunocontraception in white-tailed deer," *Wildlife Research* 35:494-501 (2008): and Rutberg and Naugle, "Deer-vehicle collision trends at a suburban immunocontraception site," *Human-Wildlife Conflicts* 2:60-67 (2008)). There may ultimately be reasons for not choosing to employ either of these vaccines, but both deserve serious consideration in a legitimate EIS.

Finally, as a trained ecologist who values wildlife as wildlife, I find myself extremely disturbed by the proposal to capture and sterilize a subpopulation of wild deer and exterminate the rest. With this management model, the Village of Cayuga Heights aspires to reduce its wild deer population to a state of semi-domestication. I do not see much of a future for the coexistence of people and wildlife if even as progressive a community as Cayuga Heights cannot tolerate wildlife within its boundaries.

I strongly recommend that the Trustees take a harder look at the proposed management plan, better define their objectives to meet the community's legitimate concerns with deer, and further consider less invasive means for managing the Village's conflict with deer.

Sincerely,

Allen T. Rutberg, Ph.D.
Assistant Director
Center for Animals and Public Policy
Cummings School of Veterinary Medicine at Tufts University
508-887-4769
allen.rutberg@tufts.edu

Mary Mills

From: Laura Simon [lsimon@humanesociety.org]
Sent: Tuesday, December 07, 2010 1:41 PM
To: Kate Supron; Robert Andolina; Christopher Crooker; Stephen Hamilton; Elizabeth Karns; Diana Riesman; Beatrice Szekely; Mary Mills
Subject: Humane Society of the US letter re: proposed deer management plan

Attachments: letter_to_mayor_supron_of_Cayuga_Heights.pdf; Ostfeld_2011_Lyme.pdf

letter_to_mayo supron_of_Cayu... (5 MB) Ostfeld_2011_Lyme.pdf

Dear Mayor Supron and Village Trustees,
I have enclosed a letter outlining the HSUS's concerns with the proposed deer management plan. The HSUS would like to assist your efforts in creating a solid, effective and humane deer problem mitigation program as we have much expertise to offer. Please see the attached!
Cheers,
Laura Simon
Field Director, Urban Wildlife Program
lsimon@humanesociety.org <mailto:lsimon@humanesociety.org>
t 203.393.1050 c 203.314.3361
The Humane Society of the United States
CT Field Office - PO Box 3665 Amity Station- Woodbridge CT 06525 humanesociety.org
<https://webmail.hsus.org/exchweb/bin/redir.asp?URL=http://www.humanesociety.org>
<https://webmail.hsus.org/exchweb/bin/redir.asp?URL=http://twitter.com/HumaneSociety>

THE HUMANE SOCIETY
OF THE UNITED STATES

OFFICERS
Anita W. Coupe, Esq.
Chair of the Board
Jennifer Leaning, M.D., S.M.P.
Vice Chair of the Board
Walter J. Stewart, Esq.
Board Treasurer
Wayne Pacelle
President & CEO
G. Thomas Waite III
Treasurer & CFO
Roger A. Kindler, Esq.
General Counsel & CEO
Janet D. Fuke
Secretary
Andrew N. Rowan, Ph.D.
Executive Vice President
Operations
Michael Markarian
Executive Vice President
External Affairs

STAFF VICE PRESIDENTS
John Balzar
Senior Vice President
Communications
Patricia A. Forkan
Senior Vice President
International
John W. Grandy, Ph.D.
Senior Vice President
Wildlife & Habitat Protection
Constance Hammon Wolfield
Senior Vice President
Philanthropy
Holly Hazard
Chief Innovation Officer
Paul Prescott
Senior Vice President
Campaigns
Geoffrey L. Handy
Media and Online
Communications
Katherine A. Liscomb
Administration &
Animal Care Centers
Jonathan R. Lovvorn, Esq.
Animal Protection Litigation
Kathleen C. Miani
Investigations and Video
Miyun Park
Farm Animal Welfare
Nancy Perry, Esq.
Government Affairs
Robert C. Rong, Ph.D., SPHR
Human Resources &
Education Programs
Melissa Seidle Robin, Esq.
Field & Emergency Services
John M. Snyder
Companion Animals
Martin L. Stephens, Ph.D.
Animal Research Issues

DIRECTORS
Leslie Lee Alexander, Esq.
Patricia Marey Asip
Peter A. Bender
Eric L. Bernthal, Esq.
Barbara S. Brack
Anita W. Coupe, Esq.
Neil B. Fang, Esq., C.P.A.
Jane Greenspun Gale
Jennifer Leaning, M.D., S.M.P.
Kathleen M. Linehan, Esq.
Dwight L. Lowell, II
William F. Mancuso
Mary I. Max
Patrick L. McDonnell
G.I. Michaels
Judy Ney
Shamin Lee Patrick
Judy J. Pell
Marian G. Probst
Josh G. S. Rowland, Ph.D.
Milton G. Soyler
Walter J. Stewart, Esq.
John E. Taft
Andrew Weinstein
Fersia Wolfe
David O. Wilkinson, M.D.

Dec 8, 2010

Ms. Kate Supron, Mayor
Village Offices
836 Hanshaw Road
Ithaca, New York 14850

Dear Mayor Supron and Cayuga Heights Village Trustees,

I am writing on behalf of the Humane Society of the United States (HSUS), a national organization with over 800,000 New York members, to express our strong opposition to the use of net and bolt to kill wild deer, and to question assumptions pertaining to the lethal control aspects of the proposed deer management plan. At the same time, the HSUS commends the Village for its forward thinking in including sterilization as a vital component of the plan.

<u>The use of captive bolt for killing wild deer</u>

Captive bolt guns were designed for use on domestic animals in highly structured and controlled environments. The HSUS does not believe that net and bolt methodology can be used correctly and consistently enough in field settings to provide for the humane capture, restraint and killing of deer. A deer caught in netting panics and thrashes around, reacting not only to the restraint, but also to the perception of other impending threats to his safety such as approach and handling by people.

As stated by the American Veterinary Medical Association *Guidelines on Euthanasia* (June 2007), "Adequate restraint is important to ensure proper placement of the captive bolt. A cerebral hemisphere and the brainstem must be sufficiently disrupted by the projectile to induce sudden loss of consciousness and subsequent death." The AVMA points to those few contexts where penetrating bolt guns can provide euthanasia, if properly used and maintained –as being "in slaughterhouses, in research facilities, and on the farm when use of drugs is inappropriate." These conditions cannot be met in field settings with free-ranging deer when so many variables occur with restraint and handling. Accordingly, we cannot condone this procedure as humane.

<u>Lyme disease and hunting</u>

Killing deer will also not reduce incidence of human cases of Lyme disease, as demonstrated by an interview with a leading researcher in the Harvard Newsletter http://www.hsph.harvard.edu/news/features/features/kiling-deer-not-answer-reducing-lyme-disease.html and by the new authoritative text, Lyme Disease: the Ecology of a Complex System (2011), which points out how assumptions that reducing deer will significantly reduce the black-legged tick (see attached chapter) are fatally flawed. The fact that the tick is carried by over 125 hosts, plus dozens of scientific

studies, all underscore the futility of trying to control the disease by reducing numbers of one host. Health authorities such as the Centers for Disease Control (CDC) and World Health Organization don't recommend hunting to reduce the incidence of Lyme disease for the simple reason that it doesn't work.

Deer-car collisions

It seems counter-intuitive, but reducing the deer population won't necessarily result in fewer deer car collisions. For example, a county-wide study was conducted by the Virginia Department of Transportation to determine which factors are correlated with deer-vehicle collisions. The logistic regression indicated that deer density was either a non-significant factor or that deer/vehicle collisions were actually lower in areas of higher deer density. The conclusion was that "there is little evidence that increased deer harvest reduced deer/vehicle collisions (McShea et al, 2008, *Human-Wildlife Conflicts* 2: 110-121)." These kinds of data reflect the complexity of deer related problems and the need to make sure the remedy actually addresses the problem.

In closing, the HSUS applauds the city of Cayuga Heights for its progressive inclusion of deer sterilization in the proposed deer management plan. However, we strongly urge you to reject outright the use of net and bolt as a means of killing wild deer, as it is wholly inappropriate. The HSUS also encourages the city to reconsider the use of any lethal control in its proposed deer management plan.

Sincerely,

Laura Simon

Laura Simon
Field Director, Urban Wildlife Program
(203)-389-4411

Mary Mills

From: Barbara Stagno [bstagno@optonline.net]
Sent: Thursday, December 16, 2010 3:31 PM
To: Kate Supron; Mary Mills
Subject: Comment on DEIS for Cayuga Heights' Deer Management Plan
Attachments: Enterprise 8.6.10.pdf; Millburn AD Lyme collisions chart.doc

Received
Village of Cayuga Heights
DEC 1 : 2010

December 16, 2010

Ms. Kate Supron, Mayor
Village Offices
836 Hanshaw Road
Ithaca, New York 14850

Dear Mayor Supron and Cayuga Heights Village Trustees:

I am writing on behalf of In Defense of Animals, an international animal protection organization with more than 8,000 members in New York State. We are aware that the town of Cayuga Heights is considering exterminating deer locally using the net and bolt method. We strongly advise against using this method to kill deer as it has been shown to be a very inhumane method of inducing death.

Using the captive bolt gun on animals such as deer in a field setting is highly controversial and condemned by many humane societies and veterinary professionals, including Temple Grandin, a noted expert in humane animal agricultural practices. The main problem with netting and bolting deer in a field setting is the inability to properly restrain the deer to ensure proper placement of the bolt gun. It is not unusual for the animals to be struck multiple times in the skull before a fatal shot is established, thus compounding their suffering and stress greatly.

A study conducted in 1997 *demonstrated that deer who were immobilized and killed using a captive bolt gun exhibited blood cortisol levels that were *ten times higher* than deer killed by rifle shot. Blood cortisol, excreted by the adrenal glands under conditions of duress, is considered by scientists to be an accurate measure of an animal's physiological and psychological stress.

Humaneness of deer control is an important criterion for the public. Recently, the town of Hastings-on-Hudson, NY rejected a plan to kill deer using the net and bolt method after widespread opposition from town residents. After careful consideration, Hastings Mayor Peter Swiderski accurately observed that netting and bolting of deer would not be a one-time event and that he could not reasonably expect the community to tolerate such an extreme measure year after year. (See attached article.).

Please also note that many communities facing a perceived overabundance of deer have learned that lethal programs have not been the answer to their problems. Typical issues, such as deer-vehicle collisions, spread of Lyme disease and browsing on vegetation are best dealt with by methods that specifically address these problems. For example, road reflector lights and proper signage are more effective at reducing deer collisions than simply killing deer. When deer are

crossing at particular sites, there is often a reason, such as the need to get to a water source. Deer, even in smaller numbers, will continue to cross those sites if the need remains, which is why simply killing them is not the solution. Similarly, browsing on residential vegetation will continue even with lowered populations of deer. To address that problem requires the direct application of deer deterrents, of which there are many effective ones available. Gardening supply companies offer a range of products to address this problem.

Between 2000 and 2005, the Town of Millburn, NJ spent $177,329 to eliminate 85% of the deer population, but failed to achieve lowered deer-vehicle collisions or incidences of Lyme disease. (Lyme disease, in fact, increased). (Source: Humane Millburn. Attached) This demonstrates the need for a comprehensive program that targets each problem at the source, rather than simply relying on reducing numbers of deer.

Killing deer by itself is a simplistic and cruel means of dealing with a problem that is much broader in scope than simply numbers of deer. It is unrealistic to expect to live in a community that offers green space without encountering the wildlife that reside in those spaces. There are ways to mitigate deer human conflicts without killing them – in fact killing them is rarely the answer.

In closing, we reiterate our strong opposition to the use of netting and bolting of deer in Cayuga Heights and urge you to pursue humane and non-lethal methods of living peacefully with deer.

Very truly yours,
Barbara Stagno
New York Campaign Coordinator
In Defense of Animals

---

* Schwartz, JA, et al, 1997. Captive and Field Tests of a Method for Immobilization and Euthanasia of Urban Deer. *Wildlife Society Bulletin* 25:532-541.

Millburn Township's Deer Facts

	Lyme Disease Confirmed Cases (per Millburn Health Department)	Deer Population (per HotShot Aerial Surveys)	Millburn Deer Co (per Poli
1999 -Baseline; pre-culling		--	
2000	?	294	
2001	4	412	
2002	9	221	
2003	8	112	
2004	13	196	
2005	18	62	

A

Notes: Millburn spent $177,329 to eliminate 85% of deer; but failed to a
auto-deer collisions or Lyme Disease. Millburn Township Committee con
taxpayer money for extensive and inhumane killing, yet will not maintai
or add signage for road protection in the long-patterned *hot spots* of col

Register your opposition: netandboltcruelty@verizon.

Visit: netandboltcruelty.net

Paid for by HUMANE Millburn
a campaign of the Coalition For Animals, Somerville, NJ

Michelle Poppensiek

From: Doreentig@aol.com
Sent: Tuesday, December 14, 2010 2:48 PM
To: Mary Mills
Cc: Kate Supron
Subject: Public Comment,DEIS,Cayuga Heights Deer Mgmt Plan
Attachments: Tignanelli_PublicComment_DEIS_C.pdf

December 14, 2010

Memo To: Cayuga Heights Board of Trustees

Subject: Public Comment, DEIS, Cayuga Heights Deer Management Plan

Please accept the following public comment on the subject DEIS dated November 1, 2010. I am against the lethal methods of deer management outlined in the DEIS including, but not limited to, the net-and-bolt process. I ask that the following public comment be included as part of the official record.

1) Executive Summary makes connection between lack of food and "wasting disease". It is not clear what exactly is meant by "wasting disease". If Chronic Wasting Disease is meant, it should be noted that CWD is believed to be caused by an infectious protein or prion, not lack of food.

2) In Existing Conditions section, statements are made equating reduction of deer with reduction of tick-borne diseases with experts from Connecticut cited. However, Dr. Richard Ostfeld, Senior Scientist, Institute of Ecosystems Studies in Millbrook NY stated "in many Lyme disease zones, reducing the deer herd is unlikely to substantially affect tick abundance. Reducing mice is more likely to be effective" and "several recent studies in New York and New Jersey have found no connection between populations of deer and ticks." See below "Reducing Herds Won't Reduce Risks" by Dr. Richard Ostfeld and Dr. Felicia Keesing, biology professor at Bard College.

3) Description of Proposed Action states that 80 percent of people surveyed wish the deer population in Cayuga Heights would decrease. As the actual survey question was not provided, it is not clear if those surveyed were provided with description of proposed net-and-bolt process where deer would be trapped under nets and restrained while a captive-bolt gun was pressed against their heads and a retractable steel rod fired into their brains. Unless the procedure was fully explained to those wishing for a decrease, the 80 percent figure seems questionable.

4) Description of Proposed Action states that deer are impacting biodiversity. It should be noted that development results in habitat loss that negatively impacts biodiversity yet restriction of development to protect or restore biodiversity was not discussed in any detail or included as an alternative.

5) Potential Impacts states "deer may be shot over bait". It is not clear if the NYSDEC allows this or if NYSDEC requires that bait be removed for a time period before shooting is to occur.

Sincerely,

Doreen Tignanelli
29 Colburn Drive
Poughkeepsie NY 12603

Reducing Herds Won't Reduce Risks

Felicia Keesing is a biology professor at Bard College, and Richard S. Ostfeld is senior scientist at the Cary Institute of Ecosystem Studies.

Millions of people living in Lyme disease zones, including current patients (who can get infected repeatedly), will benefit from a better understanding of risk. With no vaccine currently available, imperfect diagnostic tests, and controversy over appropriate treatment, prevention is a critically important strategy, and avoidance of infected ticks is the most effective means of prevention. Our research is aimed at understanding where the hordes of infected ticks come from and why. This information is fundamental to prevention.

One theme is the role of deer in determining tick abundance. In the first 15 years after Lyme disease was discovered in coastal New England, several studies showed that many adult ticks feed on deer, and researchers surmised that deer were critical to the tick life cycle. When researchers eradicated deer from New England islands, tick populations crashed.

Unfortunately, nature has a way of being more complex than first thought.
The key to the Lyme disease problem seemed at hand. Unfortunately, nature has a way of being more complex than first thought. One complication is that adult black-legged ticks feed on raccoons, skunks, opossums, and other medium-sized mammals. When deer are scarce, ticks don't necessarily become scarce, because they have alternative hosts. Indeed, several recent studies (e.g., Jordan and Schulze, 2005; Ostfeld et al., 2006; Jordan et al., 2007 — see citations below) on mainland sites in New York and New Jersey found no correlation between deer and ticks.

Second, ticks and Lyme disease are rare or absent in parts of the United States (the Southeast, most of the Midwest) where deer are abundant.

Third, ticks are only dangerous if they are infected, and deer play no role in infecting ticks. Ticks become infected with the Lyme disease bacterium by feeding on small mammals such as white-footed mice, chipmunks, and shrews. And mice play the additional role of increasing tick survival — they are at the opposite extreme from opossums, which kill the vast majority of ticks they encounter. When our group compared the importance of deer, mice, and climate in determining the number of infected ticks over 13 years in southeastern New York State, mice were the winners hands down.

Other compelling reasons exist for controlling deer populations, such as reducing vehicle accidents and increasing forest regeneration. But, in many Lyme disease zones, reducing the deer herd is unlikely to substantially affect tick abundance. Reducing mice is more likely to be effective.

This is best accomplished by allowing natural predators like weasels, coyotes, foxes, and owls to do the job. And the best way to increase their numbers is to maximize the size of forest patches. A number of other ways of reducing risk are currently being tested by our group and others, including the use of natural products such as soil fungi to kill ticks without adverse environmental impacts and the use of vaccines against Lyme disease that can be delivered to wildlife.

Citations:

Jordan RA and TL Schulze. 2005. Deer browsing and the distribution of Ixodes scapularis (Acari: Ixodidae) in central New Jersey forests. Environmental Entomology 34: 801-806.

Jordan, RA, TL Schulze, and MB Jahn. 2007. Effects of reduced deer density on the abundance of Ixodes scapularis (Acari: Ixodidae) and Lyme disease incidence in a northern New Jersey endemic area. Journal of Medical Entomology 44: 752-757.

Ostfeld RS, CD Canham, K Oggenfuss, RJ Winchcombe, F Keesing. 2006. Climate, deer, rodents, and acorns as determinants of variation in Lyme-disease risk. PLoS Biology 4: 1058-1068.

Mary Mills

From: Constance Young [conncat@fairpoint.net]

Sent: Friday, December 03, 2010 11:15 AM

To: Kate Supron

Cc: Mary Mills

Dear Mayor Supron:

Pure and simple, the proposed bolt method of "culling" deer is cruel. If you aren't convinced that what I say is true, here is what some experts say about it:

Jack Schrier, a former member of the Fish & Game Council in New Jersey, where "Net and Bolt" is legal, wrote:

> *"the poor creatures do struggle, do scream, and do try mightily to escape their fate. That natural and instinctive activity makes it virtually impossible in many instances for the bolt to be used accurately with a single shot. Too often the bolt misses the target, followed by second and third attempts before getting the bolt into the deer. .. If this loathsome slaughterhouse killing method is employed in any town, it will debase the town and its good people."*

The New Jersey SPCA also condemned the barbaric practice, writing:

> *"The NJSPCA strongly believes that netting and bolting is both cruel and inhumane and is a practice that must be ended... The deer inside the net tend to thrash violently, often resulting in injuries, including broken limbs and antlers, and endure a significant amount of stress... The NJSPCA has reviewed various expert opinions, all of which concluded that netting and bolting of deer constitutes unnecessary cruelty... because deer are "flighty" animals, the netting process alone causes undue stress and panic. ."*

Please do consider these expert opinions and the outrage of many citizens within your communcity as well as the entire state..

Sincerely
Constance Young
Freelance Medical/Health Writer
Pine Plains, New York

YALE UNIVERSITY
School of Forestry
& Environmental Studies

14 December 2010

Board of Trustees
Cayuga Heights NY

Greeley Lab
370 Prospect Street
New Haven, CT 06511
oswald.schmitz@yale.edu

Dear Trustees,

I am, herewith, commenting on the plan to control white-tailed deer within the town limits of the Village of Cayuga Heights. In providing this comment, I wish to affirm that I am not being paid by anyone for this service. I am providing feedback in my capacity as an ecologist who has studied white-tailed deer for my PhD dissertation and subsequent research. I have published 6 peer-reviewed papers and book chapters dealing with white-tailed deer ecology and population management.

I have looked at all of the documents provided at the website for the draft environmental impact statement (DEIS) http://www.timmillerassociates.com/publicreview/cayugaheights/ . I am working under the understanding that this is the official document for which comment is request. Below I identify specific informational content in the documents and offer subsequent comment.

In the document 2.0 DESCRIPTION OF THE PROPOSED ACTION the proposed deer population control effort in the Village of Cayuga Heights (VCH) is based on the following premises. (1) Many studies in the past 20-25 years suggest that high deer densities affect plant species composition, biodiversity and forest regeneration (pages 2-2, 2-3). (2) A substantial deer density can significantly influence wildlife habitat and deer foraging can compromise the ability of an ecosystem to recover, leading to alteration of forest composition and structure (page 2-3). (3) Deer populations above 10 deer per square mile are undesirable if the management goal is to achieve maximum biodiversity (page 2-3). (4) To minimize losses of animal and plant diversity, the management target should be 30 deer or fewer within VCH, or a density of 15 deer per square mile or fewer (Page 2-4).

Comment:

Re: (1) The document is correct in stating that research over the past 20-25 years has examined how deer can affect species composition, biodiversity and forest regeneration. However, many of these studies are in a single location and could thus be conflated by human land use type and land-use history so that deer cannot be concluded to be a leading factor determining the impact in any one of these studies (see Rutherford and Schmitz 2010, Journal of Wildlife Management 76:1257-1263). Indeed, such conflation of land use on deer populations has been alluded to in 2.3 Project Background… which claims that agricultural practices and forest management has improved and expanded deer habitat and suburbanization of landscapes has created edge habitats preferred by deer (page 2-2).

Re: (2) It is correct that high deer densities can significantly influence habitat and forest composition and structure. However, our research (Rutherford and Schmitz 2010), conducted in a similar landscape as VCH, and includes several replicated town sites, again shows that these damage levels are unrelated to deer density per se across a wide range of deer densities. This means that lowering deer densities will not by itself lessen deer impacts on habitat and vegetation. Furthermore, the DEIS never provides criteria for quantifying and assessing damage levels that are acceptable or unacceptable. Hence, there are no a priori criteria to judge success of management aimed at lessening "damage".

Re: (3 & 4) The document is correct that deer densities above 10-15 per square mile can be quite damaging in some areas. But, again, there is wide variation in damage levels, meaning that 10-15 is not a damage threshold, as implied by the document.

The document identifies several management goals including (5) VCH should adopt a cultural carrying capacity goal of 15 deer per square mile (page 2-7). (6) VCH should begin a Phased Options Approach (POA) beginning with sterilization of 20-60 does and subsequent culling of unsterilized does (Page 2-7). (7) POA must be implemented in each of the first 5 years of the management program (Page 2-8) and may require continuous implementation in perpetuity (Page 2-9).

Comment

Re: (5) I see no evidence that this population size goal is attainable for 2 reasons. First, the document itself states that deer population [sizes] are difficult to ascertain accurately due to daily and seasonal movements (page 2-4). Thus, there is no evidence provided that accurate estimates of deer will be obtainable to judge the success of the management. Second, because of the acknowledged daily and seasonal movements, the deer population in VCH may not be closed—meaning deer may not be confined within the town boundaries, but may enter and leave VCH. There is further evidence to suggest that VCH does not have a closed population. The current reported deer population sizes (Letter to VCH Trustees from Paul Curtis Dated 12/9/2009—Appendix A) indicates that the deer population size (presumably within VCH boundaries—the exact area of the population estimate is not specified) is very high by deer population standards. However, the population was only sampled in the spring (according to the letter) so the seasonal movement of deer remains unclear. One might expect that under such high abundances, that deer birth rates would slow because of competition for food (called density-dependent feedback). The claim that the deer population is still growing prodigiously (according to the letter) means there is incomplete understanding about the population dynamics on this landscape. One possibility is that deer are moving seasonally into and out of the VCH from the surrounding landscape, are highly abundant seasonally, but are not resident within the VCH. The fact that this alternative cannot be ruled out has implications for (6) and (7).

Re: (6) Sterilization, if it works at all, will only work for a closed population. The fact that the DEIS has not provided evidence that the VCH deer population is a closed population means that sterilization, and hence a POA as defined in the document could be altogether untenable. Furthermore, if the population is open, then it will be difficult to reach a target "stable" population size of 15 deer per square mile, even within a single culling period. Because culled deer could be rapidly replaced by deer from the landscape surrounding VCH, there is a likelihood that even a 5 year time horizon will be insufficient to reach a target population size. It may never be reached with an open population and culling efforts focused only on a small part of the greater landscape.

Re: (7) The document is correct in suspecting that the POA will need to be implemented in perpetuity, especially if the VCH deer population is not a closed population.

In summary, there is insufficient evidence provided in the documentation to show that the management effort will achieve its stated objective deer population size of 15 per square mile within VCH. Evidence to support the assertion that a deer population size reduction will lessen impacts on ecosystems (habitat and vegetation) within VCH is also insufficient. Furthermore, the DEIS needs to consider the conflating effects of human land use as a driver of deer movements and population growth on this landscape. That is, deer populations may be the consequence of human impacts on the landscape rather than a cause of impacts to humans.

Sincerely,

Oswald J. Schmitz, PhD
Oastler Professor of Population & Community Ecology

Journal of Wildlife Management 74(6):1257–1263; 2010; DOI: 10.2193/2009-068

Management and Conservation Note

Regional-Scale Assessment of Deer Impacts on Vegetation Within Western Connecticut, USA

ANGELA C. RUTHERFORD, *School of Forestry and Environmental Studies, Yale University, 370 Prospect Street, New Haven, CT 06511, USA*
OSWALD J. SCHMITZ,[1] *School of Forestry and Environmental Studies, Yale University, 370 Prospect Street, New Haven, CT 06511, USA*

ABSTRACT High densities of white-tailed deer (*Odocoileus virginianus*) are believed to cause broad-scale forest regeneration failure and loss of plant diversity. But, the empirical basis for such presumptions is limited. We, therefore, conducted a survey in western Connecticut, USA, woodlots to examine how spatial variation in deer densities influences variation in impacts on plant species abundance, identity and diversity, and tree regeneration. We also used a Geographic Information System to quantify trends between land-cover type and deer density. Deer density was not correlated with any vegetation or land use variable. This suggests that deer density is not a leading factor determining variation in vegetation impacts across western Connecticut.

KEY WORDS Connecticut, deer damage, deer–human interactions, deer overabundance, deer population control, habitat fragmentation, *Odocoileus virginianus*, plant diversity, white-tailed deer, woodlot regeneration.

White-tailed deer (*Odocoileus virginianus*) populations in the northeastern United States have increased from near-extirpation around the turn of the 20th century to >25 deer/km^2 today (DeCalesta and Stout 1997, Russell et al. 2001, Horsley et al. 2003). Such dense populations, and inevitable interactions between deer and humans, have precipitated numerous calls for management to address what is now widely viewed as a problem of deer overabundance (McShea and Rappole 2000, Russell et al. 2001, Cote et al. 2004, Levy 2006).

Calls to manage the overabundance problem stem from observations that where deer are highly abundant there are also high incidences of several environmental impacts such as forest regeneration failure, loss of biodiversity, invasion by exotic species, Lyme disease risk, and deer–vehicle collisions (DeCalesta 1994, McShea and Rappole 2000, Levy 2006, Kilpatrick and LaBonte 2007). Yet, such observations of environmental impact may be conflated by contemporaneous human alteration of landscapes because rising human populations have changed local land-use regimes throughout a region (Bashore et al. 1985, Hubbard et al. 2000, Allan et al. 2003, Brownstein et al. 2005). Thus, conclusions about overabundance are often based on human values in relation to preferences for particular environmental states (Sinclair 1997, Russell et al. 2001).

Because local values and deer impacts may be conflated, a general policy to institute density reductions can only be scientifically justified if deer abundance is shown to be the leading factor determining environmental impacts among localities within a region (Schmitz and Sinclair 1997, Russell et al. 2001, Cote et al. 2004). Such regional-scale determinations of deer impact have, however, rarely been done (Russell et al. 2001, Cote et al. 2004). We, therefore, conducted an assessment of deer impacts across western Connecticut, USA, a geographic region that encompassed a broad range of deer densities, land-use types, and human settlements (Fig. 1) and in which there was a perceived deer overabundance problem (Kilpatrick and LeBonte 2007).

We used 2 complementary approaches to assess whether deer abundance is a leading factor determining environmental impacts across this region. We tested for potential deer impacts on woodlot plant diversity and regeneration by conducting an intensive field survey across western Connecticut (Fig. 1d). We also evaluated whether deer densities varied with the nature of land use, especially in relation to important determinants of deer presence like proportion of developed habitat and the degree of habitat fragmentation (Cote et al. 2004, Brownstein et al. 2005).

If deer density is the leading factor driving environmental impacts, then across western Connecticut, variation in deer density should explain a high amount of variation in the magnitude of environmental impacts. Nevertheless, deer abundances in this region (Fig. 1b) are below minimum levels (on the order of 14–15 deer/km^2) for which significant damaging impacts on plant species abundance and diversity have been reported (Russell et al. 2001). We, therefore, did not expect to see a strong relationship between variation in deer density and variation in environmental impact across western Connecticut. We hypothesized further that if transformation of the landscape by human land-use patterns determines deer density, then across this geographic region, variation in land use should explain variation in deer densities.

STUDY AREA

Our study focused on an 8,261-km^2 area of western Connecticut, USA, between Long Island Sound in the south and the state of Massachusetts in the north (Fig. 1). Developed land was concentrated within an urban belt along the south and eastern side of the region and became more rural and forested toward the northwest corner of the state (Fig. 1a). Deer population densities varied from an average of 11.5 deer/km^2 in urbanized southeastern areas to 1.4 deer/km^2 in rural parts (Fig. 1b). The degree of land

[1] *E-mail: oswald.schmitz@yale.edu*

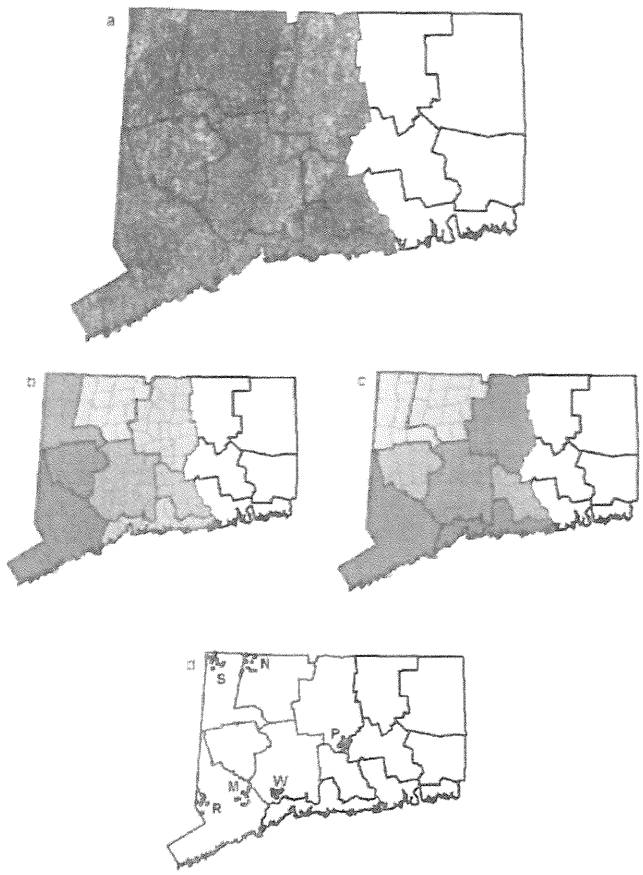


Figure 1. Study region of western Connecticut, USA, separated by Connecticut Department of Environmental Protection Hunting Management Zone. The region presents spatial variability in land use, deer density, and human population size to assess regional deer impacts on vegetation. (a) land use patterns (red = developed, brown = field, green = forest, blue = water); (b) deer density (deer/km^2) ■ = 11.5, ■ = 8.8, ■ = 7.9, ■ = 5.6, ■ = 2.8, □ = 2.0, □ = 1.4, □ = 1.1; (c) human population density (persons/km^2) ■ = 60.9, ■ = 59.1, ■ = 54.5, ■ = 54.1, ■ = 53.0, ■ = 36.0, □ = 19.3, □ = 9.3; (d) sampling sites: Woodbridge (W), Monroe (M), Salisbury (S), Ridgefield (R), Norfolk (N), and Portland (P). Maps are based on data current to 2007.

development corresponded to human population density, which was highest within the urban belt at approximately 23 persons/km^2 and decreased toward the northwestern corner to <10 persons/km^2 (Fig. 1c). Western Connecticut thus offered a range of environmental conditions needed to assess how variation in deer density, human land-use patterns, and environmental impacts might be related.

METHODS

We sampled in 6 replicate towns across the western Connecticut study area (Woodbridge, Monroe, Ridgefield, Salisbury, Norfolk, and Portland), which ranged from low to high deer densities based on the Connecticut Department of Environmental Protection (CT DEP) aerial survey data (Fig. 1b). Within each of these 6 towns, we randomly identified 20 potential sampling locations using Geographic Information Systems (GIS) and then sampled a subset of 10, giving 60 sampling plots statewide (Fig. 1d). Given our focus on woodlot plant diversity and regeneration, we deemed a sampling site as suitable if it had sufficient nonlandscaped woodlot, defined as a small ($\leq$5 ha) forested patch of land within an urban or agricultural land matrix, to accommodate a 20 × 20-m sampling plot. Our final choice of 10 sampling locations was determined by property owner permission to access the location.

We conducted vegetation surveys within each of the 60 plot locations between 7 June and 11 July 2007. At each sampling location we flagged a 20 × 20-m plot. This plot size was small enough to fit into neighborhood study locations, yet large enough to include a representative number of plant species (Condit et al. 1996, Healy 1997, Ladd et al. 2005, Goslee 2006). We then located 1 × 1-m subplots in each corner and in the center of the 20 × 20-m plot. In each of the 5 subplots, we identified each plant to species, designated it as woody or herbaceous and native, invasive, or ornamental. We estimated the percent of the 1-m^2 subplot area covered by each herbaceous and woody seedling species that was within 1 m above ground, and we counted the number of trees (saplings and canopy trees) taller than 1 m. We estimated plant species diversity within 1 m above the ground in each subplot using richness and evenness metrics because deer can affect both the number of plant species in a community (richness) and the relative dominance of particular plant species (evenness) via selective foraging (Russell et al. 2001, Cote et al. 2004). We calculated evenness using the standard Shannon index (Krebs 1998). An evenness value of zero would indicate that one or a few species dominate the plot; an evenness value approaching 1 would indicate that all species in a plot have similar relative abundance. We averaged the subplot abundance and diversity data to obtain an independent estimate of each variable for each 20 × 20-m sampling plot.

Deer impacts vary with plant species composition and palatability among sites (Russell et al. 2001, Cote et al. 2004). We categorized all plant species as palatable or unpalatable based on lists assembled by official wildlife extension services (Burroughs and Dudek 2008, Bridgen 2009, Morton Arboretum 2009, Rutgers University 2009). If a species did not make any list, we categorized it as unknown. We calculated the proportion of species within each plot that was palatable. We also estimated the degree to which plant species composition was common among all town sites using pair-wise comparisons. We divided the number of species that 2 towns shared by the total number of species in each of the 2 towns.

We assessed regeneration by measuring woody vegetation (tree seedling and sapling) density (% cover) up a 2-m vertical profile within each subplot location. We estimated percent cover at 4 heights (0–0.5 m, 0.5–1.0 m, 1.0–1.5 m, 1.5–2.0 m) using a vertical cover-board technique (Nudds 1977, McShea and Rappole 2000). We quantified an index of woody vegetation regeneration in a plot as foliage height diversity (FHD) where FHD = $-\Sigma\, p_i \ln(p_i)$, and p_i is average vegetation density (% cover) of the 5 subplots at height i, and the summation was over the 4 height categories. Our rationale was that if an area is regenerating in all age classes uniformly, then woody vegetation density should be equal at all heights along the vertical cover-board

gradient. Lack of consistent regeneration would be indicated by little or no woody vegetation density along the gradient (McShea and Rappole 2000). Accordingly, a high FHD value indicates that habitat was regenerating throughout the 2-m understory; a low FHD indicates that regeneration was uneven. We averaged the subplot FHD data to obtain an independent estimate for each 20 × 20-m sampling plot.

We estimated relative deer density at each sampling location along 4 2-m-wide transects beginning at the center of each 20 × 20-m plot and radiating 50 m outward from the 4 sides of the plot. We measured 3 indices of deer density. We counted the number of woody stems browsed by deer relative to available stems up to 2 m high within 1 × 1-m plots spaced every 10 m along the transect. Stems could be browsed either by rabbits (*Sylvilagis floridanus*) or by deer. We attributed browsing to rabbits wherever there was an obvious 45° sharp angular clip. We attributed it to deer wherever there was an obvious sign of twig removal (no apical bud and remnants of bark strips) along an erect stem. We counted deer pellet groups (fresh and old) comprised of ≥13 pellets and normalized counts by the sampling area they covered (400 m^2 over all 4 transects) to yield an estimate of pellet group density (Grund et al. 2002, Thompson and Sharpe 2005). We counted the number of independent deer tracks crossing each transect. Because the ground in the woodlots was typically moist, we could readily observe hoof impressions on the soil surface. We conducted correlation analysis among the 3 indices of density for each plot to determine whether those indices were congruent.

We also verified whether our original designation of a south-to-north deer density gradient across Connecticut, based on CT DEP aerial survey data, was indeed reflected in our sampling by correlating our measures with the CT DEP data (Gregonis 2007). The CT DEP data provide one estimate for each management zone (Fig. 1b), whereas our sampling provided several estimates within each zone (Fig. 1d). We, therefore, used a randomization procedure to generate single, independent town-level data for comparison with management zone data. We took 5 random deer density estimates from the 10 density estimates within each of the 6 town sites and averaged them for each town. We then conducted a correlation analysis between our average town-level estimate and the respective CT DEP hunting management zone estimate. We repeated this algorithm 10 times for each of the 3 indices of deer density (browse, tracks, and pellets).

We used a general linear model procedure to examine relationships between our sampled indices of deer density (independent variable) and vegetation variables (i.e., average vegetative cover, plant species richness and evenness, FHD, abundance of ornamental and native species). Broad-scale geographic analyses run the risk of obscuring important local scale trends if qualitative differences in the strength of the relationship between deer density and impact exist among locations. We, therefore, conducted our analyses of deer impact at 2 scales. We examined relationships between plot-level deer density and plot-level impact for each of the 6 towns individually. We then examined the overall geographic-scale relationship for all towns combined. At this scale, the appropriate regression model includes all the deer density data as an independent variable, but also treats town as a random effect (block) to account for potential correlation structure of the town-level sampling data owing to multiple plots in each town. We also conducted a correlation analysis between the proportion of palatable species within a plot and vegetation variables in a plot using data for all 60 plots. We normalized all proportion data using a square-root transformation.

Table 1. Mean percentage similarity in woody and herbaceous plant species among 6 towns across a range of deer densities in western Connecticut, USA. Estimates are based on plant species sampling within 10 plots in each town during summer 2007.

	Town				
Town	**Monroe**	**Ridgefield**	**Salisbury**	**Norfolk**	**Portland**
Woodbridge	38.1	37.8	25	24	27
Monroe		38.4	30.5	31.1	41.3
Ridgefield			34.1	27.5	37.8
Salisbury				39.6	34.4
Norfolk					33.7

Using GIS, we quantified land-use attributes within a 1-km-radius buffered circle around each sampling location. We used 2008 land cover data from the University of Connecticut's Center for Land use Education And Research (CLEAR 2008) land-use cover ArcGIS polygon shapefile. Because deer thrive in fragmented landscapes, we estimated degree of habitat fragmentation around each sampling location by calculating the perimeter to area ratio of each polygon within the 1-km-radius buffered circle (Cote et al. 2004, Brownstein et al. 2005). We also calculated the proportion of land within the buffered-circle classified by CLEAR as developed, field, and forested. Here, the developed class represents the urban built environment; field includes barren lands, nonforested wetlands, turf, grass, and agriculture; and forested includes coniferous forest, deciduous forest, and forested wetland. We conducted regression analyses to examine effects of local habitat fragmentation and proportion of land use of developed, field, or forest on our estimates of local deer density.

RESULTS

We sampled 157 plant species (119 herbaceous, 38 woody) across the entire geographic region. In any one town, there were 15–28 woody species (40–74% of total woody species) and 34–51 herbaceous species (28–43% of total herbaceous species). Typically, there was 33% overlap in species composition among towns (Table 1). Density of saplings and trees that were part of the canopy (dbh ≥ 10 cm) and seedlings (woody stems growing within 1 m above ground) were similar among towns except for Salisbury, which had double the typical sapling density (Table 2).

We found significant correlations between our sampled indices of deer density among the 60 sampling sites (all $P < 0.01$). Deer track counts correlated poorly with the pellet group index and browse index (both $r < 0.45$). Pellet counts and browse indices were better correlated ($r = 0.68$).

Table 2. Density (stems/400-m^2 plot) of trees (saplings and canopy trees >10 cm dbh) and woody seedlings within sampling sites in 6 towns across a range of deer densities in western Connecticut, USA, in summer 2007.

Town	Trees		Woody seedlings		
	$\bar{x}$	SE	$\bar{x}$	SE	n
Woodbridge	24.9	6.6	46.1	8.6	10
Monroe	28.7	2.8	44.4	6.8	10
Ridgefield	24.2	3.9	49.1	15.4	10
Salisbury	23.5	4.8	93.1	23.4	10
Norfolk	24.8	2.2	42.9	6.9	10
Portland	20.4	2.3	58.5	11.8	10

(Rabbit browsing accounted for <1% of impact on tree seedlings and saplings.) Randomization test comparisons of our sampled density indices with CT DEP density estimates revealed that each of the 10 replications produced statistically significant ($P < 0.05$) results, indicating that statistical power of our conclusion was high. Our conclusion was that there was a correlation between each of our indices of deer density (based on browse impact, pellet groups, and track counts) and those reported by the CT DEP (all $r \geq 0.659$), thus affirming that we did indeed sample along a deer density gradient. We found the highest average correlation between browse impact data and CT DEP data (mean $r = 0.776$, mean $P < 0.05$). We, therefore, used average browse impact for each sampling plot as an independent measure of deer density in our subsequent analyses.

Our index of deer density and values of plant variables varied considerably within towns and across the study region (Table 3). For example, all towns had similar FHD (index of forest regeneration) values (0.2–0.6) but had highly variable indices of deer abundance (Fig. 2). In general, we found no significant town (block) effect on any of the regressions (all $P > 0.35$, df = 5, 53). There was also no correlation among deer density and any of the plant variables within specific locations and across the entire geographic region (Table 3).

The proportion of palatable plants ranged from an average 5% in Woodbridge to 8% in Monroe. Because of small within- and among-site variation in palatability there was no correlation between plant palatability and deer density among locations ($r = 0.07$, $P > 0.60$). Accordingly, there was no correlation (all $r < 0.02$, $P > 0.18$) between proportion of palatable plants among sampling locations and either of plant percent cover, plant species richness, plant species evenness, FHD, percentage ornamental plants, or percentage native plants. Given our sampling effort and error structure of the data, we estimated that statistical power of our results ranged from 75% to 90% (i.e., the likelihood of falsely concluding that there is no relationship between any 2 variables ranged between 10% and 25%). Neither deer density and degree of habitat fragmentation, nor deer density and land use allocation, were correlated (Table 3).

DISCUSSION

Our analysis of the relationship between deer abundance and impact across western Connecticut tested whether deer

Table 3. Relationship between measured index of deer density and measured vegetative variables or land use type. Variables were measured at 10 sampling sites within each of 6 towns across a range of deer densities in western Connecticut, USA, in summer 2007.

Deer density vs.	All sites[a]			Salisbury			Norfolk			Portland			Ridgefield			Monroe			Woodbridge		
	R^2	P-value	n	R^2	P-value	n	R^2	P-value	n	R^2	P-value	n	R^2	P-value	n	R^2	P-value	n	R^2	P-value	n
% vegetative cover	0.05	0.72	60	0.30	0.11	10	0.11	0.35	10	0.01	0.76	10	0.12	0.34	10	0.02	0.67	10	0.01	0.79	10
Species richness	0.03	0.81	60	0.03	0.65	10	0.28	0.11	10	0.14	0.28	10	0.11	0.34	10	0.06	0.48	10	0.03	0.66	10
Species evenness	0.28	0.89	60	0.15	0.27	10	0.27	0.13	10	0.12	0.33	10	0.01	0.78	10	0.45	0.03	10	0.16	0.25	10
Ornamentals (%)	0.02	0.69	60	0.05	0.55	10	0.11	0.36	10	0.01	0.77	10	0.14	0.29	10	0.01	0.91	10	0.10	0.37	10
No. native plants	0.02	0.33	60	0.12	0.32	10	0.04	0.58	10	0.08	0.44	10	0.06	0.51	10	0.02	0.71	10	0.54	0.02	10
% native plants	0.00	0.99	60	0.22	0.17	10	0.05	0.53	10	0.18	0.23	10	0.09	0.39	10	0.02	0.70	10	0.14	0.29	10
Tree density	0.00	0.88	60	0.23	0.17	10	0.19	0.21	10	0.01	0.79	10	0.00	0.96	10	0.00	0.99	10	0.19	0.21	10
Stem density	0.03	0.37	60	0.02	0.67	10	0.09	0.39	10	0.01	0.81	10	0.20	0.20	10	0.01	0.91	10	0.14	0.28	10
% field	0.01	0.82	60	0.00	0.99	10	0.16	0.25	10	0.14	0.30	10	0.09	0.40	10	0.04	0.56	10	0.09	0.41	10
% forest	0.02	0.71	60	0.15	0.28	10	0.23	0.16	10	0.09	0.41	10	0.01	0.86	10	0.12	0.34	10	0.05	0.54	10
Fragmentation	0.01	0.54	60	0.02	0.69	10	0.12	0.33	10	0.05	0.54	10	0.03	0.66	10	0.02	0.73	10	0.07	0.46	10

[a] Based on general linear model with deer density and town as random effects.

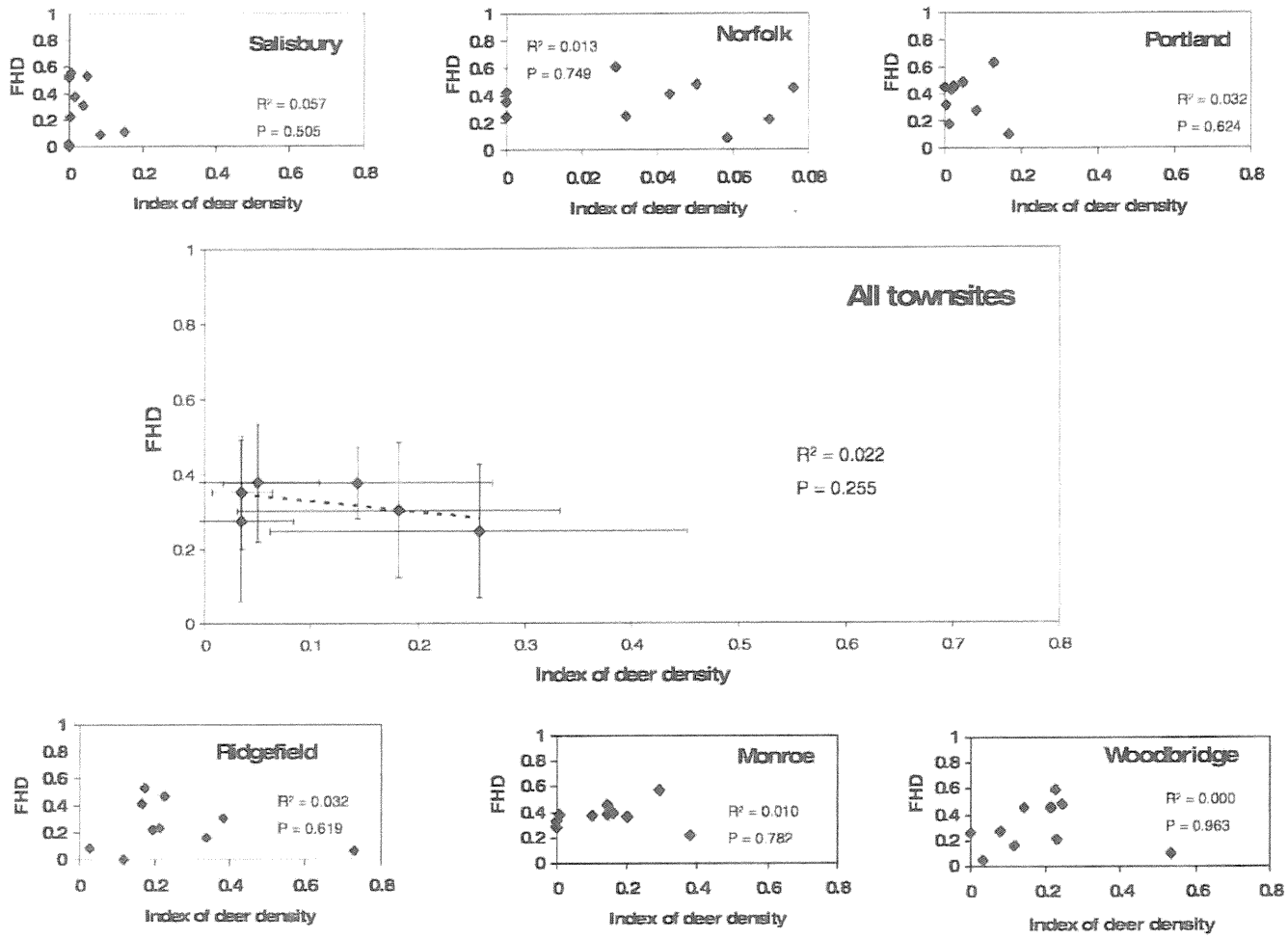


Figure 2. Correlation of foliage height diversity (FHD; an indicator of forest regeneration) and deer density index for 6 town sites in western Connecticut, USA, in which deer impacts were sampled during summer 2007. High FHD values indicate high forest regeneration and high deer index values indicate high deer densities. The data are presented for each town individually and for all town sites collectively. Values for individual town sites are the mean subplot value for each of 10 sampling plots. Values for all town sites are mean of the plot values ± 1 standard error. The patterns observed in this figure are representative of all other associations of deer density index and vegetation variables measured in our study.

density was a leading factor determining loss of plant identity, plant diversity, and plant regeneration across this geographic region. Our index of deer abundance was unrelated to any measure of plant species abundance or diversity, and deer abundance did not seem to impact woodlot tree regeneration, measured either as FHD or total abundance of canopy trees (Table 2; Fig. 2). We believe that a lack of deer impact arises from 2 factors. First, only a minor fraction of plant species within each of the sites was palatable. Second, although data indicate deer in this region have erupted in abundance over the last 50 years, deer abundance still tends to range between low and modest levels compared to deer densities in other locations throughout the United States (Russell et al. 2001, Cote et al. 2004, Kilpatrick and LeBonte 2007). Moreover the highest average densities reported for our study region (11.5 deer/km^2) remain below minimum levels (approx. 14–15 deer/km^2) for which significant damaging impacts on plant species abundance and diversity have been reported (Russell et al. 2001). Indeed, deer enclosure treatments in unthinned forests for which deer densities varied over the same range of comparatively low abundance as we observed in western Connecticut corroborate an outcome of no correlation between deer density and impact on seedling density (Tilghman 1989).

By treating deer as an independent variable in our statistical analyses, we explicitly assumed that deer are the direct determinant of environmental impacts. However, it may be that deer impacts are an indirect consequence of other factors that encourage local deer effects (Russell et al. 2001, Cote et al. 2004). For example, the nature and extent of land management and land development such as creation of edge via habitat fragmentation can create habitat that is attractive to deer, leading to local impacts (Chang et al. 1995, Russell et al. 2001, Kie et al. 2002, Cote et al. 2004, Tremblay et al. 2007). That is, deer would be a proximate cause of damage, not the ultimate cause, which is attractive habitat created by human land use. However, we did not find a correlation between deer density and degree of habitat fragmentation or between deer density and land use allocation (Table 3). We do not deny that deer impacts can be quite strong within each of the towns throughout our

Kie, J. G., R. T. Bowyer, M. C. Nicholson, B. B. Boroski, and E. R. Loft. 2002. Landscape heterogeneity at differing scales: effects on spatial distribution of mule deer. Ecology 83:530–544.

Kilpatrick, H. J., and A. M. LaBonte. 2007. Managing urban deer in Connecticut: a guide for residents and communities. Second edition. Connecticut Department of Environmental Protection, Hartford, USA.

Krebs, C. J. 1998. Ecological methodology. Second edition. Benjamin Cummings, San Francisco, California, USA.

Ladd, P. G., R. Crosti, and S. Pignatti. 2005. Vegetative and seedling regeneration after fire in planted Sardinian pinewood compared with that in other areas of Mediterranean-type climate. Journal of Biogeography 32:85–98.

Levy, S. 2006. A plague of deer. Bioscience 56:718–721.

McShea, W. J., and J. H. Rappole. 2000. Managing the abundance and diversity of breeding bird populations through manipulation of deer populations. Conservation Biology 14:1161–1170.

Morton Arboretum. 2009. Plants not favored by deer. <http://www.mortonarb.org/index.php?option=com_content&view=article&id=856&Itemid=6>. Accessed 15 Aug 2009.

Nudds, T. D. 1977. Quantifying the vegetation structure of wildlife cover. Wildlife Society Bulletin 5:113–117.

Russell, F. L., D. B. Zippin, and N. L. Fowler. 2001. Effects of white-tailed deer (*Odocoileus virginianus*) on plants, plant populations and communities: a review. American Midland Naturalist 146:1–26.

Rutgers University. 2009. Landscape plants rated by deer resistance. New Jersey Agricultural Experiment Station. <http://njaes.rutgers.edu/deerresistance/>. Accessed 15 Aug 2009.

Schmitz, O. J., and A. R. E. Sinclair. 1997. Rethinking the role of deer in forest ecosystem dynamics. Pages 201–223 *in* W. J. McShea, H. B. Underwood, and J. H. Rappole, editors. The science of overabundance: deer ecology and population management. Smithsonian Institution Scholarly Press, Washington, D.C., USA.

Sinclair, A. E. 1997. Carrying capacity and the overabundance of deer: a framework for management. Pages 380–394 *in* W. J. McShea, H. B. Underwood, and J. H. Rappole, editors. The science of overabundance: deer ecology and population management. Smithsonian Institution Scholarly Press, Washington, D.C., USA.

Thompson, J. A., and W. E. Sharpe. 2005. Soil fertility, white-tailed deer, and three trillium species: a field study. Northeastern Naturalist 12:379–390.

Tilghman, N.G. 1989. Impacts of white-tailed deer on forest regeneration in northwestern Pennsylvania. Journal of Wildlife Management 53: 524–532.

Tremblay, J. P., J. Huot, and F. Potvin. 2007. Density-related effects of deer browsing on the regeneration dynamics of boreal forests. Journal of Applied Ecology 44:552–562.

Associate Editor: Hall.

Mary Mills

From: acs6455@aol.com
Sent: Tuesday, December 07, 2010 8:41 AM
To: Mary Mills
Subject: deer situation

My name is Anne Serling. I live on Cedar Lane in the village of Lansing. I have attended several of these meetings and each time, I leave a little more disheartened.

I can only describe the initial proposal to bait and shoot deer in the village of Cayuga Heights as sheer insanity. I shudder to think of the consequences that such an act would inflict on my neighbors and their children. I think too of the legal ramifications that such an action could incur if, God forbid, a child or someone else were accidentally killed.

Now you come forward with this next proposal--this egregious plan to "net and bolt" these creatures. I had to look away from the video of this and I wonder how ANY of you could even stop for one moment to consider such an atrocious act.
Mayor Supron has said in a recent newspaper article that 75% of the Village supported killing the deer. Please tell us where that statistic came from because I have talked to people in Cayuga Heights. Not one, I repeat NOT ONE has ever been questioned as to their feelings about these proposals.

Those in favor of killing the deer have said that they are violent. For the past twenty five years I have run on Cayuga Heights Road almost every morning. In those 30,000 plus miles I have, on several occasions, seen deer and they have seen me. I have never had cause to be fearful. I have never even been approached by these animals. To categorize them as aggressive or violent is a misrepresentation. You're looking at the wrong animal.

I would implore this board to make the right decision. Use sterilization. Raise the fences. Torture of any species is never the right answer.

Village of Cayuga Heights
DEC 1 0 2010

111 Blackstone Avenue
Ithaca, New York 14850
December 16, 2010

Cayuga Heights Trustees
836 Hanshaw Rd.
Ithaca, NY 14850.

Dear Mayor and Trustees of Cayuga Heights,

I am writing this letter regarding the Draft EIS on the deer-killing plan. As a professor from Cornell University who has to apply science and accepted scientific procedures in my analysis I am deeply concerned that the Draft EIS lacks scientific rigor and it seriously raises the question of the validity of any of its conclusions.

The DEIS bases its belief on what the community thinks regarding "the deer problem" on a survey done in the 1990s (no specific date is given and nor who did the survey) and the survey was only of property owners. The survey is minimally at least 10 years and perhaps 15 or more years out of data and it also excludes all of the renters in Cayuga Heights who would be impacted by a deer killing plan socially, psychologically, and economically (in terms of the increase in taxes being passed along to them in increases in their rent).

The deer count was not a systematic deer count accepted in scientific studies (no scientific study is provided) but it appears to be a personal estimate of the deer population by Dr. Curtis of Cornell University instead of a scientific study. Since the proposal of numbers of deer to kill is not based on hardcore scientific data in a scientific study it does raise the question of how valid is the proposal of numbers of deer to kill.

The DEIS study discusses the problems of lyme disease in Maine and then suggests that this is a serious problem for the citizens of Cayuga Heights. However, no data is given on how many residents of Cayuga Heights have contacted lyme disease in Cayuga Heights and there is no study of lyme disease in Cayuga Heights to scientifically demonstrate that there is growing problem over the last few years or even if there is a problem at all. There is simply a veiled threat that if the deer-killing program does not go forward lyme disease will become a serious health issue for the residents. This is not science, this is simply opinion based on emotion not facts. An EIS should deal in facts.

The study provides minimal discussion of the other alternatives to the deer-killing program. There are scientific studies of alternatives to deer-killing that have been discussed in public hearings but those studies are NOT included DEIS. There are studies showing that deer-killing has not worked in other communities that have been discussed in public hearings but those studies are NOT included DEIS. No discussion of the effectiveness of fencing is presented in the EIS although it has been discussed at length in public hearings.

This draft EIS is seriously flawed and the Board of Trustees needs to address these flaws before reaching informed conclusions. There are numerous adverse impacts to a deer-killing plan and the Trustees of Cayuga Heights should not move forward to taking such a step based on a seriously flawed document.

Sincerely,

Sherene Baugher

Sherene Baugher, Ph. D.

131 Christopher Circle
Ithaca, NY 14850

December 15, 2010

Village of Cayuga Heights
836 Hanshaw Road
Ithaca, New York 14850

To: Mayor Kate Supron and the Village Board of Trustees

Comments on Draft Environmental Impact Statement for Deer Management Plan

I speak as a retired psychotherapist who is a Tompkins County native and who has lived just over the border of Cayuga Heights in the Town of Ithaca for almost 50 years.

During my 26-year career in the mental health profession, I worked at the Tompkins County Mental Health Clinic for about 5 years, at Family and Children's Service for more than 5 years, and 6 years in the Ithaca City School System. Throughout my clinical experience, including private practice, I have worked with many victims of domestic violence. In the 1970's I co-founded Displaced Homemakers, now called The Women's Opportunity Center, a social service organization created to provide emotional and practical support and training to women left alone following divorce, separation or widowhood. During a period of work in California, I supervised a program on women and employment at Resources for Women. Throughout my career I have had an interest in and focus on helping people overcome emotional damage caused by exposure to different forms of violence.

As a lover of human beings, as well as other creatures of nature, I am speaking up to encourage intelligent thought in the current struggle to live with white tailed deer in the Cayuga Heights area. I and many others have come to meetings to share our thoughts on this issue, where sensible and well-informed voices called for alternative manners of reducing conflict between deer and humans. But the Cayuga Heights village board of trustees has decided, to my knowledge, to kill the bulk of the deer herd — this without any serious research into non-lethal options. Now, I have recently learned, it seems this will be done in a thoroughly vicious manner described as "net and bolt" killing. Plunging ahead with violence in defiance of both science and ethics appalls me. In a setting filled with intelligent and well-educated people, there are apparently some who value flowers and bushes untouched above beautiful sentient beings who were, of course, here before us all.

I found in the village's Draft Environmental Impact Statement little discussion of the significance of the impact the proposed killing program will have on the people of this community. On page 5 it is stated, "While the culling of deer, as proposed by the Village, may be experienced as a potential significant impact to the social conscience of a portion of the VCH community, under the rules of the New York State Environmental Quality Review Act, community controversy is not criteria for determining significance." I agree that this killing program is going to impact the conscience of many people, not just in Cayuga Heights, but in the entire Ithaca area, and perhaps beyond. But to conclude that conscience is the same as controversy is incorrect. While this certainly is a matter that should weigh upon our consciences, it is also a significant question of mental health, on both a community level and individual level. The village board is

obligated to closely and objectively assess the human health implications of the proposed plan.

As a mental health professional, I am deeply concerned about the impact of this killing program on children. The lesson we teach them by carrying out mass killing of innocent wild creatures in our backyards, particularly in the manner planned, is that only human beings matter, that any creature who gets in our way can be struck down without care. And that the suffering of the creatures of this earth doesn't count as much as our often superficial wants and whims. Thus we teach them the wrong lesson for living. It continues the myth that violence is the answer to problems, and it will certainly cast a shadow on their still developing inner lives.

I am also concerned about both children and adults in our community who so deeply enjoy connections of various sorts with the deer. Some folks love to take beautiful pictures of them, others wait by windows for their daily visit, some have given names to their four-legged neighbors and consider them family. The experience of witnessing, or just knowing about, the wanton slaying of these defenseless animals, will, in my professional opinion, bring about damaging trauma for many in the village and the nearby municipalities that comprise the Ithaca community, where programs of this sort do not reflect our community values. A woman who has been physically abused may, for example, easily suffer renewed Post-Traumatic Stress (PTSD) symptoms upon exposure to this sort of violence, as may a child who has previously suffered abuse at the hand of a parent, even those among us who are just a little more empathic or who are experiencing a period of vulnerability, the same. Violence is not forgotten in the heart or head, and under the right conditions, can leave a lasting mark on any of us. I know that some people are so disturbed by just the thought of this killing program that they are considering moving out of our community if it is enacted. How can this not be considered significant by the trustees of Cayuga Heights?

I speak today not just as someone with professional expertise in the treatment of the traumas caused by violence, but also a resident of a neighborhood close by Cayuga Heights, where a small herd of deer roam freely during winter and summer. This plan to use bait to lure deer to their fearful and painful death appalls and frightens me. Many of the individual deer I see every day and recognize on sight will almost certainly be drawn into Cayuga Heights and to their deaths. Each one is an important part of our beautiful milieu, and most of us value them as such. How can I put it? If the deer are taken from us in this cruel and thoughtless way, our world will darken and lose much beauty and interest. We won't see tiny fawns gamboling on the lawn or suckling their mothers. We won't be able to show our children and grandchildren a part of the world that adds to their experience and wonderment.

Whether or not we endure the personal trauma of our neighborhood deer friends being lured into Cayuga Heights and slaughtered, many others in our community certainly will, and the lesson learned will damage children and adults throughout Ithaca for a long time to come. The lesson? "If you don't like your neighbor, go straight to violence. Killing is the answer to problems." What the Village trustees fail to understand is when we do harm to others, we are planting the seeds of violence and injustice for the future. For our own well being, we need a new answer.

Hazel Brill Brampton

Hazel Brill Brampton, Cornell AB '46, Smith MSW '49

Village of Cayuga Heights
DEC 1 2010

Letter 39

104 Randolph Road
Cayuga Heights
12/12/2010

Dear Village of Cayuga Heights representatives,

I am a Cayuga Heights resident who has spent a large amount of time and money on gardening and landscaping for our property over the last several years, and our yard shows the great efforts we have made. The deer, who visit our yard daily and often in herds, are extremely frustrating and we are, all too often, exasperated to find our new "deer-resistant" plants devoured in the night. The deer are ravenous and the battle is never-ending. Nonetheless, my husband and I are strongly opposed to the deer-culling plan that the board is proposing. While the idea may seem appealing in the abstract, in reality the plan should be abandoned for the following reasons:

1. The plan, as proposed, will not provide a permanent solution, and, in fact, will have very little or no immediate effect for property owners like me who live close to the boundaries of surrounding municipalities. Deer in other areas will simply move in to fill the void, and reproduce at a higher rate.
2. It is irresponsible to spend the tremendous amount of capital required by the program, especially when the community is so strongly divided on its implementation. As you should know, the tax rates in this area are already excessively high and must be lowered, not raised. To add a new burden for an issue that does not deal with basic services ignores this fact, and demonstrates a lack of concern for Village residents.
3. Other than for superficial reasons (yard aesthetics), the rationale behind the culling is not sound. Deer aggression is rare, and those who do their research quickly learn that the tick that transmits Lyme disease, despite its name, is carried into yards by small creatures, particularly chipmunks and rodents. A chipmunk eradication program and clearing of brush from yards would be much more successful in this regard than a program targeting deer.
4. Although I am from a family whose members hunt deer, the culling methods suggested in this program are unethical. It is both wrong and dangerous to bait and shoot in a residential area, and the new method mentioned recently on the news (to net the deer and then kill them with a bolt) is very disturbing. The Village should not engage in activities that model undesirable behavior and could traumatize some residents, especially children.

For these reasons and more, the culling proposal is inappropriate and we are very strongly opposed to having our tax dollars spent in this way. While we, as avid gardeners and landscapers, understand more than most the frustration and disappointment caused by the deer, we cannot support a plan that would be ineffective, expensive, inhumane, and extremely divisive in our community.

Sincerely,

Julia Cozzarelli

Michelle Poppensiek

From: Jonathan Culler [culler@cornell.edu]

Sent: Monday, December 13, 2010 9:54 AM

To: Mary Mills

Subject: Deer plan

As a long-time resident of the Village of Cayuga Heights, I write to protest the plan to kill deer by the barbaric "net and bolt" method, which violates the standards of our community.

I also protest the Village administration's adoption of an expensive experimental plan without trying simpler, far more sensible measures, such as amending the fence ordinance to allow those residents who want to protect their plants to do so. Adopting this untried and expensive technique is an injudicious use of our tax dollars at a time when the Village has other needs.

I urge the Board to heed the large number of residents who are opposed to this plan and to first adopt other measures.

Jonathan Culler
909 Wyckoff Road
Ithaca, Ny. 14850
607 273-7416

Michelle Poppensiek

From: Rebecca Warren Davidson [rd18@cornell.edu]
Sent: Thursday, December 16, 2010 3:15 PM
To: Kate Supron
Cc: Mary Mills
Subject: Comment on DEIS for Cayuga Heights' Deer Management Plan
Importance: High

Dear Mayor Supron,

I would like the record to show that I am strongly opposed to the killing of dear in our village using the "Net-and-Bolt" method proposed in the Draft "Cayuga Heights Deer Management Plan." This cruel and inhumane activity has no place in our community, no matter what the reason.

Yes, deer can be an annoyance to gardeners, but there are other ways to solve this problem. An important one is to allow residents to fence their yards. As a landscape and architectural historian I can tell you that the fencing of private property has an honorable tradition in this country since colonial times. It was only with the development of the "garden suburb" in the 19th and early 20th centuries that open, unfenced property became a design choice. Fencing of property is an equally valid design choice, and one which can be expected to have a positive effect on our community in terms of reduced antagonism between neighbors and toward deer and other animals.

Deer, by the way, are only one issue gardeners and other residents of our community face, and by no means the most significant one. The primary impact on any landscape, designed or not, is man. Improper use and overuse of pesticides and herbicides, badly-constructed roads, and lack of proper drainage are serious concerns affecting all residents of the village, and are all the result of intervention by humans, not animals.

In other comments and letters you have heard from myself and many other people that the Draft Cayuga Heights Deer Management Plan is a deeply flawed document in terms of the reliability and validity of the information it contains, so I will not reiterate those arguments here. I will merely state that it is based on incomplete and in some cases inaccurate data, and that it does not represent the wishes of the majority of people who live in the Village of Cayuga Heights.

Finally, I wish it to be known that I will not allow my property to be used for baiting deer, killing deer, or for the discharge of a firearm within 500 feet of my dwelling, which is illegal under any circumstances.

I urge you to continue to search for solutions to the deer issue which will not pit neighbor against neighbor and citizens against the village governance, which will be not only legal but also humane toward the living creatures with whom we share this planet, and which will be worthy of an enlightened, intelligent, and non-violent community. The proposed plan is none of those things. Enacting it will result in long-term physical, psychological, and economic harm to our community, without any long term gain, as has been repeatedly demonstrated in other communities--such as Princeton, New Jersey--where over a decade of killing deer has not solved the deer "problem."

Sincerely yours,

Rebecca W. Davidson
206 Highgate Road
Resident of Ithaca for 24 years
Resident of Cayuga Heights for 12 years

Mary Mills

From: sedeming00@aol.com
Sent: Friday, December 03, 2010 8:08 AM
To: Kate Supron; Mary Mills
Subject: Net and Bolt

I am very upset that the net and bolt method is being considered in Cayuga Heights as a means of deer population control. This method is EXTREMELY cruel, inhumane and barbaric, and has proven itself to be an ineffective means of population control. I urge you to please drop ANY plans to implement net and bolt and investigate other methods that are more effective and humane.

Thank you.

Sharon Deming
Sterling Heights, MI

Mary Mills

From: Marilyn [glasgow1015@rogers.com]

Sent: Sunday, December 05, 2010 12:15 AM

To: Kate Supron; Mary Mills

Subject: deer

Hello ladies. I am writing concerning the deer that you so zealously want to kill. This is very puzzling to me. Your determination to cruelly murder these gentle, harmless animals is very disquieting. Even though people have offered to put up fences and other ways have been put forward to help the situation, your bloodlust seems to be getting the better of you. Not only do you want them dead, you also are quite willing to have it done in the cruelest way possible. As a person of the same gender as you, I wonder, do you have families, children or pets? If so, and you are loving toward them and kind, where is this meanness coming from? Are shrubs and plants worth more than a living, beautiful being who has as much right to be here as you or I? Where do you get the right to decide who lives or who dies? Try hard to show some compassion for our animals. They don't belong to you. Do you not have more important issues to take care of? All of this time spent promoting the slaughter of our animals. Disgusting and sad.

Marilyn Glasgow

Received
Village of Cayuga Heights

DEC 1 0 2010

206 Highgate Road
Ithaca, New York 14850
December 15, 2010

Ms. Kate Supron, Mayor
Village Offices
836 Hanshaw Road
Ithaca, New York 14850

Dear Mayor Supron,

We have several criticisms of the the Draft Proposal "The Cayuga Heights Deer Management Plan." There are no data relevant to the Village of Cayuga Heights (VCH) regarding its native habitat, its native plants and animals and if studies conducted in different environments regarding loss of habitat can be applied to the village. The Village of Cayuga Heights is a suburban development. It is not a native forest, not a wetlands, not a home for ground breeding birds nor a wild flower garden. There are some undisturbed wooded areas that, if fenced, could be restored to a somewhat native environment. The document notes that the impact of deer on these natural areas is unknown. Otherwise, it should be noted that the Village contains many non-native invasive plants such as non-native privet (*Ligustrum sp.*), European Buckthorn (*Rhamnus cathartica*), and bush honeysuckle (*Lonicera maackii*) and that these plants were introduced by humans, not deer. It is well documented that these plants and others found in our community (*Euonymus alatus*, *Lythrum salicaria*, *Euonymus fortunei*, *Ailanthus altissima* and *Acer platanoides*) threaten native species. Removing deer will do little to improve plant and animal diversity unless these non-native invasives are removed.

There are no data to justify the estimated size of the herd within VCH. Estimates of herds sizes are generally based on the number of reported deer killed within a year. This method is being evaluated by the State of Pennsylvania. Hunters within NY legally took 222,798 deer in 2009, a number that is within the range for the number taken in the past 20 years.

The number of reported deer/vehicle incidents should come from law enforcement and not from a committee made up primarily of persons pre-disposed to favor killing deer (the Cayuga Heights Deer Remediation Advisory Committee). Giving a 5 year number based on an estimated single year (10 per year) is misleading.

As for water contamination, many residents use large amounts of herbicides and pesticides to maintain lawns and gardens. Run-off from these chemicals go directly into the source of the village drinking water. No one proposes to study that. The effect of run-off into Cayuga Lake from the village deer compared with run off from all the dairy farms that are within the watershed is not mentioned. The effect is misleading.

There are no data on the incidence of Lyme disease caused by ticks encountered within the Village.

Many of the "implications of the density of the existing deer herd in the VCH" are preceded by the word "likelihood." Without sufficient data, these implications can be seen as fear mongering, or at the least, such statements give rise to controversy because they invite counter-statements.

The Trustees who currently govern the village were elected by a large majority of of the people who voted. The village has information on exactly how many persons took part in the elections and the percentage of eligible voters who participated in the elections. The overwhelming majority of village residents did not vote in either election. For the sake of honesty, this fact should be in the document. The existing statement that the Village Board members "have been elected by an overwhelming majority of those voting in the largest election turnout in the history of the Village" is misleading.

In the section on "Community Viewpoints" it is noted that "community controversy is not criteria for determining significance," whatever that means. If the viewpoint of the community is of no relevance, why is it included? Culling deer within the village will cause significant pain and anguish to many villagers. To call that an "impact to the social conscience" misrepresents the feelings of many. It should be known to the Trustees who have listened to speakers at public meetings that these deer have been a part of village life for decades and many residence have a loving bond with these wild creatures despite the problems they cause. Another objection that is frequently voiced is that this proposal will bring violence to the village -- a violence that cannot be ignored and about which nothing can be done. If the killing of the deer includes the use of captive bolts it may attract activists from outside the community who have little regard for the safety and welfare of the rest of us.

There are NO studies that show that killing deer within a suburban community has contributed to a significant increase in the quality of life, biodiversity, or economic vitality. There are many confounding variables regarding deer/vehicle encounters. None are mentioned.

We believe there are no data to support the claims that deer within VCH are responsible for a significant amount of loss of biodiversity, vehicular accidents, and Lyme disease. Vehicular accidents, Lyme disease, and loss of biodiversity are not particular to VCH.

The Trustees have already stated that there will be no change in the existing fence ordinance and that 20 deer will be sterilized. The document makes reference to the use of fences and the sterilization of 20 to 60 deer. That should be changed to reflect current decisions by the Board.

The deer do eat things and they do leave droppings. These are the real reasons behind this proposal.

Both of us were brought up in households where "what's for dinner" was often raised and killed by our families. We are very aware of the sources of our food. We treasure the natural and the native. On our property we attempt to create an environment that nurtures birds, butterflies, bees, and native plants. The Cayuga Heights Deer Management Plan, as described, will cause great suffering to us and will do very little to protect us from Lyme disease and vehicular accidents, nor will it prevent our plants from being eaten by deer, ground hogs, moles, voles, mice, chipmunks, and rabbits. Nor will it promote increased biodiversity.

Deer management is an important issue for many people. To have it based on such an inadequate report is distressful. This document is faulty. It pretends to show the need to kill these deer, but it fails to prove anything. There are alternatives to reducing the deer population and with the help and support of interested groups, such as hunters and environmental groups, the Board should be able to find a solution. There are reasonable voices on both sides of this issue. Some accommodation should be possible.

Sincerely,

Ann Gray Rebecca Davidson

Ann Gray & Rebecca Davidson

From: Gayle Gray 12/16/10

"Non-violence leads to the highest ethics, which is the goal of all evolution. Until we stop harming all other living creatures, we are savages."
Thomas Edison

I have been following the Cayuga Heights deer management issue very closely, mainly because I am concerned about the suffering of those who cannot speak for or defend themselves. Deer live within the context of nature's laws, taking no more food and water than necessary, and caring for and protecting their offspring. Their attempts to endure on starvation rations, survive a broken leg, or cross a busy road safely with their young are pitiable to witness. During deer hunting season, they are put into high alert, fearing for their lives while at the same time trying to survive the long cold winter.

I, on the other hand, enjoy food and luxury way beyond my basic needs, live in a lovely home that keeps me warm in the winter, receive medical care when I am in pain, and have the means to protect my family and myself. This extreme advantage gives me pause.

When I recently had a black-footed tick (inaccurately called "deer tick") removed, the physician said to me: "and this is a good reason to get rid of the deer." One of the world's leading expert on the transmission of Lyme disease maintains that the deer's role in the spread of the disease has been greatly distorted, but even if I did become ill because of contact with a deer or any other animal in the wild, do I really have the right to eliminate that species because my well being might be threatened? Am I above the laws of nature? Further, should the deer become an enemy to be annihilated because they eat my garden plants, or dent my car ("a deer hit my car" – "who hit who?)!

In response to the claim that the deer in Cayuga Heights are overpopulated, what recent study has been completed that substantiates this assertion? There is no evidence that the number of deer has been increasing. It has been stated that the deer population is presently around 170-210, which is in the same range indicated by a study done in 2000. The deer tend to regulate their numbers based on the available food supply and the harshness of the winters. When food supply is scarce, they reproduce less, having one fawn instead of two or three, or if hungry enough, none at all.

The ongoing argument about deer "overpopulation" in general has always sounded insane to me. It would be more accurate to say that humans are overpopulated, and that our greed and gluttony has driven many species to extinction, while pushing our ailing earth to the point of no return.

Because we humans continue to expand our "territory," with absolutely no regard for the balance of the natural environment (the native habitat of Cayuga Heights was destroyed long ago when the houses were first built) and the communities presently in place are not going to go away, we must find a way to live in peace with the deer. Those who have concerns about their yards should advocate for the right to put up adequate fencing, not mass murder the innocent deer who cannot be blamed for being forced to eat our plants, leave feces in our yards, or according to some individuals, behave in aberrant ways.

One thing I know for certain, the proposed "Net and Bolt" method of dealing with this issue is unconscionable, and should be withdrawn with haste. I challenge anyone who supports this method to stand in witness as the procedure is executed, and then say that the experience does not torture his heart.

"We must fight against the spirit of unconscious cruelty with which we treat the animals. Animals suffer as much as we do. True humanity does not allow us to impose such suffering upon them. Until we extend our circle of compassion to all living creatures, humanity will not find peace (Albert Schweitzer)."

I am not naïve enough to think that we humans would be capable of giving up our dominance and tyranny over nature, however, I fervently hope we will at least be able to identify with the innate desire in the heart of all creatures to survive as long as possible without pain, to raise their families with a modicum of peace, and to live without constant fear and suffering.

Mary Mills

From: Joyce Janicki [joycejanicki@hotmail.com]
Sent: Friday, December 03, 2010 2:21 PM
To: Kate Supron; Mary Mills
Subject: Please Protect Deer

Hello-

I hope you are having a good day.

I just read the following letter, which I know has been published, and I want to say I totally and completely agree with what this man is saying. Hopefully, Cayuga Hts. will find the wisdom to use non-lethal methods to deal with the perceived deer/human issue.

Thanks for your time and attention to this urgent matter.

Joyce Janicki
22493 Milner
St. Clair Shores, MI 48081

Net-and-bolt killing: Barbaric and illegal

We are appalled that Cayuga Heights is considering a highly controversial method of killing deer for their annual mass-slaughter program.

"Net-and-Bolt" uses large nets to ensnare groups of deer who are then shot in the head with captive-bolt guns. Video documentation shows the animals crying out in terror, some tossed in the air upon capture.

"The deer inside the net tend to thrash violently, often resulting in injuries, including broken limbs and antlers," said the president of the New Jersey SPCA. After consulting numerous experts, their board unanimously agreed that "netting and bolting is both cruel and inhumane and is a practice that must be ended."

It can take several shots to kill deer in this context, making their deaths slow and agonizing. A five-year member of the NJ Fish & Game Council "deplores" the practice, saying: "The US Veterinarians' Association has stated publicly that net-and-bolt is not appropriate for use in the field. If this loathsome slaughterhouse killing method is employed in any town, it will debase that town and its good people."

Net-and-bolt is illegal in New York, yet a Freedom of Information request revealed the DEC will give Cayuga Heights a special permit. How do they justify subverting our laws?

We urge you to speak out against this violence at the December 6th public hearing at Cayuga Heights Elementary School, 7 PM.

Ann Druyan, Robert Hockett, Dominick Lacapra, Guy Tabacchi, Mary Tabacchi and Sandip Tiwari
Cayuga Heights, NY

James LaVeck
Ithaca, NY

My name is Karen Kaufmann and I have lived at 110 Northway Road, in the Village of Cayuga Heights, for 20 years. I cannot attend the public hearing on the Deer Remediation DEIS scheduled for December 6, 2010. I submit this statement instead.

I am apalled and deeply ashamed that my neighbors in the Village are willing to move ahead with a program of mass slaughter on the flimsy collection of inapt suppositions and unquantified speculations set forth in the DEIS. I would urge the Board to demand additional, local, data collection and quantification before approving this document or proceeding with the program.

For instance, the DEIS begins its analysis with a general overview of studies purporting to show the impact of whitetail deer populations in natural-- specifically, forest-- ecosystem regeneration and environmental diversity, with only a small caveat that the Village is not a forest. Yet it goes on to use deer-density criteria drawn from such studies to support the Village's assessment of the optimal or acceptable deer density in the Village. Clearly, if ecosystem regeneration or environmental diversity is the Village's goal, as the DEIS and the Village's supporting EAF both suggest, culling ought to be the penalty for any ecosystem- or diversity- destructive activity-- for instance, when I clear brush from the back portion of my lot, or when the few remaining undeveloped plots in the Village are put up for development, or when we spray pesticides on our unnatural lawns.

In addition, on the issue of density, the DEIS is upfront in pointing out that a deer population enumeration is difficult if not impossible to obtain. Nonetheless, it goes on to premise the need for and impacts of mass culling on repeated references to excess population density, based on projection from a 4-year-old "count" based on population modelling. The projection may or may not be accurate, especially for the 2010 season, when folks in the Village have repeatedly observed that there seemed to be fewer fawns and fewer multiples than in previous years. The bottom line is, however, that the impact of the culling proposal on the deer *and* on the rest of our

Village environment cannot be accurately gauged without at least some current population count or data-based modelling, if only to know how many deer must be killed, how much shooting must be done, how many days or nights of gunshot and neighborhood police stake-outs we must endure, how much waste must be disposed of, how many truckloads of personnel, equipment, and waste must traverse Village streets and for how many years in order to achieve ephemeral "stability" of the deer population.

Beyond that, if ecosystem preservation or environmental diversity is the Village's goal, isn't it ironic to find that, for the three identified "unique natural areas" remaining in the Village, no enumeration of species, no quantification or any other measure of deer damage, and no analysis of the impact of culling, has been undertaken or assigned? We are talking about mass slaughter of close to 200 deer, at a cost of $1 million over a period of five years, purportedly to maintain environmental diversity, with no data to even suggest that such diversity actually exists, is threatened, or will be impacted here in our well-manicured Village or its residual unique natural areas.

A similar lack of data or data analysis is evident in discussions of Lyme disease, deer-vehicle accidents, and the alleged problem of "untreated waste." Notably, the Board, in its EAF, pointed to information from the American Lyme Disease Foundation acknowledging that Lyme is actually percolated by mice, although transmitted long distance by deer, and that effective Lyme control would entail a reduction in mouse population and/or the use of tick pesticides to reduce Lyme incidence; while the DEIS, touting the prospect of Lyme control, relies on a precis of studies actually concluding that Lyme control through deer culling remains inconclusive with regard to human disease, and/or demonstrating that such control is most compelling where captive deer populations are involved. There are no statistics offered for Lyme disease incidence in the Village; and even Tompkins County statistical reports, while warning that Lyme can be contracted in the County, continue to suggest that the reported incidence does not necessarily

reflect locally-acquired tick bites. It is sheer speculation to suggest that killing 200 deer will prevent Lyme disease locally, particularly as the Village boundaries are permeable and deer abound in the surrounding areas.

Likewise with automobile accidents: while the DEIS does cite to statistics for 2003-2008, it does not analyze them by year, or by location, or by reporting protocols, to identify any upward trending or any correlation with traffic, speed, or terrain. In addition, the DEIS use of correlate statistics for the Village reporting category of deer-related "incidents" is suspect, as the DEIS misinterprets the category, describing such "incidents" as instances where, although no vehicle is present, the police must shoot an injured deer; whereas Chief Boyce clearly explained, in reports to the Board during the Board's preliminary environmental assessment, that "incidents" included all deer-related complaints, not necessarily vehicle-related nor necessarily involving the shooting of an animal. Can an assessment of the beneficial impact of the culling plan for drivers really rest on such a poverty or misinterpretation of data or analysis?

And on the alleged problem of untreated waste entering the local watershed, there is no quantification of current deer-related waste production, nor any environmental analysis of the contribution of deer scat to water quality relative to other waste, nor, apparently, any concern about the infusion of lime-treated deer guts into the waste stream in the remote location where the waste will be trucked, or about the environmental costs of trucking waste away from the bait sites and out of the Village. Anyway, if deer scat poses a waste-stream threat sufficient to justify mass slaughter, as the DEIS implies, then let's put a comparable death warrant out for commercial pesticide operations, for rabbits and crow, geese and coyote, and other wild waste producers, for those dog owners whose canine feces rot in our yards and along our sidewalks.

Notably, although the DEIS purports to address alternatives to the Board's culling plan, it does not discuss any non-invasive alternative besides the "do-nothing" option. Yet for concerns with

collisions, ticks, and vegetation, there are clear non-lethal non-invasive options that the Village could implement at minimal cost– from speed reduction/enforcement and reflective lightposts to a revised fencing ordinance that would address the concerns of gardeners and homeowners much more efficiently and at lower cost to the taxpayers than a large-scale population control program.

Likewise, the DEIS analysis of a sterilization-only alternative quickly writes off that option as too protracted– with a three to five year trajectory-- to meet Village stabilization goals, ignoring completely the evidence that the Village's previous sterilization program saw a marked decline in population in the two or three years it was in operation, that plans for culling have given rise to nearly three years of conflict and controversy in the current go-round alone, that the current plan's own projections call for one to two years of sterilization and five years of culling and maintenance operations thereafter, and that in other communities a commitment to culling, once begun, is unending.

Unlike the non-invasive options for highway safety and property-protection, or even the non-lethal option of sterilization for deer population control, the Village's culling plan will bring long-term and pervasive change to our community– from the five-plus years of shooting that it is projected to entail (as noted above, other communities have found that their initial short-term projections continue to drag on), in backyards and neighborhoods that will be off-limits to residents, neighbors and passers-by for the duration of operations, at times and places that will be unannounced (despite the DEIS promise of "constant communication between [sic] community members, municipal officials and the culling agent" during shooting operations), with the sounds of gunshot, struggle, and painful death becoming a feature of our daily life for unspecified periods each shooting season. I will most certainly not be allowing such operations to occur within 500 feet of my home.

Moreover, as an all-weather, all-hours walker along Village streets, I am concerned about the

plan's clear– but scantily addressed– impact on pedestrian and roadway safety and peace of mind, and on the pattern of daily life in the Village, particularly if shooting sites are unannounced. I am also concerned about the polarization of our community around this issue, particularly as the Board continues to blame "outside agitators" for opposition to the culling plan and gives scant heed to the number or deep-seated concerns of resident opponents. I am concerned about the message we send our children in the Village in looking first to violent population-control measures to address issues that revolve largely around our own convenience or desires; and about the image and public perception of our community, as we opt to spend millions on violent deer control while the county, the state, and the national economy are in a phase of deep cutback and human suffering. I implore the Board to look as deeply at these impacts as at the speculative prospect of an easy life without deer offered by the DEIS, and govern yourself accordingly. Thank you.

Mary Mills

From: Dominick Lacapra [dcl3@cornell.edu]
Sent: Sunday, December 05, 2010 10:53 AM
To: Carol Warshawsky
Cc: Kate Supron; Mary Mills; Steve Shiffrin; Bob & Ginny Powers; Victor Nee; Jane Pedersen
Subject: Re: "Deer Management" Plan--for distribution to the Village Trustees!!

Dear Kate and village trustees,
We very much agree with the message you have just received from Carol Warshawsky. It expresses the common sense many of us share. You are obdurately pursuing a plan that is very costly, will not work. and will cause suffering to animals and dismay to those who find the plan senseless and callous. Cayuga Heights is not a bounded ecosystem like the Galapagos Islands. Trapping in nets one or more terrified deer and shooting bolts at them is not in the least "normal" slaughterhouse procedure. And the entire PR campaign has been characterized by the use of obfuscating euphemisms. Please reconsider what you are doing and go in the direction of what would indeed be a project of "remediation," including the remediation of tense hostile feelings in the village.
Sincerely,
Dominick LaCapra and Jane Pedersen

On 12/5/10 12:27 AM, Carol Warshawsky wrote:

> Dear Kate and Village Trustees
>
> I am leaving town today so I won't be able to attend the meeting on Monday. But I would like my voice to be counted.
>
> I am strongly opposed to the deer management plan. I do not think it makes sense; I do not think it will have the affect many of you expect; I do not want my taxes increased for a program I find distasteful and frivolous at best, dangerous and useless at worst.
>
> I am writing this despite feeling there is little interest on your part in hearing from the public, or at least that part of the public opposed to this plan. If for no other reason, please reconsider this culling program in light of the serious liability it poses to our Village and the burden of higher taxes.
>
> As many have pointed out, deer have no sense of boundaries; culling deer in C.H. does not necessarily reduce the herd. Others will roam in filling the void of those culled, enjoying increased vegetation and mating with the remaining females. The situation will not change.
> I do not trust that culling with guns can be done safely. While bow and arrow hunting would be a minuscule improvement, both are very poor solutions which put residents at risk. The benefits will be minimal contrasted against the frightfully large potential liabilities.
>
> The costs of this program is high, more so if it proves ineffective. Village taxes will go up on an annual basis to pay for this tomfoolery which has no end in sight -- deer will still find their way into C.H. I find it unconscionable to be forced to pay higher taxes for a program that is dangerous, unlikely to work, will not increase

safety*** and has been frivolously conceived to protect some residents' gardens.

Save us the Strum und Drang; plant deer resistant flora and put up fencing. The financial burden would rest on those concerned instead of being foisted on the rest of us.

***To date there have been minimal (if any) deer / car accidents; if drivers obey the Village speed limit it is difficult to see where this could become a more serious problem. However, deer running from the sound of shot guns could pose a risk to drivers and pedestrians.

Thank you,
Carol Warshawsky
104 The Parkway
Ithaca NY 14850

Education is an ornament in prosperity and a refuge in adversity. ~Aristotle

Mary Mills

From: Lorraine E Maxwell [lorraine.maxwell@cornell.edu]

Sent: Thursday, December 16, 2010 11:41 AM

To: Kate Supron; Mary Mills

Subject: Comment on DEIS Cayuga Heights' Deer Management Plan

Dear Mayor Supron:

I am writing to express my concern and dismay over the "Deer Management Plan" being considered by your administration. It is not a deer management plan; it is a deer killing plan. I have lived in Ithaca for 17 years and have learned to manage my life related to local wildlife. It might be unfortunate that I can't plant tulips because the deer will eat them but the solution to that problem is not to kill the animals. I have learned how to drive to avoid deer and use fencing or other means to protect my garden. Killing should never be the answer to a "management" issue.

I urge you to allow appropriate fencing instead of killing animals. Your plan is inhumane and sends the wrong message to our children and our community. Please, reconsider.

Sincerely,
Lorraine E. Maxwell

Lorraine E. Maxwell, Ph.D.
Associate Professor
Design and Environmental Analysis
Martha Van Rensselaer Hall
Cornell University
Ithaca NY 14853
p. 607.255.1958
f. 607.255.0305

Michelle Poppensiek

From: kristin@bevia.com
Sent: Thursday, December 16, 2010 9:53 AM
To: Mary Mills
Subject: [Fwd: deer]

---------- Original Message ----------
Subject: deer
From: kristin@bevia.com
Date: Thu, December 16, 2010 6:48 am
To: clerk@cayuga-heightsny.us
mayor@cayuga-heights.ny.us
bszekely@cayuga-heights.ny.us
randolina@cayuga-heights.ny.us
ccrooker@cayuga-heights.ny.us
ekarns@cayuga-heights.ny.us
driesman@cayuga-heights.ny.us
tboyce@cayuga-heights.ny.us

Hello,

As a resident of Cayuga Heights, I am writing to express my dismay and opposition to the proposed Net and Bolt solution regarding the deer in Cayuga Heights. I implore the mayor and board to continue considering more humane options -- sterilization, fence building and even allowing hunters, perhaps experienced bow hunters, into the area to thin the herd -- in their search for answers to this complicated question. From what I have read about it, Net and Bolt seems especially cruel and draconian.

If the deer are exterminated, I do hope a way will be found to distribute the venison to the needy in our community.

Thank you for your time and consideration.

Kristin McCarthy-Bevia
111 N. Sunset Drive
Ithaca, NY 14850

DEC 1 - 2010

12-6-2010

My comments regarding the environmental impact statement on the manner in which to decrease the deer herd in Cayuga Heights, N.Y. is; there are better and more humane methods of reaching that goal.

A much better and more acceptable plan to all would be to allow a one year experimental trial by allowing a licensed Veterinarian to dart and throughly examine each animal for wasting or any other disease and certify to the health of each animal. Only then allow the certified and in good health animal be transported to my 320 acre well posted against hunting, farm, a deer heaven, with excellent deer cover, woods, running brook for fresh water, corn, hay and oats are the crops grown on the farm. This could reduce the C.H. herd by 20-25 deer per year and in 9 or 10 years the 200+ animals would be re-located. In the mean time; Surgical sterilization of female deer would speed up the yearly decrease of deer to be left in the C.H. population.

Robert W. Munch Ithaca, N.Y.

Mr. Robert Munch
902 N Tioga St.
Ithaca, NY 14850

6-3-2010

Mr Robert W Munch
902 N Tioga St
Ithaca, NY 14850-3628

TO DEC COMMISSIONER GRANNIS

Dear Sir:

I'm sure you are aware of the current deer problem in Cayuga Heights, N.Y.

I currently co-own with my sister a 320 acre field crop farm in Chenango County, N.Y.; about 60 miles from Cayuga Heights. Our farm has a year bound stream winding through it, lots of excellent deer habitat including woods, brushy pastures, apple trees and plenty of corn, oats and hay for feed for deer. The land is always posted against hunting. I feel 20-25 deer could be relocated there each year. I have been told DEC will not allow deer to be relocated because of mortality but what if a qualified Veterinarian anesthetized and accompanied the deer to its new location and safely released it? This would be a much better solution to a hotly contested problem. DEC presently allows licensed wildlife relocators to transport bears, raccoons, skunks, squirrels and other mammals; so at the very least couldn't you at least try this as a one year experiment? Sincerely, Rob W. Munch, Ithaca, N.Y.

12-4-2010

Dear DEC Commissioner Iwanowicz

Enclosed is a copy of a letter I sent to Pete Gronks several times and never received an answer.

The DEC has given permission to slaughter almost all the deer herd in Cayuga Heights, N.Y.

I would like you to consider another solution to decrease the deer numbers in Cayuga Heights.

I feel a licensed and wildlife qualified Veterinarian could dart and anesthetize, examine each animal for wasting disease or any other disease certify it is completely free of any disease and in good health and then accompany the animal, probably 2 or 3 at a time to my farm which is well posted against (AGAINST) hunting. Why not at least give us at least a one year experiment to try this method? And of course at the same time, other animals could be sterilized and left in Cayuga Heights per option number six. Thank you for your time and please at least give me the courtesy of an answer.

Sincerely

Robert W. Munch Ithaca N.Y.

Mr. Robert Munch
902 N. Tioga St.
Ithaca, NY 14850

12-13-201

Mayor Kate Supron
Would you
please see that
the whole advisory
committee is
allowed to read
all my letters
outlining how
to decrease the
C.H. deer herd
without killing
them? Thank you.
Sincerely
Rob W. Munch

DEC 16 2010

To: Cayuga Heights Trustees

From: Victoria Pifalo and Kieran Donaghy
Cayuga Heights Residents

Date: December 15, 2010

Re: Deer Management Plan and DEIS

We are writing to express our grave misgivings about and objection to the proposed deer management plan with its reliance on lethal means—and particularly cruel ones—that are inconsistent with current Village and State regulations. We are also concerned about restrictions that the plan will place on our outdoor activities in the neighborhood and the threats to public safety from the use of firearms to slaughter the deer in undisclosed locations at undisclosed times. Our objection is such that we will not give permission to allow the discharge of firearms within 500 feet of our property.

As relative newcomers to Cayuga Heights, we are struck by the evidence contained in the DEIS documenting the failure of the community to sensibly address a growing deer population in a concerted fashion for years. While there are *estimates* of the size of the deer population in the DEIS, the report does not detail **compelling** evidence of a comparative nature about the incidence of disease and traffic accidents associated with the increased deer population that would warrant taking a drastic lethal measure before non-violent options have been exhausted. It is extremely odd that the DEIS does not provide alternatives between that of no action and that of sterilization/culling. Chief among non-violent methods should be a fence ordinance commensurate with the suburban (as indicated in the DEIS) nature of our community. Others are steps to deter traffic accidents (reflectors, strict enforcement of the speed limit or a lower one, deer crossing signs) and an education program about health and gardening as related to wildlife realities.

We strongly urge you to reconsider the decision to implement the divisive, immoral, and illegal plan proposed in the DEIS. While adverse social and economic consequences are discounted within the scope of the DEIS, they are weighty considerations in achieving a rational deer management program that protects the harmony and reputation of the community.

c: Police Chief Tom Boyce

Unfortunately, I and my family are out of the country. I hope some one can read this aloud.

I am overwhelmed by the latest turn this farce has taken. Up until now, I have held back from talking about the inhumane aspects of former deer killing plans. I have focused instead on the dangers of firing guns in our small community.

But this current plan is so ghastly, I have even refrained from telling my 13 yr. Old daughter about it because of the effect I know it would have on her. Net and bolt is a horrifying methodology condemned the world round and illegal in our state. Why is Mayor Supron SO focused on this deer killing issue? Why will the board work for years to protect a few Hostas, coming up with such outlandish plans that the media has made our small, and normally, wise community into a laughingstock and a media circus? Anyway, I'd much prefer that our roads be fixed, that our school children be made more safe going to and from school and that our water supply be brought up to modern standards than waste any more time on these dangerous and shockingly inhumane plans made by a handful of people behind closed doors.

Our community is made up of intelligent people who care about one another. If we were brought together in a forum where we could really talk amongst ourselves in small groups instead of being given a few seconds to spout our position, we could hear each other and solve this problem, Put this issue into the hands of the community where it belongs.

Joe Romano
Cayuga Heights Resident

Mary Mills

From: Mary Schiavone [maryschiavone@gmail.com]

Sent: Thursday, December 16, 2010 9:51 AM

To: Mary Mills; Kate Supron; Beatrice Szekely; Thomas Boyce; Robert Andolina; Christopher Crooker; Diana Riesman; Elizabeth Karns; Stephen Hamilton

Subject: Deer Management

To the Mayor and Trustees of Cayuga Heights:

I hope I am not too late to register my opinion regarding the deer.

I understand that many people want *some*thing done to manage our deer population, but I don't sense from my conversations with neighbors that we are in a desperate situation or that we are willing to support inhumane methods, especially when there are other viable options. I find it hard to imagine that the 69% of people who show up to the hearings to say that they want the deer controlled by any means possible represent the rest of us who didn't or couldn't show up. They do not represent me or my family.

I hope your minds are not yet made up. I hope you are not ready to resort to unsafe or inhumane methods. And I hope your final decision represents the compassionate nature of our community.

Thank you for your thoughtful consideration.

Sincerely,

Mary Schiavone
North Sunset Drive
Cayuga Heights

Letter 55

Shelly Schlueter
Wildkind Care
3674 Cronk Rd.
Montour Falls, NY 14865
Help for Injured Wildlife

Rec
Village of Cayuga Heights
DEC 06 2010

12/13/10

Dear Mayor Supron,

For the life of me I cannot understand why you would go along with the terrifying and injurious netting of wild deer, continuing on to their painful death by captive-bolt, in the hands of nervous and inaccurate shooters.

If it were puppies or kittens digging in someone's garden you wouldn't even consider putting them through this gruesome killing scheme. I'm sure of it.

So why the deer?

Everyone knows that deer can be excluded by appropriate, next-to invisible, fencing. This is also a permanent solution, if maintained over the years.

Please be the hero here, and work toward a humane arrangement between residents and the natural residents, the deer. Thanks for your time - Shelly Schlueter

Michelle Poppensiek

From: CFSchmitt@aol.com

Sent: Monday, December 13, 2010 11:40 AM

To: Michelle Poppensiek

Subject: deer

Village Mayor and Trustees,

We attended the meeting at Cayuga Heights School last week and the number of people speaking against the current remediation plan showed that the village Trustees do not have a clear mandate to proceed with such a controversial method of control.

This plan will create a long-term divisiveness in the village and we urge you to seek a compromise rather than take a forceful "majority rule" approach. You do not represent a large part of the residents here and in good conscience should not proceed with the net and bolt idea.

A revised Fence Ordinance will help address immediate concerns and is a sensible first step.

All the issues relating to the deer problem could be addressed in a humane manner, and I urge you to postpone action and revisit methods of sterilization, which were clearly beginning to be effective.

We have expressed our views to you before, with no acknowledge or response. Being a lifelong resident of this village, I am extremely disappointed in the unenlightened governance apparent right now. I strongly object to having my village tax dollars put to this use, nor would I allow the brutal culling to take place within 500 feet of my property.

Please set a higher standard and devise a deer remediation plan that all communities facing this problem could emulate.

Sincerely,
Carol and Ron Schmitt
302 E. Upland Rd.

Memorandum

To: Mayor and Village Board of Cayuga Heights

From: Steven H. Shiffrin, Village Resident (102 Highgate Road)

Date: 12/13/2010

Re: Deer Management Plan Draft Environmental Impact Report

I appreciate the opportunity to submit comments on the Draft Environmental Impact Statement. Despite our differences, I am grateful for your work, and I recognize that honest and intelligent people can disagree about the deer issues facing the Village. Nonetheless, I think the Statement has some serious weaknesses. I will focus on two: I do not think the Statement shows that the recommended plan can obtain the needed political support over a five year period and I do not believe that it offers a serious consideration of alternatives to its plan for killing deer.

The Lack of Political Feasibility

The Statement concedes that the plan will need political support over a five year period. It presumes that the plan has current support because the Board was elected against opposition on the deer issue. This presumption is misplaced. The plan is not practical.

Although people vote for many reasons, it does seem likely that the deer issue decided the election. The election was between those who wanted to leave deer alone and those who were prepared to kill them. The issue of a compromise involving contraception or sterilization as the exclusive method of reducing the deer population was not presented as an election choice. It seems to me that the election shows that a strong majority of the village population wants to do something to reduce the herd. It does not show that the population was in favor of killing, or killing combined with sterilization, as opposed to sterilization and fencing. Indeed, the Deer Committee endorsed the Cornell study in the late 1990's that 80% of villagers wanted to reduce the herd, but those who favored killing the deer were in a minority that did not exceed 30%. (Appendix D) The Statement has no data to support its view that the majority favor killing of the deer (let alone killing deer with bolts). Of course, the Board has

the power to proceed without a majority in support of its actions, but without popular support over a five year period, the plan will fail.

Whatever support the plan has now, there is reason to believe that support for it will decline over the next five years. It appears that the primary support for the plan in terms of numbers comes from those who are concerned about their gardens. This was the finding of the Deer Committee and the impetus for its establishment. (See Appendix D). And the Statement is not to the contrary. It does not point to lyme cases in the Village and it does not show that traffic accidents have increased in the Village. As the tentative budget for the Plan discloses, the cost for the proposal amounts to a 3.45% increase in the Village budget. It is reasonable to assume that the Village budget will need to be further increased for other reasons (do Village budgets ever go down?). If there is one thing we know about the American people (I doubt the villagers are an exception), they want many things, but they do not want to pay for them. When taxes go up, villagers will grumble and those who wanted to protect their gardens on the cheap may reconsider in a difficult economy.

Under these circumstances, villagers will also examine the budget with some care. I expect future political candidates will have a field day in attacking the Board on grounds of fiscal irresponsibility. The plan calls for the expenditure of $150,000 each year for five years ($750,000) and an undisclosed amount thereafter. It has a goal of reaching a herd of 30 deer for 1.8 square miles (even though its figures show that other governments have sought to achieve 25 per square mile or what would be 45 for our community). The figure of 30 deer for 1.8 square miles seems to be completely arbitrary. It has no scientific basis, and the Statement does not even attempt to show that it has community support.

But, taking the Statement's figures, the Board would sterilize 30 deer at a cost of $1,100 per deer (see Executive Summary) at a total cost of $33,000 and would kill the 170 other deer it estimates to be in the herd at a cost of $500 per deer (see Executive Summary) at a total cost of $85,000. This totals $118,000. Even assuming another 20 deer come into the community to be killed ($10,000), the total figure for killing and sterilization, does not exceed $128,000. This leaves an expenditure of $622,000 to be explained. I have seen a document from the Village that budgets $30,000 a year for two years for a deer management professional (I assume this is for the sterilization period and that the Police Chief would protect public safety when the killings begin).

This still leaves $562,000 to be explained. I do not think an expenditure of this character is politically defensible, and no evidence in the Statement suggests otherwise. If the Board plans to spend $562,000 on studies and unspecified contingencies, I would think any political consultant would forecast that it should plan to lose a lot of political support.

Finally, when the killings begin, there are risks of deteriorating support. Killing in the abstract is one thing; when people hear gruesome stories, many will lose their stomach for the enterprise. This would be especially true if the Board adopted a net and bolt plan. A study by Hastings-on Hudson concluded that no community has been able to sustain a net and bolt program and that government has opted for a contraception program. http://hastingsgov.org/Pages/HastingsNY_Issues/New%20Folder/Deer%20Presentation.pdf

The Board recognizes that its proposed plan cannot work without support for five years, yet there is little evidence in the Statement that gives any grounds for believing that any present support will be stable. Communities have started deer plans only to lose political traction. To suppose that the Village will be politically stable around this plan without supporting evidence is to engage in a kind of riverboat gamble: a gamble with the tax money of the Village, a gamble that risks further community polarization and deterioration. There are better alternatives.

Alternatives

New York law requires that an environmental impact statement "must analyze the significant adverse impacts and evaluate all reasonable alternatives" [6 NYCRR 617.9(b)(1)]. I maintain that the Statement substitutes conclusory assertions for evaluations. It does not meet the legal requirement. The Statement dismisses contraception and/or sterilization as the exclusive method of reducing the herd, but it lacks evidence to do so. It should be observed that sterilization was tried in the Village before and the Statement recognizes that it reduced the herd. Surgical sterilization was abandoned by the Village when Cornell was no longer willing to make its facilities available. The Village Board at the time shifted to darts and serum as a method of contraception, but the particular serum was ineffective. Apparently, the Board has relied on Paul Curtis for the proposition that such methods are always ineffective.[1] But the views of Curtis are contested in the scientific literature and in local communities which have examined the evidence. To hear Curtis is, of course, responsible. But to rely on him without a serious consideration of the contesting evidence is excessively provincial (the local expert is not always right) and is inadequate legal support. For example, Jay F. Kirkpatrick, a Cornell Ph.D. in reproductive physiology from the College of Veterinary Medicine at Cornell University in 1971, is a nationally recognized expert in this field. He has spent 38 years carrying out research on fertility control for wild horses and other wildlife

[1] The Deer Remediation document in Appendix E states that its conclusions are drawn largely from a paper by Paul Curtis. As I suggest below, following a local expert who has taken one side in a national controversy without examining or discussing the evidence on the other side is inadequate consideration of alternatives in an Environmental Impact Statement.

(including deer), for the purpose of developing non-lethal and humane methods of controlling wildlife populations He is currently the Director of the Science and Conservation Center at ZooMontana, in Billings, and has consulted with numerous communities including the city of Pittsburgh. His conclusion is that contraception with darts and vaccine works. See http://www.zoomontana.org/science-and-conservation-center/. To rely on Curtis without considering the arguments of Kirkpatrick in an independent way is indefensible. Similarly, the failure to take account of the attention paid to the issue by Hastings-on-Hudson which has opted in favor of a contraception plan (at a cost they estimate at $400 per deer) for a deer situation far more serious than in Cayuga Heights is further support for the conclusion that the Statement does not discuss the contraceptive issue in the detail it would deserve if it were adequately considering alternatives.

The Deer Remediation Statement (Appendix E) does mention that surgical sterilization could take place in a mobile lab that can be shared with other communities (Cornell facilities are not necessary), and the proposed plan does call for some sterilization which constitutes a recognition that sterilization is feasible. The Statement objects to sterilization as an exclusive remedy largely on the ground that it is too expensive. The support for this appears to be that it costs $1,100 to sterilize and $500 to kill a deer. But this depends on the number of does that need to be sterilized (the Statement has no evidence concerning the number of does in the Village) and the Deer Committee concluded that only 70% of the does needed to be sterilized.

Even more important, as the Deer Remediation Report observed, the cost figures assume the absence of a volunteer graduate student or volunteer veterinarian (which the Deer Remediation committee recognizes would dramatically reduce costs), and the cost figures do not consider the possibility of private grants. Moreover, the Statement does not take into account the transient character of male deer. Male deer may come in and out of the community inflating the numbers that the Board would kill. Indeed, there is no showing that a killing plan can work in a small area surrounded by a large and mobile population of deer. In truth, the Board does not know if sterilization is more expensive.

The Board properly observes that killing deer is faster than relying on sterilization. It suggests without evidence that herd reduction with sterilization would not take place for five to six years, and its killing plan is apparently scheduled to begin in the third year. The Statement does not specify the difference this time differential will make in terms of the environment.

Finally, the Board may believe that the 60% reduction of the herd that occurred on Fire Island and the 50% reduction of the herd anticipated by Hastings-on-Hudson is inadequate to

meet the 30 deer goal set by the Village board. But, as I suggested earlier, that goal has been supported by arbitrary fiat in reckless disregard of the needs of an Environment Impact Statement. The Statement needs to show that it needs to reduce the herd to that number with appropriate argument that reduction to that number is necessary to avoid environmental impacts that need to be remedied with a solution that is practical (I have argued that it is politically impractical). It needs to make that showing in face of the fact that the deer herd has been at levels far above 30 without arousing controversy. Only when the herd has risen to a level five to six times the targeted goal has significant controversy been triggered. The Statement does not come close to making its case in support of the 30 deer goal.

In the end, the Board does not seriously evaluate the alternatives of contraception and/or sterilization, and it underestimates this: Unlike killing, contraception or sterilization will have widespread support. It is a plan that can be sustained without intense opposition over a significant period of time.

I will conclude with some remarks about fencing. I am pleased that the Statement endorses at least a temporary change in the fencing ordinance. If vegetation is protected, deer will go elsewhere. If it is not, deer will be attracted to the area. The Report, however, does not seriously consider the combination of contraception or sterilization and relaxation of the fencing ordinance as a suitable alternative to a killing program. It needs to do so both as a matter of democratic process, wise policy and legal obligation.

Deer Management Plan in Cayuga Heights and its environmental ramifications
--Comments on the DEIS--

December 15, 2010

I am writing as a resident of the Village of Cayuga Heights, an Ithaca native who grew up in this community, and the mother of two young children. I have lived away from Ithaca for many years, but chose to return to this community in large part because of the culture and environment I value so dearly. I had hoped for my own children to experience and enjoy a similar upbringing to mine.

This is a community with a cultural heritage characterized by sharing and coexisting peacefully, solving problems together constructively and creatively, listening respectfully to each others' concerns, working together with their elected officials to solve problems and to make the community a better place in which to live, in which to raise their children, in which to grow old.

The vast majority of people in the community who complain about deer are those who have yards unprotected by adequate fencing to prevent the animals from browsing on their plants. Although drastically reducing the deer population in the village might have a positive environmental impact for gardeners without adequate fencing, it is not guaranteed that the deer left after the culling by killing is carried out will not continue to seek food in unprotected yards.

There are others in the village who actually enjoy the deer and feel connected to them, especially the family groups that they see daily in their yards. They fear the trauma it will cause them, and their children and grandchildren, to have these animals rounded up and shot in their near vicinity.

There are also many people who fear for their safety, their children's safety, their parents' safety, their neighbors' safety. They are experiencing fear about the use of firearms in such a densely populated community, where children play and walk to and from school; where elderly people take leisurely walks, where bicyclists and joggers are out and about both morning and night, where people walk their dogs, where people go to and from work. They believe their once safe environment will become one in which they will no longer feel comfortable to walk, move about, and play freely in.

The Draft Environmental Impact Statement specifies that increased security measures will be taken during the killing periods, with stepped-up police force involvement. This only serves to prove the higher risks to safety that the killing actions will impose, and to validate the inhabitants' fears about safety in their environment, rather than to allay those fears.

I personally will not allow the killing of deer on my own property or the discharge of

firearms within 500 feet of my home, and I believe many, if not most, other village residents will also disallow discharging of firearms, for whatever reason, in such close proximity to their homes.

There are also many people, myself included, who fear the message and its ramifications that this violence will give to their children – which is that we solve our problems by shooting them. Although this is a prevalent credo in many circles in America, I don't believe it is in Ithaca. And I don't believe most of us want to pass that credo down to our children.

Rounding up deer and shooting them with bolts or bullets right in our village will severely damage the core of the community of Ithaca, its cultural fabric, its self image and the self images of the people residing within.

The deer-killing plan for Cayuga Heights specifies that the locations and times of the deer shooting will not be disclosed, compounding the fears of the villagers, and indeed the rest of Ithaca. Cayuga Heights is a part of Ithaca, and bullets, like the deer, do not stop in their tracks when reaching the village borders.

I cannot imagine any environmental impact more threatening to a community than the imposition of violence, trauma, fear, and distrust; imbuing its constituency with a feeling of complete powerlessness, as the village officials carry out this violent, trauma-causing, and highly disputed plan against the wishes of a substantial portion of its constituency. The Cayuga Heights community will effectively be destroyed by the imposition of an experimental and likely ineffectual annual mass slaughter in the village.

The community has already been divided by these controversial plans. Neighbors who congenially got along for years, for decades or more, are already polarized, forced to either keep their opinions and feelings to themselves, or risk conflict by airing their fears and concerns.

Catherine Stein
11 Spruce Lane
Ithaca NY

To: Cayuga Heights Mayor Kate Supron and Village Board of Trustees

From: Stuart Stein, Cornell University Professor Emeritus, City and Regional Planning.
11 Cornell Walk, Ithaca, NY 14850. 607-273-3500

Date: December 15, 2010

Re: Cayuga Heights Deer Management Plan Draft Environmental Impact Statement

---

In my professional opinion, the Draft Environmental Impact Statement (DEIS) for Cayuga Heights' Deer Management Plan does not adequately address several significant potential negative impacts that may well occur if the proposed program is carried out. I will lay out these issues in this memo and request that they be addressed in a Supplemental DEIS. Those issues are directly related to the following:

Impairment of the character or quality of important aesthetic resources or of existing community or neighborhood character as required under Section 617.7 (c)(1)(v) of NYS SEQR Regulations). These impacts relate to:

1. The definition and character of the community and neighborhoods that are likely to be impacted by the proposed action;
2. Important impacts to the larger community, including potential damage to some of the characteristics that attract tourism and motivate relocation to the area;
3. The impact on relations with neighboring municipalities in the Ithaca urban area; and
4. The SEQR requirement to examine and evaluate alternative means of solving the problem to which the proposed program is addressed.

My credentials in addressing these issues are as follows:

I am a Professor Emeritus of City and Regional Planning at Cornell, having taught subjects relating to community development, land use and urban design for 31 years.

I hold professional degrees in both City Planning and in Architecture from MIT.

I am a Fellow of the American Institute of Certified Planners, an honor given to only three professional urban planners in Upstate New York (north of New York City).

I was an elected official in County and City government for 21 years, including the Chairmanship of the County Legislature and Ithaca City Council.

I have been appointed to and served as a member or chair of many local and state government committees including: Chair of the Ithaca-Tompkins County Transportation Council; Chair of the City of Ithaca Planning Board; Chair of the New York State Board for Historic Preservation; Chair of the Tompkins County Strategic Tourism Planning Board; and various others.

I was a citizen member of the committee appointed by City and Town governments to explore inter-municipal cooperation and potential consolidation of services between the City and Town of Ithaca (of which Cayuga Heights is a part).

I have been a full-time resident of the Ithaca community for the past 48 years, including some years as a resident of Cayuga Heights.

Impairment of Community Character

Basic to an evaluation of "impairment" is the understanding of the meaning and definition of "community." Apparently, the DEIS consultants and the Village Board define the community very narrowly, as that area lying within the legal boundaries defining the Village of Cayuga Heights. However, in the urban planning field there are alternative definitions of community that are much broader in scope, and much more appropriate to the situation being discussed. Urban (and suburban) communities are seen as a part of a much larger "settlement organism," one that exists with strong interdependent relations to its neighbors. Cayuga Heights as a municipality is a component of the larger Town of Ithaca, which in turn is part of the larger still Ithaca urban or metropolitan area. People live in the Village, but travel to work at Cornell or elsewhere outside of the Village, shop downtown, and the children go to school in various locations around the area. Fundamentally, the Village is inseparably integrated into the Ithaca community. This is expressed in such basic ways as residents of the Village having an Ithaca, and not a Cayuga Heights mailing address, and the fact that such commonly-used businesses as grocery stores, movie theaters and auto repair shops used by residents of the Village are all located in the other municipalities that make up the larger Ithaca community.

Consequently, elected officials in Cayuga Heights are obligated to consider the impact of their actions not just on the proportionally small population and area of the Village, but on Ithaca as a whole, a community that encompasses contiguous municipalities that share a common landscape, cultural values, economic and environmental interests. Indeed, this concept is embedded in a number of federal and state laws, regulations and grant programs.

State and local governments have long recognized this broader definition of community and have fostered inter-municipal cooperation. In some cases inter-municipal cooperation is required in order to qualify for public grants-in-aid. One example is the Ithaca-Tompkins County Transportation Commission, which, by Federal and State law defines our community (for grant purposes) as the Ithaca Urban area, which includes the City and Town of Ithaca (including Cayuga Heights), Cornell and several small contiguous built-up parts of Dryden and Lansing. Many other public programs also emphasize the concept of the larger community in programs dealing with youth and recreation services, water supply, public and fire safety, libraries, assessment, etc.

Clearly, many of today's problems facing local municipalities transcend legal borders and, therefore, must be addressed on a broader basis. These shared concerns require public officials and citizens within an urbanized area to work together, and when they

do so, they form a shared culture. That certainly is the case in the Ithaca urban area, and if Cayuga Heights acts without due consideration of its neighbors, this has the potential to damage that common culture. To maintain the vibrancy of our community, the trustees of Cayuga Heights, though leading the smallest of all of Ithaca's contiguous municipalities, must still be responsible for the impact of their decisions on the character of the community as a whole. Likewise, residents of neighboring Ithaca municipalities should not be expected to remain silent if Village officials propose a plan that could damage them or the character of the larger community.

In professional planning terms, and clearly in the minds of many residents who live beyond those invisible municipal boundary lines that define Cayuga Heights, the Ithaca community as a whole would be negatively impacted by the deer-killing program being proposed by Cayuga Heights. This explains why people residing both inside and outside of the Village have come forward to offer criticism of the DEIS, and why, over the last two years, large numbers of people from other Ithaca municipalities have attended numerous public meetings to express their concerns on the deer issue. Some live within a few blocks of the village boundary, and have spoken of how this proposal will impact their lives negatively, either through the killing of animals they care about, or through negative changes in the character of the Ithaca community this plan will cause. Therefore, it is reasonable that they have come to meetings to be heard. And they have every right to participate, even though several Cayuga Heights residents have at times rudely addressed those not residing in the Village as "outsiders," "invaders" and "outside agitators," and even told them to "get out." More significantly, Village officials have expressed the idea that only input from residents of Cayuga Heights is of consequence in their decision making process. The DEIS itself also completely fails to address or assess potentially significant impacts on the wider Ithaca community. In my professional opinion, this calls the validity of its conclusions into question.

The bonds of community are fragile, and when they are frayed or even broken, the impact on the well-being of the whole can be serious. That is a risk that is inherent in this proposal and the process that produced it, and it speaks to a potentially serious impact that is not addressed by the DEIS. There are troubling signs of increasing isolation of the village from its neighbors, including acrimonious public remarks directed at non-residents at public meetings on the deer issue, harsh and sarcastic comments made in letters to the editor in the local papers and on online forums. It is obvious that the effects of past Village actions on this issue, plus the impending possibility of the proposed deer-killing project moving forward, is having a cumulative negative effect on the broader community character and well-being, fomenting a kind of inter-municipal resentment that is not characteristic of Ithaca. The widespread perception that this killing plan is being implemented without consideration of its effect on the community as a whole, and with indifference to the effect it will have in isolating Cayuga Heights from the other Ithaca municipalities, is exacerbating the damage being done, damage that will very likely grow if the killing program is actually implemented.

However, it may still be possible to avoid the worst of this damage if clear actions are taken by the Village trustees that have the effect of acknowledging their responsibility to consider the impact on the wider community, and if less drastic approaches than a mass deer-killing program, which exist, are taken to address deer-human conflict in

Cayuga Heights. The simple and cost-effective mechanism of allowing residents in Cayuga Heights to have access to the same practical fencing options available to residents of the neighboring Town of Ithaca, which has no equivalent deer controversy, is just one example. The DEIS does not seriously consider non-lethal alternatives with less severe negative impacts than the proposed killing plan, and therefore fails to satisfy the very clear requirements of state environmental law.

External Impacts on the Larger Community

I submitted a letter on October 28, 2009, as part of the earlier EIS process review, pointing out the impact that the deer-killing program may have on county tourism. I stated in that letter that such a concern needed to be addressed. However, the DEIS does not appear to have given any attention to the concerns identified in my letter. Since I am quite knowledgeable about tourism both as a professional planner, Cornell professor and former county public official, it is my opinion the trustees of Cayuga Heights are obligated to consider this issue with the potential to affect many. I am again requesting that the consultants and the Village Board address this issue.

I want to be clear that, in regard to tourism, I am speaking only for myself, and am not speaking for the tourism board, for my department at Cornell, nor for the County legislature. Nevertheless, I do believe that my many years of experience in the field of tourism give me status to address the issue of economic development and community character to which tourism is a contributor.

I have a concern that the proposed deer-killing program may have a detrimental effect on characteristics of the community that make it a tourist destination. Tourism development is a recognized component of the county's broader economic development program, which, in turn, is focused on building the tax base and increasing jobs. There is some evidence that the County is seen as a special place, one that is progressive and enlightened, and that this attracts a group of tourists who will spend money here. Ithaca (including Cayuga Heights) consistently shows up on national surveys as a top place to visit and to live. Most recently, we were ranked number one in the country for "well-being." Several years ago the Utne Reader magazine rated the Ithaca area as the "most enlightened" community in the US. Our SPCA is seen nationally as a leader in the "no-kill" shelter movement for animals. We are recognized nationally as one of the centers of the healthy food movement with a vibrant farmers market, an innovative natural foods Co-op, and Moosewood restaurant known far and wide. EcoVillage, in the Town of Ithaca, is a leader in advanced community-building. Ithaca-Hours is known throughout the western world as a creative means of supporting local economic development and keeping money in the community. And we have excellent cutting-edge theaters, museums, arts and music. These, and more local "attractions", create an image of our community as a special place to which many people throughout the country respond. It is an image that is part of what brings them here as tourists. Moreover, it is an image that many who live here embrace with pride, and one that they have come to love. In my professional opinion, those who choose to reside in this community, and those who choose it as a tourist destination, are more likely than average to share a constellation of values that would include such things as inter-municipal unity, nonviolent approaches to conflict resolution, and respect for animals and the natural world.

A 2010 report analyzing the County tourism program (*Profile of Visitors to Tompkins County*), prepared by Chmura Economics & Analytics for the Strategic Tourism Planning Board, stated that visitors ranked "the feel of the area—the ambiance, diversity, the peacefulness," as what they enjoyed the most, or found most memorable, about visiting here. In fact, the area's "peaceful ambience" is one of several aspects identified as being likely to bring tourists back for repeat visits, according to the County tourism program staff (http://www.visitithaca.com/press/41.html). A program that entails the annual mass killing of deer in neighborhood backyards to protect garden plantings, in a municipality of Ithaca that refuses to let its own citizens use practical deer fencing, has the potential to detract from those qualities of the larger community that define its core values for many who choose to visit, as well as many who may choose to move here. Thousands around the country and the world have signed a petition against the Cayuga Heights deer-killing program. Local, regional and national media have highlighted the deer-killing controversy. Further, as more information is emerging about the lack of scientific validity behind the justifications for this program, additional unwanted attention is likely, due to the irony of this happening in the bedroom community of an Ivy League University.

In 2006, 2007, 2009 and 2010, Ithaca was ranked in the top 100 places to live by Relocate America. In 2001, Mothering Magazine named it one of "25 Terrific Places to Bring up a Family." The growing appeal of this community for retirement, relocation, or raising children could be damaged by the fact that the deer-killing plan calls for not just a one-time bait and kill effort, but a multi-year program that could potentially be performed annually over a 5-10 year period, or possibly longer. Each year that the killing is performed, old wounds will be reopened, leading to an even greater rift than we're already seeing in relations between people in the village itself, and between residents of the village and residents of the wider Ithaca community. Since there are already people residing in Cayuga Heights who are saying they find the plan so morally repugnant that they will move away if it is implemented, it's possible many people might shy away from coming to our county for the very same reason, because they may see us as a community that uses violent means to solve our problems – not the progressive or enlightened place it once was thought to be. If this image of our larger community should become widespread, the broader Ithaca community and county, not just Cayuga Heights, could be impacted negatively in the long-term. This potential significant impact of the program on our community culture and its attractiveness as a place to live has not been considered in the DEIS, and I believe it should be.

While the program's negative impact on the tourist program may be difficult to pin down statistically (like many aspects of any tourism program), it should be recognized that such an impact is quite plausible, and therefore should be given further detailed study before the Village goes ahead with its program.

Conclusion

It is my professional judgment that the DEIS fails to adequately evaluate the potentially significant impacts outlined in this memo, not just on Cayuga Heights, but on the Ithaca community as a whole, and that these flaws need to be addressed before a responsible decision is made about the proposed program.

Date: 6 December 2010
To: Board of Trustees, Village of Cayuga Heights, New York
From: Guy Tabacchi, Resident of Cayuga Heights, 705 The Parkway

Subj: Hearing on the Draft Environmental Impact Statement of a Deer Remediation Plan

1. Since this and the previous administrations have continually called for Deer Remediation by lethal means the village has become divisive and has destroyed the community spirit. We now have a split community:
    a. Those who have expressed that the only remediation is killing deer
    b. And those who do not and believe that there has to be a better approach that would entail working with neighboring communities as part of the remediation effort.
2. So that the board may know, I **do not** give permission for our property to be used *for any purpose of this program* ***nor*** *do I give permission for the discharge of a* firearm within 500 feet of our home.
3. There is no guarantee that if the bait and shoot plan is adopted that a stray projectile will not become a lethal object to people or pets.
4. If a deer is wounded that animal can become a danger to drivers since the animal will in all probability run away very frightened.
5. How can the number of deer left to survive be defined as 20? Exactly how many deer do we have in the village? Since the mayor claimed in her television interview on WSTM that there are too many deer and has been claiming this for over a year - it is time that we know exactly how many deer there are.
6. I would like to know how much public monies our mayor and the board of trustees have spent on the "Deer Remediation Issue"?
7. Why are the mayor and the board of trustees not concerned about the villages infrastructure, such as sidewalks for all neighborhoods so that adults and school children can walk safely and not have to walk on our roadways. But I guess that would take monies away from their wanting to kill a living creature who does them no harm.
8. Why is the mayor and the board of trustees more concerned about maintaining divisiveness within the village than creating a harmonious place to live?
9. How long a time frame is the board of trustees allowed to commit public funds? Are they allowed to commit future administrations to this expense and tax burden?

Village of Cayuga Heights Board of Trustees
Cayuga Heights, Ithaca , NY 14850
15 December 2010

Subject: Comments and Feedback Regarding Deer Management Plan for Cayuga Heights Draft Environmental Impact Statement (DEIS)

We live at 705 The Parkway on a 2 acre wooded plot with a lovely pond and waterfall. In 1977, we purchased this property from Alpheus and Nicole Smith, who through the years had fostered a wildlife sanctuary by their preservation of plant species and undergrowth in which animals take shelter. Mrs. Smith was the niece of the famed naturalist John Muir, and with her knowledge and background she encouraged the growth of native plants, bushes and trees.

We purposely purchased this land in the anticipation that we too would preserve this small oasis for our family, friends and the animals. Since then, we have lived in peace with many species, sharing our home with deer, squirrels, muskrats, opossums, wood chucks, chip monks, mice, fish, turtles, water snakes, song birds, crows, hawks, buzzards and water fowl, all fellow beings whose presence we keenly enjoy. Occasionally we even see red fox, raccoons and skunks. This small microcosm in a hectic world gives us much peace, beauty and joy. It is our refuge and our strength.

For many years, we grew vegetables, but alas, the wood chucks have similar tastes – so after many years of building fences which the woodchucks burrowed under – we happily retreated to the Ithaca Farmers' Market. Before giving up our vegetable garden, we paid to have someone trap the wood chucks with "have a heart" traps and relocate them – it would not have occurred to us to go to the Village Trustees and ask for the extermination of these animals.

Now it appears that we, and all of the inhabitants of our sanctuary, will be subjected to baiting, netting terror, pain, and mass killing with guns or captive bolt guns. This is indeed horrific – as I write this, there are mallards swimming on the pond, deer drinking in the stream and squirrels in their nests high above my head. We are fond of all of our animals, but the deer have become constant, silent companions in our habitat. They live in families - mothers, daughters and their offspring. These families move together and their tender, gentle eyes move us each time we encounter them. Because we prove no threat – they live close to us. We are accustomed to seeing them at dawn and at days end. Bucks come and go – but one buck this year particularly looked after an orphan fawn – the two are still together and both are beautiful animals. Bucks sometimes "spar" with one another –in our back yard. The sparing appears to be in play because no injury occurs. Our cats can walk up to large bucks with no fear – the young fawns often come nose to nose with our companion animals.

Losing these animals would be painful for us, and those who live on either side of our property. Our neighbors on one side are vegan and the idea of killing anything is against their deeply held beliefs. Words cannot express my fear for these gentle deer families – we have bonded with them and they with us. Not to see them each morning and evening would be a loss indeed. When my Mom lived with us – she was slowly developing dementia – but she spent hours watching for the deer and called me often to the window –to point out their beauty and grace. We have named these deer – and know the characteristics of individuals and their families. They are protective of each other as only close family members can be. Deer communicate through a series of soft high pitched sounds, and if by mistake we walk too closely to a young fawn – they more or less snort – kind of a warning to respect their space. The mother can place a young fawn in the grass or under a tree or bush and the fawn does not move

until the mother returns. Fawns play – chasing each other almost gleefully. Deer seem to run for sheer joy– a way of expressing their exuberance. They show affection by grooming each other, by actual snuggling, and by being watchful for each other. For most of our time here – we have jogged a 3-4 mile route in Cayuga Heights – often at dawn or right before – just as deer are moving about. Never have any of these animals been aggressive nor have they bothered our shrubs, flowers or companion animals.

We have learned to love these animals and their families – they sleep in our yard, occasionally look in our windows and drink from our stream and our pond. In the winter the young ones run and slide across the frozen pond. Yes – they raid the bird feeder – but they are fun to watch. These are not wild deer living in a remote forest – they are habituated to humans and part of our community, and to slaughter them as they live amongst us in their trusting state would indeed be cruel.

We have been coming to as many Village Board meetings as we are able given our occupations – I teach as a professor at Cornell University and my husband runs a consulting business out of our home. At each board meeting we attend – we have strongly objected to the killing of deer with our tax monies. We have paid taxes since 1977 in the Village. It is hard to discuss our feelings given the manner in which our speaking is so artificially controlled. The opportunity to have a back and forth public dialog with the trustees almost never happens. Matters so much more trivial than the heavy impact of this killing program on our community are discussed in obsessive detail. But our concerns, and those of many others who oppose this program are shown almost no consideration or respect. The people promoting this killing program have created a climate of intimidation in the village – I experienced this when I ran for trustee a couple of years ago. Members of our party, which stood for a more open approach to government, were treated with a shocking level of disrespect, and even stopped on the village streets and accused of violating various laws while campaigning. I have been chided by members of the current board for caring about the deer, creating a climate in which my concerns are seen as trivial or somehow illegitimate. Basic questions my husband has posed at public meetings about the financing of the killing program have been deliberately ignored. Some of my neighbors also love the deer and abhor the thought of such slaughter, but are afraid to speak up or to write to the papers for fear of being mistreated or marginalized. This is not something I have seen before in over three decades in this village.

We believe that the mass killing of these animals will affect the nature of our environment and the character of the village. Children should not experience this violence – nor should anyone who does not want to be subjected to it. This killing, which will happen each year –will have a deep psychological impacts upon all of us, and affect our relationship to each other. This also brings a sad sense of loss, a loss of the beauty and grace of these innocent animals – and a loss of innocence of the neighborhoods, and a continuing divide among neighbors – who have for years been friends.

While we are not biodiversity experts – we have not noticed a loss of native plants or birds. Our little part of the word is a busy place with song birds in the spring, summers and fall – and the bright Cardinals, Jays and other birds at the feeders in the winter. There are plenty of ground cover and native plant growth on our property – and it has not changed much since Mrs. Smith managed the land over three decades ago.

I do not see why the Village Trustees cannot put in speed bumps to control traffic, allow fences to protect gardeners, and live and let live. The Lyme disease issue is interesting, as the most credible scientific studies show that killing deer in an effort to reduce risk of this disease makes no sense. Although Mayor Supron believes the number of deer in the village has grown significantly, a population

study carried out in 2000 showed the population to be between 170 and 200, the same level Mayor Supron claims it is now. It is hard to believe that our mayor claims that this horrible killing program is justified in part because deer or deer scat threaten our water quality, when fertilized and chemically treated lawns are prevalent in our village.

After attending many meetings and reading the DEIS, we believe the deer killing program is little more than an expensive, divisive, and ill-considered experiment– one designed to test a theory that seems to have little basis in fact. The DEIS is rife with poorly collected data, misconstrued data and poorly analyzed information. Given the flawed process that produced it, this makes sense. We can do better for our community. The trustees have not done their jobs, and this plan needs to go back to the drawing board.

Respectfully,

Mary and Guy Tabacchi

Date: December 6, 2010

To: The Trustees of the Village of Cayuga Heights

From: Mary Tabacchi, 705 The Parkway Mary Tabacchi

Re: Hearing on the Draft Environmental Impact Statement of Deer Remediation Plan

As a 33 year tax paying resident of Cayuga Heights, I am opposed to the current plans for deer remediation – which clearly means killing the deer in an inhumane manner.

a) I am afraid of stray bullets and do not want to view injured deer wandering my property or on the streets.
b) The deer remediation plan will restrict my activities such as walking, biking, jogging or cross-country skiing in the village and nearby locations.
c) I do not want the children or elderly in Cayuga Heights to be traumatized by the killing or viewing of injured deer.
d) I will be afraid to have my pets out of doors.
e) I am afraid of stray bullets or injured deer while driving in Cayuga Heights.
f) I do not want to pay taxes for the slaughter of these animals – especially when the village needs to pay more attention to its infrastructure – and at a time when we need to focus on the safety and security of our residents. Surely we can use tax money for more important village issues such as sidewalks, walkways, speed bumps or more traffic lights and so on.
g) I believe we could resolve our deer/car issues by placing speed bumps in Cayuga Heights – just as did the residents of Forest Home.
h) I believe we can resolve the garden issues by allowing adequate fencing.
i) I am strongly opposed to the deer remediation plan because it divides the residents of Cayuga Heights into camps – neighbor against neighbor.
j) I believe that this annual killing will reduce property prices and the value of my home.
k) I will not allow deer to be killed within 500 feet of my home.
l) I do not want to be alarmed at night or suddenly at home – due to noise and violence associated with the killing of deer.
m) I believe that baiting and killing deer is unethical and cruel.
n) I do not like being intimidated because I believe it is wrong to kill the deer – it is unpleasant to live in an atmosphere of pressure and fear.

Thank you very much

12/15/10

Board of Trustees
Village of Cayuga Heights, NY

Re: Comments on Deer Management Plan Draft Environmental Impact Statement

Dear Trustees,

My name is Charlene Temple, and I live on Renwick Drive in Ithaca. I am writing today as a concerned citizen who has resided in this community for over forty years, and in my professional capacity as a psychotherapist, to offer my assessment of the Cayuga Heights Deer Management Plan Draft Environmental Impact Statement (DEIS).

My comments below are informed by my academic training (Syracuse University, MSW 1987) and my clinical experience, as well as by observations I've made at numerous public meetings on the Cayuga Heights deer issue. During my 23 year career, I have worked in hospitals, hospices, Ithaca's Family and Children's Service Clinic, and in private practice. I also have special training in Critical Incident Stress Debriefing. In all these medical and counseling contexts, I have acquired extensive experience treating people who have been traumatized in various ways, from chronic and severe physical abuse, sexual abuse, violence, and experience with traumatic events such as rape, military service, divorce, etc. Whether someone is age three, thirteen, thirty-five, or seventy five years old, the symptoms are often almost identical.

In my professional opinion, psychological trauma will be a likely occurrence for a number of people in this community if the deer killing plan put forth in the DEIS is implemented. Post Traumatic Stress Disorder, Adjustment Disorder with Mixed Anxiety and Depressed Mood, or Anxiety or Dysthymia are some of the conditions that may be caused or worsened as a direct result of the carrying out of a mass deer killing program in Cayuga Heights neighborhoods. Some of those likely to be affected are those who enjoy the individual deer that habitually visit their yards, those who have watched does raise their fawns, or observed the relationships between herd mates over time, and those who have developed a sense of personal connection with one or more of these animals. Such individuals will almost certainly experience deep sadness, possibly even devastation, when the deer they have come to appreciate are systematically killed.

Another vulnerable population are individuals who have a strong emotional identification with animals, or even a philosophical commitment to respect animals, of whom there are many in our local community. Families who have cultivated in their children a love of nature and wildlife are also at risk. Should such individuals have the misfortune of seeing/hearing deer being killed by shooting, or witnessing deer scrambling with terror and panic under a heavy net, or seeing/hearing deer being

slaughtered by persons using a bolt gun, the trauma experienced could be deep-seated. If people are driving, and witness a wounded, bleeding deer fleeing into the road or collapsing on the ground in view of the roadway, the gruesome image could be indelible and highly disturbing. For those with pre-existing trauma, the knowledge alone that a mass killing of animals is being performed could act as a trigger.

In all of these scenarios, which are so disturbingly graphic, what could the effects of such trauma look like from a clinical perspective? Potential symptoms could be: recurring and intrusive distressing recollections and dreams; acting or feeling as if the trauma were being relived; psychological reactivity to an external cue that resembles an aspect of the traumatic event; avoidance of stimuli associated with the trauma; difficulty falling or staying asleep; hyper-vigilance; social withdrawal; work inhibition, etc. These clinical symptoms are described in detail in the DSM-IV, the Diagnostic and Statistical Manual of Mental Disorders written by members of the American Psychiatric Association. Such possible negative impacts on the mental health of individuals and the community are extremely significant, and in my opinion, quite likely to affect not just residents of Cayuga Heights, but residents in the wider Ithaca community. Yet, based on the contents of the DEIS, the trustees of Cayuga Heights appear to have failed to consider these impacts. They also appear to have failed to have adequately considered alternative approaches to reducing deer-human impact that have a far lower potential to cause harm.

In addition to my concerns as a professional, I also want to take this opportunity to express, as a concerned citizen, my unqualified moral opposition to the plan to kill deer in the Village of Cayuga Heights. I am opposed to shooting the deer, and also the latest plan: the use of "net and bolt" killing. I have attended many meetings and done my own research as well. There are reasonable solutions, such as modernizing the Village's outdated and inflexible fencing ordinance that can directly help gardeners protect their plants from deer. This solution will not cause any trauma to anyone, and will preserve the peaceful character of our community. On the other hand, the killing "solution" will most definitely cause trauma to individuals and bring shame on our community as a whole.

I hope that the trustees of Cayuga Heights would not knowingly introduce trauma into our community when there is a choice not to. The deer killing program will exact too high a price. It is imperative that we continue exploring non-lethal alternatives and work together to find a better solution.

Sincerely,

Charlene Temple

Charlene Temple, MSW, LCSW

Greetings.

I am Sandip Tiwari. My family and I moved here in 1999 attracted by the combination of Cornell University and the values that the community represented – a non-self-centered and humanist view of the local and global world that we inhabit and affect through our actions. We have resided on Upland Road since the arrival in 1999. This will end since it is becoming growingly clear that the extremism and lack of civilized conversation that has become more pervasive in this decade across the world – through wars and creative ways to polarization has arrived here.

This country is going through its worst financial crisis with nearly 10% unemployment. There are budget shortfalls all around – local, state, nation. And competitiveness and the nation's place in the world has changed dramatically over this decade. To think that Cayuga Heights elected officials can act as a protected gated community of the "Have's" immune to the world around, doing as they please because of a small vote majority in elections as "Masters" of the world, and eliminate inhabitants of this land, is not only barbaric but also self-defeating.

Mahatma Gandhi said "The more helpless a creature, the more entitled it is for protection by man from cruelty of man."

That we are not willing to consider solving the problem through individual use of fences is unethical, uncivilized, and representative of the style of governance that is becoming too pervasive - from Cayuga Heights to Washington. And all this act of killing will do is create long term sustainability problems for the community – Cayuga Heights, Ithaca, and the institutions and companies that have made this area their home.

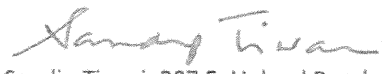
We, Cayuga Heights, think we are rich and immune in this financially struggling country where many complain about the taxes.

We think that a good use of a million dollars is this proposition.

May I suggest that if you think you have this $1M that you consider the following to make this community a more friendly and livable community and contribute in ways that a university town community should.

a. Most of the service workers in Cayuga Heights live outside Cayuga Heights since we are unaffordable. Give the employees including policemen and firemen a break so that they can live here where they work.
b. Fix the roads. Build more sidewalks so that people can walk. We are in Cayuga Heights Elementary School. Just go to the intersection of Upland and Parkway and see what is going on. A breakdown in drainage has been a constant at that intersection over the years, and you will see plenty of temporary solutions through history that have been practiced there. Today's is temporary asphalting and large safety hazard openings in drain, accumulation of water at the intersection that ices up, and a plywood that has been sitting on one of the drains for the past innumerable number of months. There are plenty of such spots with potholes, etc., that you should be worrying about as governing body.
c. Help improve education at the elementary school here. Bring a science lab to every grade and support arts and music so that our children grow up to their full potential.
d. Make community programs that teach citizenship, community service, and other desirable humanist characteristics to the young.
e. Provide better snow removal services.
f. Control the increase in taxes by eliminating unnecessary costs such as this one.

Respectfully submitted on Dec. 6,



Sandip Tiwari, 207 E. Upland Road, Ithaca, NY 14850

Letter 65

Sandip Tiwari
207 E. Upland Rd
Ithaca, NY 14850
Dec. 10, 2010

Village of Cayuga Heights Board of Trustees
Cayuga Heights, Ithaca, NY 14850

Subject: Comments and Feedback on Deer Management Plan for Cayuga Heights, DEIS, and Dec. 6 Public Hearing

This note is a follow-on to the Dec. 6 Public Hearing, a reading of the DEIS report, and observations and personal opinions on the Deer Culling Plan. I write it as an eleven year resident of Cayuga Heights in the expectation that the trustees are listening before making important decisions and that the process undertaken to this point is not just a perfunctory fulfillment of state requirements.

I will end with sharing what my own personal inclinations, values, morals and ethics tell me, but first a few comments on some of the factual elements of the effort to date. The comments that follow are based in part on the expertise I have gained in the application of the scientific methods in a career spanning 30+ years, nearly two decades as a research scientist at IBM Research and recent 11 years of education and research carried out in my capacity as Charles N. Mellowes Professor in Engineering at Cornell and as Director of the National Nanotechnology Infrastructure Network.

Data and Records as reflected in the DEIS

a. It is very problematic that there are no year by year statistics with error margins on deer population provided in the main body of the DEIS[1]. From what I understand, such data is available from field studies carried out for the 2000 through 2006 period (from 2000, with a range of 170-210 deer to 2006, estimated at 147 deer with a range of 124-176). Based on the information included in the DEIS, we cannot know with any confidence if the current deer population is smaller or larger than it was in 2006. The current population should have been determined using a field study, as in previous years. As it is, in what way does the estimated population in 2010, in the same range as the population in 2000, reflect such a major change from the past that it should spur drastic action?

[1] See *Cayuga Heights Deer Management Plan DEIS Executive Summary: page 1-1*

b. The DEIS should include detailed information on the range of travel of local deer. If most of the village's deer are to be killed, the DEIS should include an accurate analysis of how many new deer are likely to come into Cayuga Heights due to migration. This is important since animals travel, and short range and long range impact in time and space are central to environmental modeling. Population changes and diffusion are critical in this discussion. It is a serious flaw that this fundamental issue is not addressed.

c. Lyme disease, a bacterial disease, is carried by ticks, and there are numerous tick vectors besides deer – all vertebrates. Lyme disease exists in a variety of regions where there are no deer, and it does not always exist in regions where deer are present. I see no statistics in the DEIS on the incidence of Lyme disease in this community[2]. Studies point out that mice and rats are the principal way by which Lyme disease ticks are distributed, at least in the northeastern United States, and killing deer has little to do with controlling the role these kinds of animals play in Lyme disease transmission. If Lyme disease is a true matter of any concern here, the DEIS should make a point of addressing the population of mice and rats, and not deer.

d. Biodiversity is a term used entirely inappropriately in this DEIS report[3]. Biodiversity encompasses measures of both flora and fauna, and no Cayuga Heights statistics at all are provided in the DEIS for past or present levels of either. Household plantings cannot be considered part of this biodiversity; these are largely foreign plants brought in by community members and many of these plants are quite inappropriately matched to the local climate.

e. No year by year statistics are provided for the number of deer-vehicle collisions[4]. It would be important to know how the number of deer-vehicle collisions change year to year and where clusters of accidents occurred to identify patterns and also to know the speed limit in these locations, as well as how often the accidents were associated with violation of the current speed limit. The DEIS should include the percentage of drivers who have been charged with violating the 30 mph or other even lower speed limits in this community.

f. While a survey of residents is included from a decade ago[5], no current statistics are provided regarding the opinions and wishes of local residents. Do the people of Cayuga Heights really want the mass killing of deer by net and bolt? Do they want

---

[2] See *Cayuga Heights Deer Management Plan DEIS Project Description: page 2-10*

[3] *Cayuga Heights Deer Management Plan DEIS Project Description: page 2-3*

[4] *Cayuga Heights Deer Management Plan DEIS Existing Conditions, page 3-3*

[5] *Cayuga Heights Deer Management Plan DEIS Appendx B: Preliminary Situation Analysis From a Survey of Residents March 1999*

deer to be sterilized, or do they want them to be left alone? When was the last survey and what did it say? How can such an important decision be made without knowing more about community attitudes?

In sum, this DEIS has little that stands up to even the most basic scientific scrutiny, and almost nothing in way of verified factual information. How can an educated community like ours accept such an abjectly insufficient document for which $12,000 of taxpayer money was spent?

Cayuga Heights rules and ordinances and their relationship to deer-human conflict

a. As an avid gardener, I fail to understand the arguments regarding the negative impact of deer on gardening[6]. Through the use of fencing and careful choice in plantings our family has had no problems with deer for many years. Even our vegetable gardens have faced no problems.
b. Allowing people to have higher fences if they want to have plants attractive to deer would remove the biggest source of deer-human conflict in Cayuga Heights. It is a serious flaw that fencing in not seriously evaluated in the DEIS since it is a cheap, sustainable and an effective long term alternative to the annual mass killing of deer[7].
c. Be stricter about the 30 mph limits. If people have accidents with deer driving at this speed or lower, I would wonder more about the driver's capabilities than about the number of deer in the village. For those speeding, of course, driver reaction time is often inadequate. Speeders should be ticketed for breaking traffic laws.
d. Introduce policies that encourage the biodiversity that the DEIS pays such a lip service to and ends up misinterpreting[8]. Encourage a greater diversity of local species in people's yards and elsewhere by encouraging planting of as many native species as possible.
e. Introduce village-wide education program about Lyme disease prevention and early detection, which would be far more effective than killing deer. This is the practice in many communities in Northeast United States and a recommended practice by health sources. This is what was practiced in Westchester County from where we moved to Ithaca.

Simple changes in rules and ordinances would protect homeowners' properties and, over time, likely reduce the deer population by reducing the food supply through an increase in fenced in areas. It appears that a variance was recently given to a village trustee for an illegal fence. It is hard to see the logic or comprehend why the rest of the village doesn't

---

[6] *Cayuga Heights Deer Management Plan DEIS Existing Conditions, page 3-6*
[7] *Cayuga Heights Deer Management Plan DEIS Project Description: page 2-9*
[8] *Cayuga Heights Deer Management Plan DEIS Project Description: page 2-3*

have the same courtesy in the use of fences. Greatly restricted fencing in location and in height makes it hard for those who want to protect their plants needlessly increasing the level of deer-human conflict.

Being Humane in Cayuga Heights

a. In the DEIS it is stated that the killing "may be experienced as a potential significant impact to the social conscience of a portion of the VCH community." This one sentence does not at all represent a serious examination of the negative impact of this killing program on the character of our community[9]. Our elected representatives have responsibility for the well-being of the community and for responsible use of our taxpayer dollars. This means that they must be respectful of the diverse population that resides here and take seriously any act's impact on the physical and psychological health of those in our community – not just Cayuga Heights, but our whole community including the Town and City of Ithaca and Cornell. This includes trauma connected to acts of killing – both on children and on those who find the mass killing of our backyard deer morally repugnant.
b. This program has already polarized the community, and it is the responsibility of elected representatives to choose a course of action that assures that civilized behavior prevails, laws are followed, and that conduct is ethically and morally correct.
c. Democracy is not dictatorship of majority but involves acting in a way that morally and ethically reflects the values and will of the people. *Why is there is no information available anywhere on the will of the people on this issue?* Do our residents really want a mass-killing of deer in our backyards by net and bolt, or do they want deer to be made infertile, or do they want them to be left alone? Do they want killing and a divided community, or fences and a community at peace?
d. Our elected representatives should take a hard look at the opinions being expressed by our citizens. There are people on both sides of this issue. It is the responsibility of the representatives to develop an informed understanding through collection of factual data on many topics such as the deer population, biodiversity, community attitudes and all possible solutions, and following that, finding a peaceful and legal means by which problems can be addressed.

Personal Ethics and Values

a. Our family moved to Cayuga Heights attracted by the combination of Cornell University and the values we thought this community represented – a local and global view of the world we inhabit and affect through our actions. We believe in non-violent means of solving problems and conflicts and in raising children and educating students to be

---

[9] *Cayuga Heights Deer Management Plan DEIS Executive Summary: page 1-5*

civilized humans aware and acting responsibly as one of the large diversity of species who inhabit this planet.

b. I am a native of India, a country that at the time of my birth was a young country that achieved its freedom from multiple centuries of colonialism and foreign domination, similar in many ways as the independence of United States nearly two centuries before that of India. We grew up in a Gandhian tradition, of civil disobedience, that was so powerfully practiced here by Martin Luther King in the civil rights movement even when significant popular opinion and governance was against it. The approach insists on truth, openness, and ethics and values guided by a moral force and use of non-violent means of civil resistance. These are the values we have practiced and taught our children. These are the values that guide actions of our life. The world, and United States, would be a far more pleasant, humane and livable place if we practiced these values of a civilized society, rather than polarization and violence that has become pervasive. For us, this is our religion and our spiritual way. And practice of this locally is an essential part of a society all connected together living in harmony.

c. We love the deer that come to the yard, and have known a deer with an ear tag labeled #138 now for a couple of years. She gave birth to two fawns this spring in our yard and that was an expansion for us of our family of whom they are a part and a source of immense love and pleasure. The psychological and personal impact of their unnatural death by any means can scarcely be imagined. My wife and I shudder and cry at the mere imagining of the event, and it is even worse considering my own local government intends to use our own tax dollars to carry out this injustice.

We are resolved that if such acts of wanton violence comes to pass, we will leave this community. It does not represent our values, morals, and ethics. Fortunately for us and others like us, the world provides many options for graceful living at peace with our surroundings. We are not alone in this thought. The trustees have heard serious objections to the planned pogrom with passion. My colleagues at work that live in Cayuga Heights and numerous neighbors have expressed similar opinions.

Departures from Cayuga Heights based on ethical objections will certainly change the character of the community in ways few would want.

Submitted in the hope that the representatives are truly listening and will act morally in fulfilling their responsibilities towards the community, rather than merely pretending to be listening.

Sandip Tiwari

Resident of Cayuga Heights, and Charles N. Mellowes Professor in Engineering at Cornell University

Michelle Poppensiek

From: stephen wagner [stwa14@yahoo.ca]
Sent: Thursday, December 16, 2010 2:42 PM
To: Kate Supron
Cc: Mary Mills
Subject: Comment on DEIS for Cay. Heig. deer rem. plan

Dear Mayor Supron,

I am writing to submit my comments on the DEIS for your proposed deer remediation plan (please go to cayugadeer.org to access them). I believe the DEIS you prepared is deeply flawed and does not stand up to ethical and scientific scrutiny.

I consider your proposed deer remediation plan unreasonable and barbarous, and I am embarrassed to be associated with it in any way as a resident of the Village. I truly hope that you will reconsider it.

Yours sincerely,
Stephen Wagner
519 Cayuga Heights Road
Ithaca, NY 14850

Mary Mills

From: Carol Warshawsky [carolw104@gmail.com]
Sent: Sunday, December 05, 2010 12:28 AM
To: Kate Supron; Mary Mills
Cc: Steve Shiffrin; Dominick LaCapra; Bob & Ginny Powers; Victor Nee
Subject: "Deer Management" Plan--for distribution to the Village Trustees!!

Dear Kate and Village Trustees

I am leaving town today so I won't be able to attend the meeting on Monday. But I would like my voice to be counted.

I am strongly opposed to the deer management plan. I do not think it makes sense; I do not think it will have the affect many of you expect; I do not want my taxes increased for a program I find distasteful and frivolous at best, dangerous and useless at worst.

I am writing this despite feeling there is little interest on your part in hearing from the public, or at least that part of the public opposed to this plan. If for no other reason, please reconsider this culling program in light of the serious liability it poses to our Village and the burden of higher taxes.

As many have pointed out, deer have no sense of boundaries; culling deer in C.H. does not necessarily reduce the herd. Others will roam in filling the void of those culled, enjoying increased vegetation and mating with the remaining females. The situation will not change. I do not trust that culling with guns can be done safely. While bow and arrow hunting would be a minuscule improvement, both are very poor solutions which put residents at risk. The benefits will be minimal contrasted against the frightfully large potential liabilities.

The costs of this program is high, more so if it proves ineffective. Village taxes will go up on an annual basis to pay for this tomfoolery which has no end in sight --deer will still find their way into C.H. I find it unconscionable to be forced to pay higher taxes for a program that is dangerous, unlikely to work, will not increase safety*** and has been frivolously conceived to protect some residents' gardens.

Save us the Strum und Drang; plant deer resistant flora and put up fencing. The financial burden would rest on those concerned instead of being foisted on the rest of us.

***To date there have been minimal (if any) deer / car accidents; if drivers obey the Village speed limit it is difficult to see where this could become a more serious problem. However, deer running from the sound of shot guns could pose a risk to drivers and pedestrians.

Thank you,
Carol Warshawsky
104 The Parkway
Ithaca NY 14850

Education is an ornament in prosperity and a refuge in adversity. ~Aristotle

-----Original Message-----
From: Mje7335@aol.com [mailto:Mje7335@aol.com]
Sent: Tue 12/7/2010 10:16 AM
To: Kate Supron
Subject: Village Deer Issue

Dear Mayor Supron:

My name is Mike Ellis and I reside at 111 Sheldon Road in the Village of Cayuga Heights where I have lived for 23 years.

I did not attend the public hearing last night (December 6, 2010), but for the record, this email is being sent to give you my full support in your efforts to significantly reduce the deer population.

Moreover, I strongly urge you and the Trustees to continue your efforts to put forth what you determine is the most efficient way to reduce the grossly overpopulated number of deer that we have in the Village. The sooner the better! The time has arrived to implement action on this issue.

It is also my belief that the views of Village residents should be given much more weight than non-residents and most especially those non-residents who are nothing more than hired hands directly funded by a certain deep-pocketed group and/or family who are opposed to dealing with this serious issue.

I appreciate the efforts and determination of yourself and the Trustees in dealing with this issue.

Respectfully submitted,
Mike

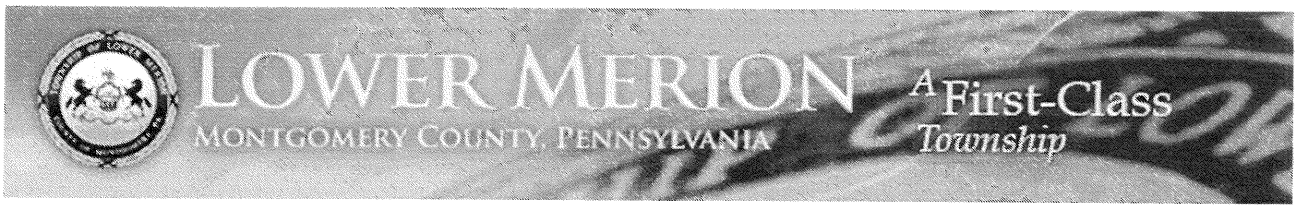
-----Original Message-----
From: Constance B Kintner [mailto:ckintner@cornell.edu]
Sent: Tue 12/7/2010 9:09 AM
To: Kate Supron
Subject: Please follow through on Deer Remediation

Dear Mayor Kate, Thank you and the village board for holding the meeting on the Deer Remediation Plan last night. As someone who has had to replant endless "deer resistant" perennials, rebuild legal-height fences that the deer merely trample, pull ticks off dogs, worry about a grandchild picking up disease from deer feces in our yard, been threatened by an aggressive 12-point buck while out running, and sustained more than $1,500 in damage from a car-deer collision, I heartily support the village's efforts to reduce the deer population through culling and sterilization. I believe the net and bolt procedure would be effective while mitigating the danger of firearm use in populated areas. But ANY solution that involves drastically reducing deer numbers has my full support and is critical for the health of the Cayuga Heights ecosystem. Please act to reduce the deer population drastically and do it as soon as possible. Thank you.

Connie Bart Kintner
316 The Parkway
Ithaca, NY

APPENDIX B

Deer Culling Activities, Lower Merion and Upper St. Clair, Pennsylvania



News

Print

Township Prepares for Deer Culling Operation

Operations to Take Place Between 9 p.m. and 5 a.m.

Posted Date: 10/14/2010 1:08 PM

The Lower Merion Township Police Department will oversee deer culling in areas of the Township overpopulated by deer on the following dates:

- November 8, 9 and 12
- November 15—19
- December 13—17

Conducted by a small team of professionals from the United States Department of Agriculture, the culling will take place between 9 p.m. and 5 a.m. in cooperation with large property owners throughout the Township.

As a courtesy to citizens residing in the vicinity of the culling operations, informational flyers will be distributed in the coming weeks. All culled deer will be donated by the Township to a local food bank as required by the Game Commission Permit.

Since 1991, the Township has assessed the deer population and the problems that are associated with a high density of deer, such as environmental damage; vehicle crashes and reported cases of Lyme disease. A 2008 deer density study, conducted in partnership with the United States Department of Agriculture (USDA) - Wildlife Services determined that there are between 44 and 58 deer per square mile in Lower Merion, which far exceeds the recommended population of between 6 and 10 deer per square mile.

A two-phase culling operation in 2009 proved successful. Of the 119 deer that were harvested, 79 were female and 40 were male. On average, the 79 does would have produced 158 fawns, resulting in a total projected deer density impact reduction of 277 fewer deer in the Township in the spring of 2010. Over 2,900 pounds of venison was donated to the City Team Ministries as a result of the 2009 culling initiative.

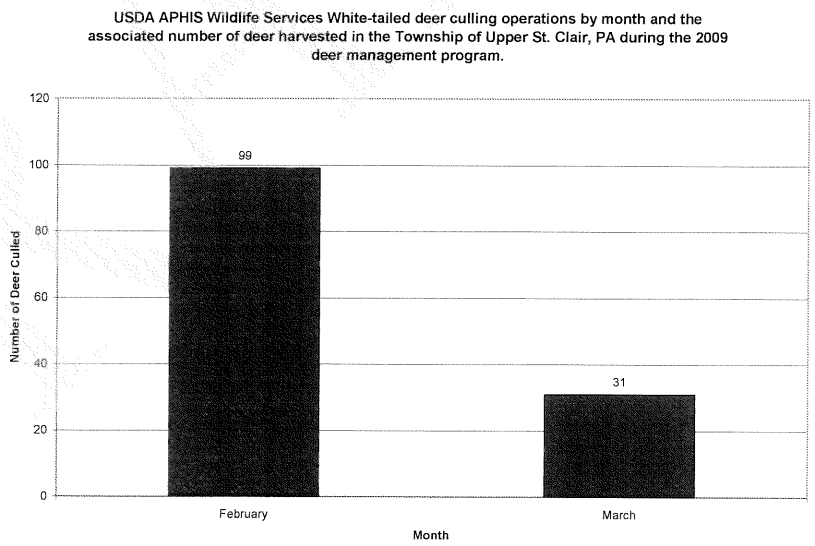
Citizens with questions regarding the upcoming culling operations can call (610) 645-6258 or visit the Police Department/Topical Issues page on www.lowermerion.org for more information.

USDA APHIS WILDLIFE SERVICES
ACTIVITIES SUMMARY REPORT
2009 WHITE-TAILED DEER MANAGEMENT PROGRAM
TOWNSHIP OF UPPER ST. CLAIR
(AUGUST 2009)

USDA APHIS Wildlife Services (WS) was requested by the Township of Upper St. Clair (TOWNSHIP) to conduct white-tailed deer culling throughout the Township and on designated private properties. An operational control program was first implemented in 2005 and has been continued in subsequent years to reduce deer densities. The objective of this culling effort is to manage the deer population at or near 5-8 deer per square mile, as originally recommended by the Pennsylvania Game Commission (PGC). In addition, deer damage operations were conducted to decrease the vehicle/deer collisions throughout the TOWNSHIP, but especially along the State Route 19 corridor (SR 19). WS conducted operations under a PGC Special Use Permit issued to the TOWNSHIP to remove no more than 200 deer from within the Township limits. The following report includes program methodology, results, analysis, and recommendations.

WHITE-TAILED DEER MANAGEMENT METHODS

WS conducted deer removal activities according to the work plan established in the Cooperative Service Agreement with the collaborative effort of the TOWNSHIP and PGC. Removal operations consisted of multiple nights of activity throughout the Township from 02 February 2009 – 06 March 2009. Deer were removed primarily from elevated mobile stand units. Bait sites were strategically placed to draw deer out of dense cover and to position them for safe shooting. Shooting was conducted with suppressed rifles of different calibers (.22-.250, .223 and .243).



Deer observed were removed on a first opportunity basis provided safe shots could be taken. Adult does were targeted first when more than one deer was observed in a safe shooting location. Antlered deer were targeted for removal after antlerless deer had been safely removed. Selective removal allows for the removal of breeding individuals first, which also aids in the safe removal of juvenile deer at the same time or on subsequent nights. Deer were only targeted for removal on predetermined TOWNSHIP and private properties.

Removal activities, including biological data from the deer harvested were recorded on data sheets. Information collected from harvested deer included gender, relative age, tag number, location, and final disposition of the venison.

Forward Looking Infrared (FLIR) technology was used during removal operations as well as night vision and spotlights with red filters. WS utilized a hand-held FLIR unit to locate and observe deer in complete darkness. These capabilities also further enhanced WS' ability to ensure safe removal operations by detecting human activity on TOWNSHIP property from greater distances after hours. The use of night vision and spotlights is necessary to identify possible obstructions (i.e., branches, debris, etc.) in the line of fire. All deer removed by shooting were taken with the aid of spotlights.

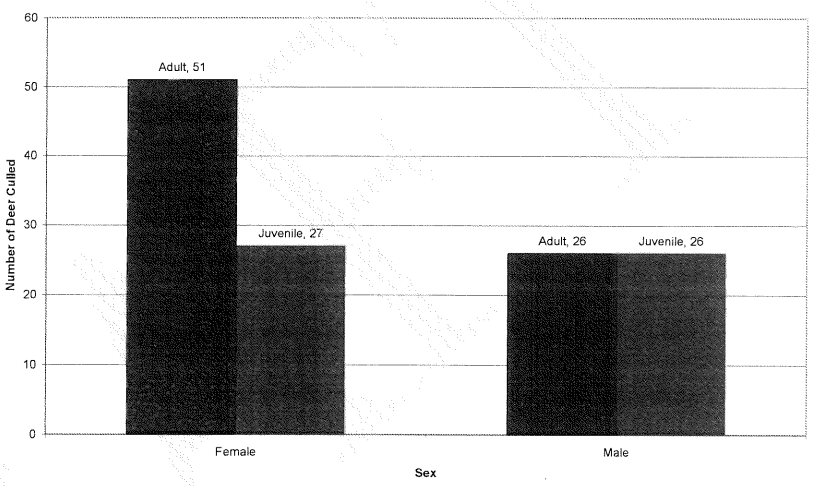
RESULTS

WS removed a total of 130 deer from within the Township. Of those 130 deer, 53 were juveniles and 77 were adults. This age distribution is expected for suburban White-tailed deer populations.

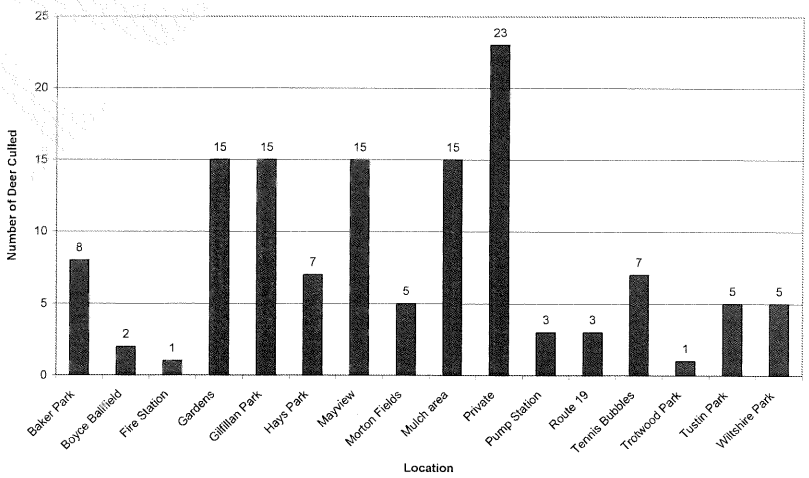
Several areas were identified by the TOWNSHIP as priority locations due to their proximity to SR 19. The areas of special concern were Gilfillan Park, the 3-hole golf course/tennis bubbles, Wiltshire Park, Township pump station, Boyce ball field, fire station and several private properties which were strategically located near SR 19. WS was able to remove 59 deer (46%) from those locations alone.

WS noted several interesting observations regarding herd health. Overall, culled deer appeared to have prime over-wintering weight and thick coats. During culling operations, WS removed six deer with broken legs and obvious signs of vehicle collisions. Several deer had multiple fractures and were extremely thin due to their injuries. WS removed all of the injured deer observed provided safe shots could be taken.

Relative age and sex distribution of deer harvested by USDA APHIS Wildlife Services in the Township of Upper St. Clair, PA during the 2008 deer management program.



Location of deer harvested by USDA APHIS Wildlife Services in the Township of Upper St. Clair, PA during the 2009 deer management program.

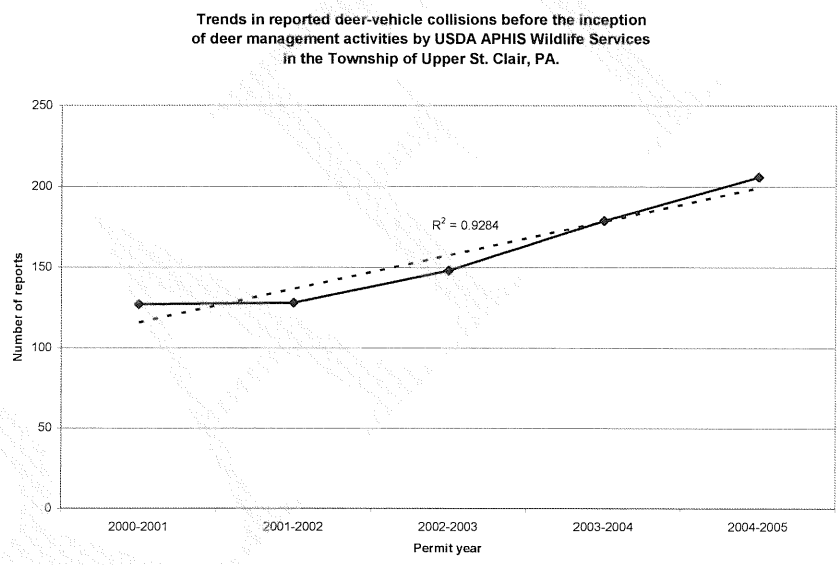


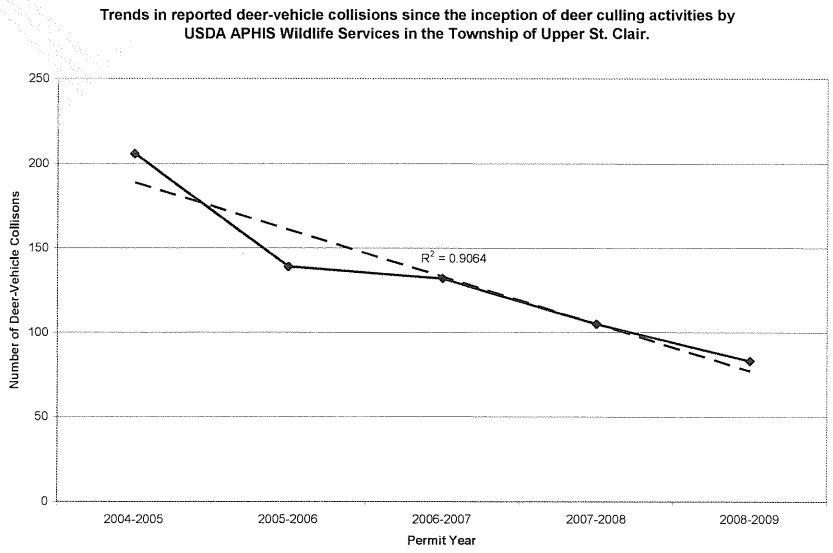
Venison from culled deer was distributed at soup kitchens and shelters in Western Pennsylvania. The Pennsylvania Game Commission also helped distribute venison to families in need. Twenty two deer were retained and/or distributed by the Pennsylvania Game Commission. Overall, approximately 6,210 pounds of venison was distributed to needy citizens in Western Pennsylvania.

ANALYSIS

Wildlife Services has culled 742 deer from the Township since the inception of the culling program in 2005. Of those 742 deer, 438 were adults and 304 were juveniles. WS intentionally targets adult females first when safe shooting opportunities are available. The successes experienced to date are largely due to an expansive baiting program and increased private property access for culling operations.

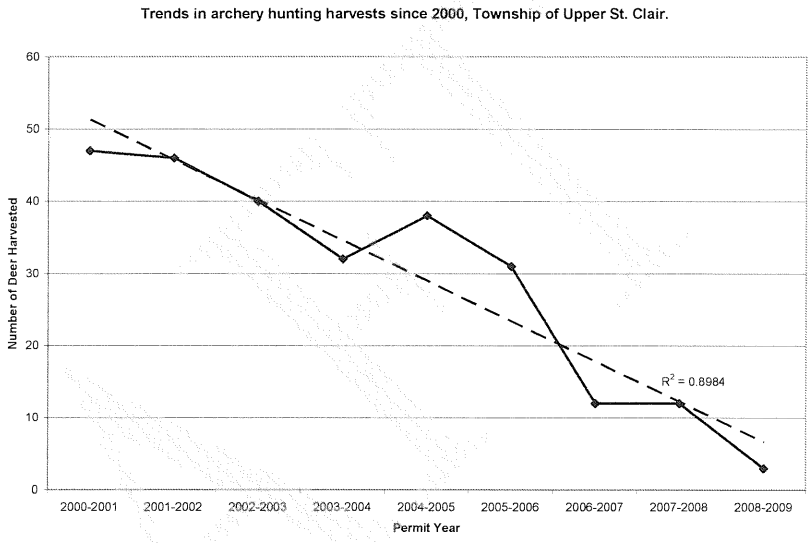
A comprehensive and extensive analysis of the problems associated with deer within the Township has been ongoing for numerous years. WS analyzed deer vehicle collision trends prior to culling. That analysis suggests that collisions would have likely continued to increase if no deer management program was implemented. Archery hunting as the only management tool was not able to successfully reduce the population. The relatively recent implementation of culling is also well documented. Since culling activities began in Upper St. Clair, deer vehicle collisions have declined each year. A trend analysis suggests that this decline is likely to continue assuming that the deer population is continuously managed. The trend analysis clearly demonstrates that the culling program has successfully reduced deer vehicle collisions despite poor-to-no archery success and increased traffic volume.





One of the stated goals for the TOWNSHIP in 2005 was to reduce deer-vehicle collisions to fewer than 100. Deer-vehicle collisions in the permit year prior to culling activities were 206, which was steadily increasing year by year. **Last permit year, largely due to successful deer damage management, deer-vehicle collisions were at an all time low (83) since the late 1990's.**

Archery hunting has historically played an important role in the management of White-tailed deer in the Township; from 2000-2003, archery hunters harvested more than 40 deer each year. Since that time, harvests have been less than desirable with an all time low of just 3 during the 2008-2009 permit year. Archery hunting is not only an important recreation opportunity for hunters in Allegheny County, but also the most cost-effective management tool. If no more than 3 deer are taken each year by archery hunting, there is no impact from this activity on the overall deer population. Although the opportunity to archery hunt in the Township is beneficial to the hunting community, there is no management value to the TOWNSHIP unless these harvest numbers can be improved.



It is extremely difficult to determine the exact population size within the Township without conducting deer population surveys. WS has the ability to provide a FLIR/spotlight survey which can provide the Township with an estimated deer density. This deer density estimate can be used in comparative analysis for future management. Without such a density estimate, visual observations, damage complaints, and reported deer vehicle collisions are the only statistics available to measure successes or failures of current management approaches. Although this information is important, the Township will not know when they have met the goal of 5-8 deer per square mile without periodic density estimates. **Deer surveys are also critical to determine the number of deer that must be removed to maintain a desirable population size once the damage has been reduced to an acceptable amount (i.e., collisions <100 per year).**

Based on an analysis of deer accident statistics provided by the Township coupled with trend analysis and general observations, WS can say with reasonable certainty that USDA APHIS Wildlife Services deer damage management activities have halted population growth and resulted in a decrease in the overall deer population. Despite unknown rates of immigration and emigration for the Township, published literature on suburban deer population dynamics suggests that these rates are not factors in the overall management of deer. The decreased archery harvest, increased traffic volume, and decreased deer-vehicle collision rates suggests that USDA APHIS Wildlife Services deer management activities are effective at reducing the deer population within the Township. Continued culling activities utilizing sharp shooting and hunting will be necessary in future years to maintain deer-vehicle collision fewer than 100;

the absence of deer management will likely result in rapid population growth and increased deer-vehicle collisions similar to those documented in 2004. Intensive management (i.e., harvesting/culling) may be required to reach recommended population density goals.

RECOMMENDATIONS

WS recommends a continuing deer damage management program each year to establish and maintain deer densities at or near 5-8 deer per square mile. After reviewing trends in the data, WS recommends that the Township continue deer management activities in 2009-2010. Continued management is necessary to maintain deer-vehicle collisions below 100 per year. WS recommends management activities consisting of at least nine nights, targeting 120 or more deer. However, the number of nights allocated to culling should incorporate the following factors: (1) nightly mobile unit observations of deer sightings; (2) weather events; (3) vehicle/deer collision rates; (4) impacts of over-abundant deer on local environments and; (5) available monetary resources.

WS once again recommends that the Township conduct a deer population survey (i.e., density estimate) before initiating culling activities in 2009-2010. Relative deer density information is a critical component in determining the overall effectiveness of deer culling operations. This information should be used in conjunction with field observations and collision data to evaluate the current program. As a result of these surveys, the culling program should be modified (if necessary) to achieve the desired deer density throughout the Township. It is impossible to know when the target goal of 5-8 deer per square mile is achieved without surveying the deer population.

Finally, WS recommends that the current archery hunting program in the TOWNSHIP be examined more carefully. At the current level, hunting is not being utilized adequately. The removal of 3 deer during the 2009 season is alarmingly low and well off the harvests established in the first half of the decade. WS will concede that there are fewer deer available for harvest and perhaps the hunting is more difficult, but there are still plenty of deer available for harvest on Township property. There is an opportunity to consider reducing the number of deer culled if archery hunting can once again be more productive.

ACKNOWLEDGEMENTS

Wildlife Services would especially like to thank Walter Jarosh for his continued cooperation with this project. Walter's professionalism and attention to detail were essential to the safe and efficient management of deer within the Township. Walter has spent countless hours baiting numerous sites. He has also assisted WS with securing access to private properties. Walter is an invaluable partner without whom the culling program would not be as successful.

Wildlife Services would also like to thank our private cooperators, Mark Mansfield, and the entire Upper St. Clair Police Department for their outstanding contributions to a safe and efficient culling program. We would also like to thank the local Wildlife Conservation Officer, Beth Fife for her support of the management activities. They should be recognized for their willingness to support the deer damage management program and helping the Township reduce its over-abundant deer population.

APPENDIX C

Update Deer / Vehicle Accident Data
Village of Cayuga Heights

CAYUGA HEIGHTS POLICE DEPARTMENT

MEMORANDUM

TO: Mayor Supron **Date: 2/14/11**

FROM: Chief Thomas L. Boyce

SUBJECT: Updating of Deer MVA and Incident Form

The Cayuga Heights Police Department has updated the Deer MVA and Incident form which breaks down the accidents and incidents by street locations. I have attached a copy of the updated form with this memo.

After reviewing the data on this new form, it was obvious that the three top areas affected by accidents and incidents occurred on Route 13, North Triphammer Road, and Triphammer Road. The next group of impacted roads was Hanshaw Road, Pleasant Grove Road, and Cayuga Heights Road. There were numerous accidents and incidents through out the corporate limits of the Village of Cayuga Heights but the numbers were not as significant as the top six roads mentioned above.

In a memo to Mayor Gilmore and the Board of Trustees, dated 1/26/10, I wrote an explanation of how the Cayuga Heights Police Department breaks down the two classifications of deer accidents and deer incidents. I have attached that memo along with this new memo for the EIS report.

Sincerely,

Thomas L. Boyce

Deer MVA Accidents and Incidents

Location	2003	2004	2005	2006	2007	2008	2009	2010		Total
Berkshire Rd							1			1
Burleigh Dr.					1					1
Cayuga Heights Rd.	1	1	1		2	5	4	4		18
Comstock Rd.					1					1
Devon Rd.		1	1				1			3
E. Upland Rd.				1		1	2			4
Hanshaw Rd.	1	1	1	2	2	1	10	5		23
Highgate Rd							2			2
Highland Rd.	1		1			1		2		5
Iroquois Rd								1		1
Klinewoods Rd.	1									1
Leslie Ln					1					1
Lowell Pl.						1				1
N. Triphammer Rd.	2	8	3	2	2	4	11	7		39
N. Sunset Dr.	1				1		3			5
Overlook Rd								1		1
Parkway Pl.		1								1
Pleasant Grove Rd.		2	2	2	1	4	4	5		20
Randolph Rd								1		1
Ridgewood Rd								1		1
Rt 13			7	5	8	2	8	20		50
Savage Farm Dr								1		1
Sheldon Rd.				1						1

Village of Cayuga Heights

Deer MVA Accidents and Incidents

Simsbury Dr								2		2
Texas Ln								1		1
The Northway							1			1
The Parkway			2	1				1		4
Triphammer Rd.	2	4	1	3	6	1	7	3		27
Tyler Rd.				2						2
W. Remington Rd.			1	1		1	1			4
Warwick Pl.						1				1
Winthrup Dr								1		1
Wyckoff Rd.	1							1		2
*Burdick Rd-PD vehicle								1		1
*Warren Rd								1		1
	10	18	20	20	25	22	55	59		

CAYUGA HEIGHTS POLICE DEPARTMENT

MEMORANDUM

TO: Mayor Gilmore & Board of Trustees Date: 1/26/10

FROM: Chief Thomas L. Boyce

SUBJECT: Statistics on Deer

On January 22, 2010 I sent the Mayor an e-mail with the statistics on Car/Deer Accidents and Deer Incidents, which occurred within the corporate limits of the Village of Cayuga Heights. The period of time that was show cased was 2007, 2008, and 2009. The numbers that were presented for this block of time were as followed:

2007- 12 car/deer accidents and 13 deer incidents.

2008- 6 car/deer accidents and 16 deer incidents.

2009- 24 car/deer accidents and 31 deer incidents.

The above numbers show a big increase of accidents and incidents with deer from previous year to last year. I believe these numbers represent a more informed and aware public to the fact those car/deer accidents and deer incidents must be reported to the Cayuga Heights Police Department.

The Cayuga Heights Police Department has not changed the way we classify car/deer accidents or deer incidents. So with that preface, let's examine the way the Cayuga Heights Police Department classifies and makes a distinction of these two classes.

The way in which we classify car/deer accidents is to determine that a deer collided in some way or fashion with a motor vehicle. We need a complainant to report that they hit a deer with their vehicle, whether there is damage to the vehicle or not. If the Damage to the motor vehicle is $1,000.00 dollars or more the report would be on an MV-104 form. If the damage was less than $1,000.00 dollars the report could be documented on a Cayuga Heights Police Department report form. The big fact in determining a car/deer accident is showing that a deer collided with a motor vehicle!

The way in which we classify a deer incident is to determine that the Cayuga Heights Police Department received a report of any incident that involved a deer. This could be any number of things from a dead deer in the roadway, having to shoot an injured deer, to any incident that involves a deer.

I know this is a very simple explanation of how we classify and make these distinctions, but it really is that simple.

Sincerely submitted,

Thomas L. Boyce
Chief of Police

APPENDIX D

Deer Ticks and Deer Density
Dover, Massachusetts
Board of Health

Report by the Dover Board of Health concerning the health hazard of Lyme Disease, its relationship to deer ticks and deer density.

Lyme disease in humans is due to an infection with the bacterium (spirochete) called *Borrelia burgdorferi*. It is the most common tick-borne disease in the US. The white-footed mouse is the primary animal reservoir for *Borrelia*, with some small birds as secondary. Black-legged ticks or deer ticks (*Ixodes scapularis*) are the responsible carrier (vector) of *Borrelia* between mice and humans.

In order to evaluate the health hazard posed to humans by infected deer ticks, it is essential to understand the 2-year life cycle of the deer tick as summarized below and shown in Figure 1 (Page 2).

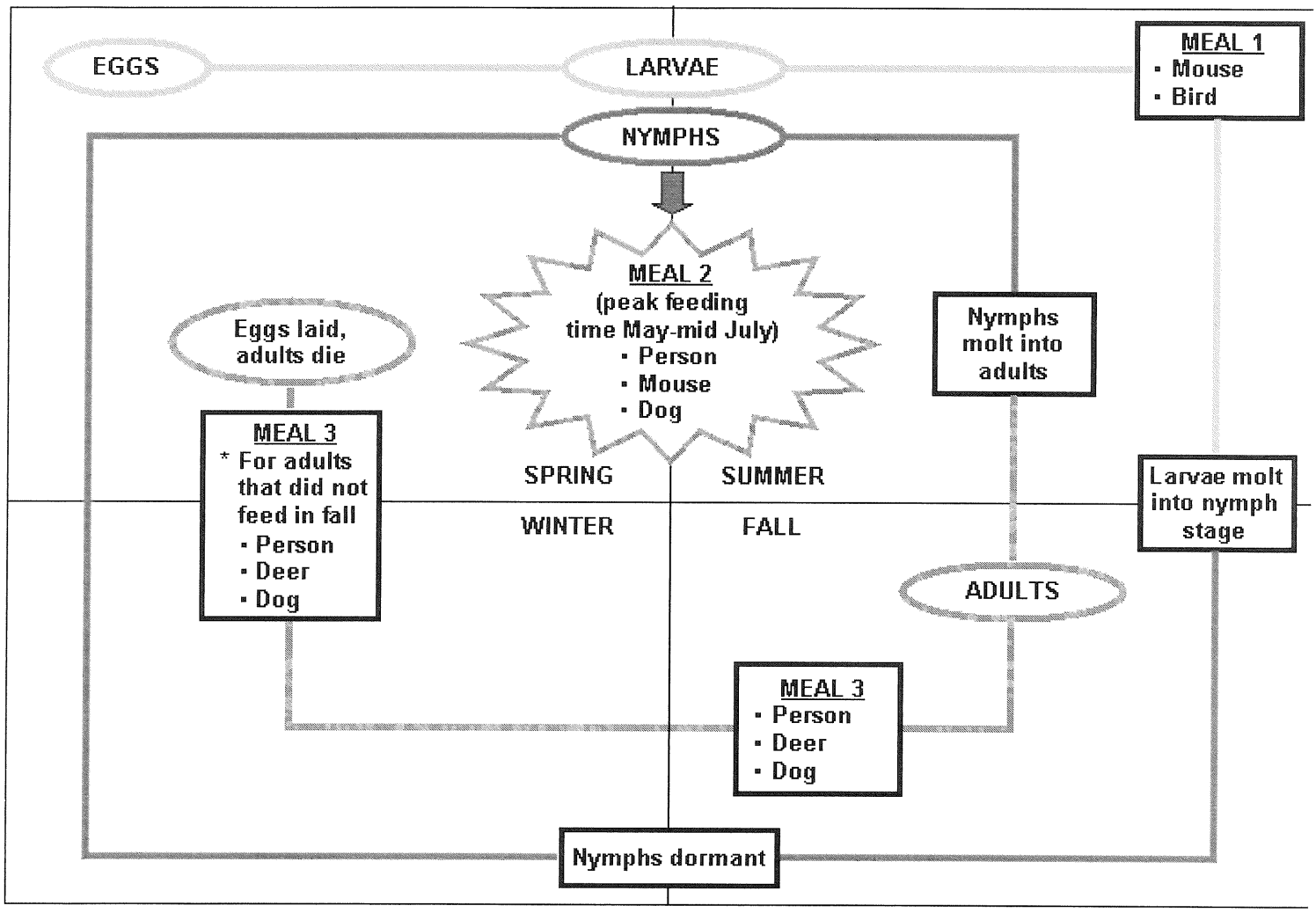
In summary:

- **In the spring and summer of year one, tick eggs hatch into larvae which get their first blood meal from mice or birds. This first blood meal may or may not carry the *Borrelia* infection. Larvae molt into nymphs which become dormant for the fall and winter.**

- **In the spring of year two, nymphs feed (2nd meal) on mice, dogs, or persons from May through July. Nymphs that were not yet infected can get infected at this time on mice. In feeding on a person, an infected nymph may transmit *Borrelia.***

- **In the fall of year two, nymphs molt into adult male and female ticks. The females feed (third meal) on deer and other large mammals (person, dog). Ticks mate on the deer, lay eggs (about 2000 per female adult tick), and die. In feeding on a person, an infected adult tick may transmit *Borrelia*. (Male blacklegged ticks attach to a host to wait for females, but do not take a blood meal.)**

Figure 1



Statistics indicate that more humans are infected through the bites of nymphs as they are tiny and difficult to see rather than through the bites of adult ticks which are more likely to be discovered and removed.

Ixodes ticks search for host animals from leaf litter and from the tips of grasses and shrubs. Ticks crawl onto animals or persons as they brush against them, they do not jump or fly.

There is no evidence that a person can get Lyme disease from the air, food, or water; from sexual contact; from insects such as mosquitoes, flies or fleas; or directly from wild or domestic animals.

In 2008, the Dover BOH conducted an informal survey of LD incidence. A brief questionnaire was mailed to every household in Dover. It was not intended to be a scientific measure, rather an estimate of LD prevalence and risk in our town.

Of the 2000 cards distributed, 778 were returned which amounted to a response rate of 39% . Residents were asked to respond to the following question:

Have you had or are you currently recovering from LD or have sought medical treatment for a tick bite?

487 with YES = 66% and 251 with NO = 34%

In addition:

- **39 individuals reported to have been treated more than once**
- **More than a few cases had to be hospitalized**
- **47 dogs were diagnosed with LD**

Based on these results official LD incidence data as published by the CDC and Mass DPH were consulted and analyzed. One has to keep in mind that although every case of LD is supposed to be reported to CDC and DPH, LD is suspected to be underreported because of the sometimes uncertain diagnosis and the significant administrative load on the treating physician. Nevertheless, these are the official scientific data available. LD incidence rates are defined as number of reported LD cases per 100,000 individuals which is the accepted way of reporting medical incidence rates. For reference, an annual incidence rate of >100/100,000 is considered 'very common' both for disease and AE (Adverse Event) incidence.

For 2008, Massachusetts had the 4th highest LD incidence rate nationwide with 61 cases per 100,000 (after NH with 92; Delaware with 88; Connecticut with 78). Within Massachusetts, Norfolk county had a LD incidence rate of 44 in 2006, 59 in 2007 and of 68/ 100,000 in 2008.

For Dover relevance to Tick and Deer density, however, LD incidence rates were analyzed even more specifically. All of Massachusetts is divided by Mass Wildlife into Wildlife Management Zones. Dover is located in Zone 10, defined West by the 495 Beltway, North by the NH border and South by routes 1A and 128.

The following LD incidence rates (number of reported LD cases per 100,000 individuals) represent the change over the last 10 years in Dover and some adjacent towns within Zone 10 by comparing rates in 1999 to 2008.

	1999	2008
Needham	0	103
Wellesley	18	34
Newton	8	28
Medfield	40	187
Framingham	0	35
Millis	0	114
Natick	0	83
Walpole	0	170
Holliston	0	181
Medway	0	144
Sudbury	0	142
Westwood	0	240
Sherborn	0	380

	1999	2006	2007	2008
Dover	**0**	**90**	**215**	**270**

It is readily apparent that LD incidence rates in Dover have significantly increased over the past 10 years and are among the highest within Zone 10 and Massachusetts.

Spatial relationship between white-tailed deer population and abundant infestation of ticks has been observed repeatedly. (Wilson, 1985, Spielman 1985, Armstrong 2001)

Without going into great detail, two studies evaluating this relationship are worthy of specific summary presentations.

Great Island Experiment, Lewis Bay, Cape Cod, MA (Wilson et al 1988)

At the beginning of the experiment in 1981, the deer density on the island was 30 to 50 deer per square mile. LD incidence was that 16 % of the population had had LD or other tick-borne diseases. Baseline levels of immature ticks were established over a two-year period from 1981 to 1983. During 1984 the deer population was reduced by an extended 1-year hunt to fewer than 6 deer per square mile and kept at that level from then on forward. Beginning with 1985, tick density progressively decreased to 1/10th of the 1983 level and has remained there ever since. Between 1986 and present, there have been 2 cases of LD and one case of babiosis on the island.
This experiment provides critical evidence for the association between deer abundance, tick density, and risk of infection.

Crane Beach Reservation Experiment (Deblinger 1993) Ipswich, MA

This study focused exclusively on the abundance of deer and of deer ticks before, during, and after controlled deer hunting over a period of 9 years. The following are summary data before and after controlled hunting:

	1985	1991
number of deer per square mile	**100**	**< 10**
Larvae in mice	**21/mouse**	**10/mouse**
Nymphs	**460/mouse**	**187/mouse**

Thus, this study as well shows that there is a correlation between deer density and immature tick density.

It is often argued that in the absence of deer, ticks will feed on other mammals, i.e., deer are not essential in the propagation of LD.

This theory is not borne out by the facts as researched over the last 2 decades by Telford and coll. and summarized in a 2002 review. Based on their evidence, it was estimated that if a deer herd is in progressive, steady decline only about 10 % of adult ticks will ultimately latch on to other large mammals like coyotes, raccoons etc., but 90 % will fail to get the essential 3rd blood meal for reproduction. It is concluded that it is primarily the deer that are responsible for the increased reproduction of ticks (irrespective of them being infected or not) which explains the fact that epidemic LD in NE US occurs primarily at sites where white-tailed deer are abundant.

As for specific data for Dover deer density together with the increasing incidence of LD, Mass Wildlife estimated the deer density of Zone 10 in 1980 as 2.2 deer per square mile, while in 2008 it was found to be approximately 20 deer per square mile. Obviously, the distribution of deer within Zone 10 is not homogenous, a town like Dover with lots of open space is much more likely to provide better feeding conditions than a town like Framingham or even Needham. Presently, Mass Wildlife goal for a healthy deer herd density in Zone 10 is 6-8 deer per square mile. It is of interest to note that Zone 9 (West of Dover) presently is estimated to have 15 deer / square mile and Zone 11 (Southeast of Zone 10) 18 deer /square mile, both targeted by Mass Wildlife with a goal of 8 deer / square mile.

At least three processes appear to be responsible for the emergence of the deer tick pathogen as a public health burden within the last two decades: 1) the relatively recent proliferation of deer due to the absence of predators together with the reduction of hunting; 2) creation of habitat by the abandonment of farmland and subsequent succession to thick secondary vegetation and 3) increased use of 'woods' for human recreation and habitation.

Although not directly related to the health risk of LD, an excessive deer herd can have a significant environmental impact. Danger of reduction or even elimination of native plant and sapling undercover as well as small animal species has been reported as a consequence of overabundance of deer. I would like to summarize the experience of another community in Zone 10.

Sudbury permitted bow and shotgun hunting of deer on conservation land up until 1985, at which time all hunting was banned due to the rapid increase in development, population and human use of conservation lands. By 1998 the deer population had exploded, and shrub and sapling layers were found to be mostly depleted. The town investigated several different options to reduce and control the excessive deer population, but decided in 1998 to re-introduce yearly regulated bow hunting, strictly controlled and monitored. Beginning in 1999 underbrush was found to recover and reports of deer-car collisions were reduced. By 2005, healthy underbrush was restored, and presently deer density is continuously monitored and managed by the use of legal hunters and by wildlife tracking. Significantly, based on Mass DPH data, the incidence of LD in Sudbury has been stable at 145/ 100,000 over the last 3 years while in Dover over the last 5 years, the incidence of LD increased progressively.

Therefore, in order to stabilize and subsequently reduce the risk of infection of LD, the Dover Board of Health researched various options to reduce the deer population, clearly in combination with several other means of Public Health care, like education on personal and property protection and management. Based on numerous discussions with experts at Mass Wildlife, the best approach for Dover to progressively reduce deer density is to open Town Land and Open Spaces for strictly regulated and monitored deer hunting.

Similar to the approach used in Sudbury and Crane Beach, Mass Wildlife suggests but does not limit the following criteria to be implemented for regulated hunting:
- hunters would receive a special permit for limited number of animals only;
- would be required to be residents of town or of bordering towns,
- have 5 years hunting experience,
- attend pre-hunting seminars and teaching,
- pass a shooting proficiency test.
- distribution of significant signage and information about hunting dates and times to residents of Dover.

It is worthwhile to note the Massachusetts hunting safety record. There has not <u>ever</u> been any accident of hunter versus non-hunter in Massachusetts (data provided by Mass Wildlife).

Thus, from a Mass Wildlife perspective, beginning a controlled hunt to progressively reduce Dover deer density to a healthy and reasonable deer population would:

- ensure present and future well-being of the species and the habitat
- provide a sustained availability of deer for licensed hunters, wildlife photographers and wildlife viewers
- allow for compatibility between deer populations and human land-use practices.

More importantly, however, from a Board of Health perspective, controlled hunting to progressively reduce Dover deer density would result in a corresponding progressive reduction of deer tick reproduction with a simultaneous progressive reduction in risk of infection of LD.

In summary, the Dover Board of Health <u>concludes</u> that:

The incidence of LD poses a health threat to the residents of our town.

The rate of infection of the ticks primarily by white-footed mice and the rate of reproduction of the ticks on the deer are independent phenomena. Together, however, they are responsible for the increased risk of LD.

Therefore, in order to manage this health threat, the BoH <u>recommends</u> a three-pronged approach:

- **Continuous Education of Adults and School children about the means of personal protection from tick bites**
- **Continuous education of residents and organizations about the means to create tick-safe zones on private and recreational properties in Dover**
- **Responsible management of the deer population via progressive reduction of deer density by allowing strictly regulated and monitored deer hunting on Open Town Land and Spaces.**

References:

Armstrong et al. Risk of human Lyme disease in a Lone Star tick-infested community. Bull WHO 79:916-925

Deblinger R D et al. 1993 Reduced Abundance of Immature Ixodes dammini following incremental removal of Deer. J Med Entomol 30 (1): 144-150

Spielman A et al. 1985 Ecology of Ixodes dammini borne human babiosis and Lyme disease. Ann Rev Entomol 30:439-460

Telford, S R 2002 Tick-transmitted Zoonoses in the Eastern United States. In Conservative Medicine and Challenges for the Future, Part V, Chapter 24, 2002

Telford, S R et sl. 1997. Emergence of tick-borne diseases. Sci Med 4:24-33

Telford S R et al. 1999. Acorns have little to do with Lyme disease risk: mouse density and the risk of acquiring a deer tick transmitted zoonosis. Nantucker Island 1991- 1998. Presented at the eighth International Congress on Lyme borreliosis, June 220-24, 1999

Wilson M L et al. 1985 Correlation between abundance of Deer and that of the Deer Tick, Ixodes dammini. Ann Entomol Soc Am 78: 172-176

Wilson et al. 1988 Reduced abundance of immature Ixodes dammini correlated with that of deer. J Med Entomol25:224-228

Wilson M L and Deblinger R D 1995. Vector management to reduce the risk of Lyme disease . In: Ginsburg, H S et al. Ecology and environmental management of Lyme disease . 126-156 Rutgers University Press , NJ.

Prepared by:
Barbara Roth-Schechter, Ph.D.
Dover Board of Health, Chair
January 2010

APPENDIX E

Deer Overpopulation and Residential Landscapes

The Impact of Deer Overpopulation on Designing Residential Landscapes across Suburban Northern New Jersey

By: Richard R Cording
Graduate Student
Columbia University
Landscape Design Program
and
Landscape Designer
CLC Landscape Design, Inc.

November 2006

Table of Contents

Introduction.....1

I. Deer overpopulation in northern New Jersey.....2

II. Designing landscapes with strictly "deer-resistant" plants.....7

III. The effectiveness and practicality of the various "deer-proofing" methods.....11

Conclusion.....16

Figure 1 - Average Deer Density by Deer Management Zone.....3

Appendix A – Landscape Plants Rated by Deer Resistance.....17

Appendix B - Plants cited on both the invasive species list and deer-resistant list.....23

Bibliography.....24

References.....28

Introduction

The suburban environment across northern New Jersey has created an overabundance of the white-tailed deer (*Odocoileus virginianus*). This overabundance dramatically impacts how the residential home is landscaped. Many ornamental favorites like yew, hosta, and arborvitae are also favorites on the deer's menu. When designing a landscape, we are forced to use a limited pallet of ornamental plants classified as "deer-resistant." Or, if incorporating plants the deer prefer, the homeowner is then faced with a myriad of questionably reliable protection methods from "deer-fencing" to "deer-repellents." Frustrations are often voiced in a series of alarmed questions: "Only these *few* plants are deer-resistant?" "Even deer-resistant plants can *sometimes* be eaten?" "Deer fencing has to be *how* high?" "Deer-repellents don't *always* work?" "Ugh!"

Every homeowner desires a landscape that is both low-maintenance and provides year-round interest. When living within an area of deer overpopulation, like most of suburban northern New Jersey, achieving both of those characteristics requires taking an extra step of care – protecting the landscape from deer damage. No universal solution exists. The landscape industry has forged many novel strategies for dealing with deer. Individual homeowner's must weigh the pros and cons of the varying options and select a landscape design solution that suits their priorities and values. Five factors should be considered when assessing each approach:

1. Effectiveness
2. Landscape Impact/Aesthetic Impact
3. Maintenance Required
4. Cost
5. Risk

For example, some consider the high-degree of security afforded by deer-fencing to be worth the cost of installation. Others prefer not to surround their yard with 8-foot high deer-fencing and are willing to accept the added maintenance of applying deer-repellent frequently. Still others utilize only deer-resistant plants to create a beautiful landscape.

This essay is written to serve as a guide through the process of selecting the best option. The first step is to consider these questions:

1. How severe is the influence of deer in my neighborhood? How extreme a measure should I take to protect my landscaping from deer damage?

2. Do I mind using only "deer-resistant" plants for my landscaping? Which plants are reliably deer-resistant in my neighborhood? What are some strategies for making a deer-resistant design look attractive?

3. Are there certain plants that are not "deer-resistant" but that I love so much they must be included in my landscape? If so, then, which method of protecting these plants is best for me? Deer-fencing? Deer-repellents? Others methods?

After providing detailed information to assist answering these questions, we will revisit them in the conclusion. First, however, we must investigate the cause and impact of deer overpopulation in New Jersey.

Part I: Deer overpopulation in northern New Jersey

Throughout most of northern New Jersey's suburban communities deer exist in overpopulation. While the state has not established a target density, it acknowledges that when deer populations exceed 10 per square mile there begins a loss of biodiversity in the native ecosystem due to deer overgrazing.[1] The loss of biodiversity dramatically increases in severity as deer density increases. Generally, a density of 20 per square mile will result in minimal deer damage to the native ecosystem, as well as, to landscape plantings and for this reason it is frequently cited as the goal density of deer reduction programs.[2] New Jersey's deer population is estimated from 150,000 to 200,000 distributed unevenly over 4,734 square miles of deer range (total state land area is 7,417 sq mi).[3] That makes the statewide average density between 32 to 42 deer per square mile. Yet because the suburban environment can support more deer than the deep woods, many communities boast densities of 60-70 deer per square mile.[4] The suburban town of Watchung, just 35 minutes outside of New York City, reported a density of 80 per square mile in 2001.[5] Submitted as part of the *Governor's Report on Deer Management in New Jersey* (1999), Figure 1 (next page) illustrates the average deer density throughout the state.

Both the New Jersey Department of Environmental Protection (NJDEP) and the New Jersey Audubon Society (NJAS) advocate lessening the deer population in order to reduce the numerous negative effects the overabundance of deer has on our environment and our society. Ecologists estimate that before settlers arrived in New Jersey, the state-wide deer population was significantly less than its current level. Densities ranged from 5 to 11 deer per square mile.[6] The population was moderated by a balanced ecosystem which included indigenous predators such as the mountain lion, gray wolf, and bobcat.[7] Further, the unbroken old-growth forests that once stretched across the state offered less ideal habitat for the deer than the current fragmented environment does because deer thrive on the edge of clearings, not in the deep woods.[8] All in all, the underlying source of the problem is the arrival of modern human civilization, specifically, the suburbs.[*]

Causes of deer overabundance:

White-tailed deer populate the suburban environment at greater densities than the undisturbed native forest for several reasons:

A. <u>No Predators</u>. The natural predators of the white-tailed deer no longer live in the state, except for the bobcat, which exist in such scarcity as to be listed as endangered in New Jersey.[9]

B. <u>Habitat Expansion</u>. Unlike the case of their predators, the suburban environment expands the optimal habitat for deer. Deer are "edge feeders." They thrive in the area between the deep woods and open fields where shrubs and small trees are within their reach.[10] Suburban communities create clearings in the forest for housing developments, individual homes, public parks, powerlines, and roads, all of which are rimmed with new edge habitat.

---

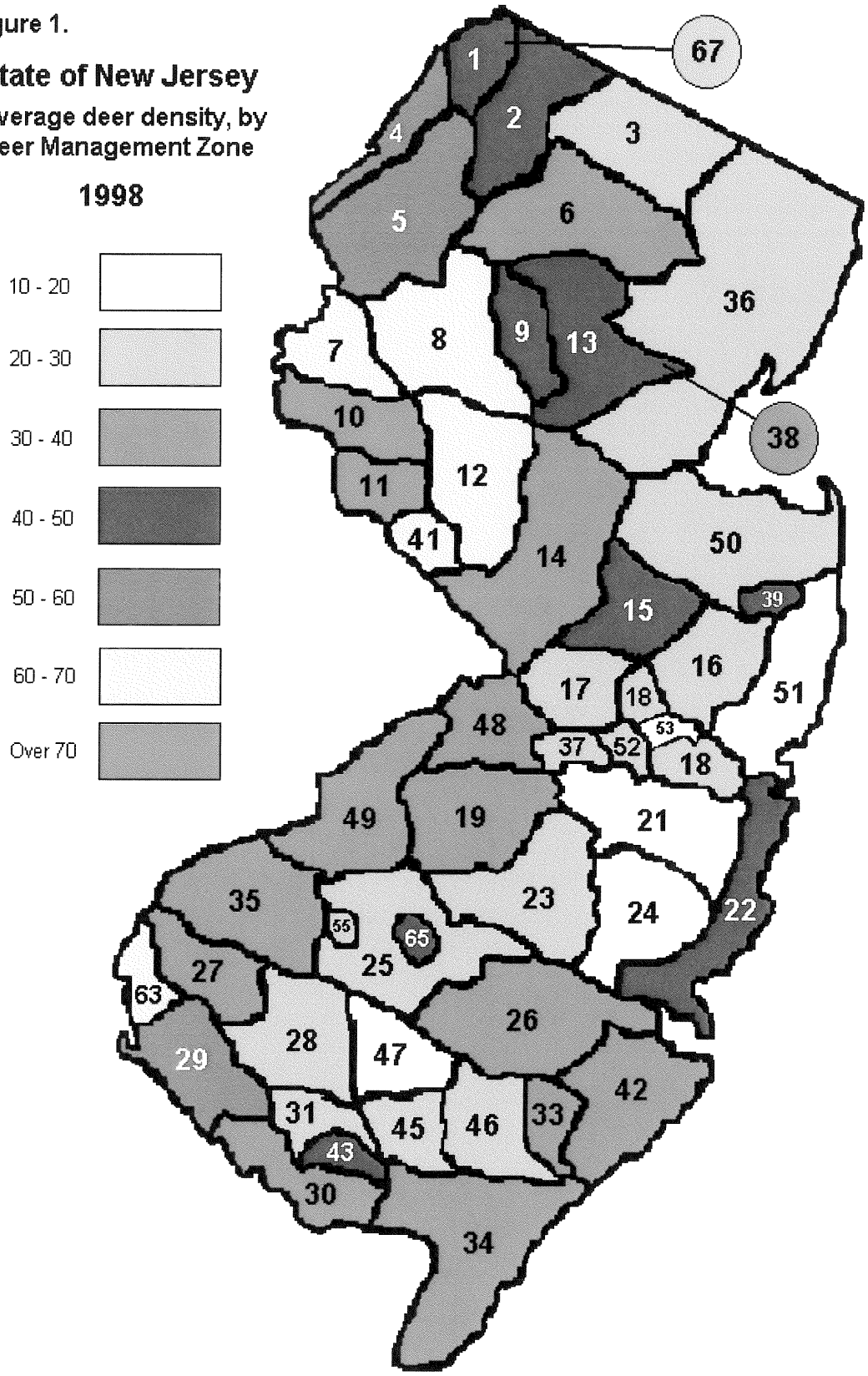
[*] I define "suburbs" as the developed region between the urban and the rural. Certainly, suburban areas existing on a sliding scale from more urban (Bergen County) to some more rural (Warren County). Outside of strictly urban areas around major city centers (Paterson, Newark, Camden) and strictly rural areas (parts of the Pine Barrens) most of the Garden State is some degree of suburbs.

Figure 1.

State of New Jersey

Average deer density, by Deer Management Zone

1998



C. Hunting Restrictions. Historically, the size of New Jersey's deer herd had been managed through sport hunting, but restrictions stemming from suburban civilization limit the influence the traditional hunter has on reducing the deer population.[11] In the *Governor's Report on Deer Management in New Jersey* (1999), the NJDEP wrote: "These increases [in deer population] have been caused by inadequate population control due to no or poor hunter access to land harboring deer, municipal ordinances banning hunting or firearm discharge, low density housing patterns, creation or expansion of parks not open to hunting, a decreasing hunter population, hunter unwillingness to shoot more antlerless deer, landowners protecting deer from hunters and other factors."

D. Increased Food Supply. In pre-settled New Jersey, the deer herd was subjected to naturally occurring food shortages in the summer and winter. With modern irrigation systems, the plants in suburban communities stay lush throughout the summer. With the abundance of vegetative material, along the increased edge habitat, deer have a more plentiful supply of food throughout the winter. And, some people even feed the deer.

E. White-tailed Deer are Prolific Reproducers. Although growth rate depends on quantity and quality of food, generally a herd can grow at 50% per year. An experiment conducted within the 1,146 acre Edwin S. George Reserve in southeastern Michigan showed that an isolated herd of 6 deer multiplied to 162 after six years. The experiment was repeated with an initial herd of 10 deer which grew to 212 in six years.[12] In order for a population to remain stable, studies demonstrate that 40% of female deer – the does – must be removed each year by either natural causes or human influences.[13] Without a reduction of at least that amount, a deer herd will continue to grow.

The suburbs have created (albeit, unintentionally) an ideal breeding ground for the white-tailed deer. With the absence of natural predators and protection from being hunted, the suburbs' fragmentation of the native forest has created an abundance of edge habitat for these prolific reproducers to multiply to overwhelming populations. Before the wide sprawl of the modern-day suburbs, deer populations were effectively controlled by hunters. Beginning in the 1750's until around 1900, most of the state was deforested and turned into farmland. This earned New Jersey the nickname "The Garden State." In the process, deer were hunted to near extinction. In 1904, the state Board of Fish and Game Commissioners took action to rebuild the white-tailed deer population by gathering 100 deer from an estate in Warren County and releasing them in optimal areas of the state.[14] Also, they banned hunting that year. Since these actions in 1904, the deer population has swelled. Improved hunting oversight and regulations kept the post-1904 deer herds from being over-hunted.

Throughout the first half of the 20th century, as much of the farmland was allowed to return to forest, the secondary-growth forests with abundant low-growth foliage was the ideal landscape for a resurging deer population. Then came the suburban sprawl in the 1960's, in part fueled by the post-World War II push to build interstate highways, particularly I-80 (constructed ca. 1959-1973) and I-78 (constructed ca.1960-1970).[15] As major highways crossed northern New Jersey, more and more hunting territory was taken away from the sport hunter and given to the suburban homeowner. Many of these suburban dwellers have a great love for being able to live outside of the city and in nature, although that does not directly translate to 'in harmony with' nature.

Effects of deer overabundance:

New Jersey's current overabundant deer population is considered **undesirable** for a number of reasons:

1. Loss of Biodiversity in the Natural Ecosystem. Deer are selective feeders. They prefer particular plants over others. The increased deer population consumes an increased amount of preferred plants. The toll is taken not merely on agricultural crops and landscape plantings, but on our native forests where certain plant species are being decimated. Deer's browsing range is from ground level to, on average, 4-feet above the ground. Within that height, deer overwhelm the forest's understory plants, both woody and herbaceous, and also devour new seedlings before they have a chance to grow into trees. Of the particular plants deer favor, many are being eaten to extinction within the state, to include the native Atlantic white cedar (*Chamaecyparis thyoides).* The deer negatively affect a balanced regeneration of the forest because they devour preferred seedlings, such as sugar maple, white ash, oaks, yellow poplar, hemlock, white pine, and white cedar, while allowing others to develop into maturity.[16] Moreover, when the deer eliminate the forest understory shrubs, they affect the habitat of other native animals, particularly ground rousting birds such as ovenbirds, wood thrushes, veerys, worm-eating warblers, flycatchers, yellow-billed cuckoos, indigo buntings, eastern phoebes, and ruffed grouse.[17] The lack of diversity in an ecosystem like the one that northern New Jersey is approaching greatly reduces its ability to bounce back from outbreaks of forest pests and diseases.[18]

2. Exacerbate the Issue of Invasive Species. As deer decimate certain preferred native plant populations, many exotic invasive species are given a chance to spread and colonize uncontested. Invasive species can drastically alter the composition of a natural ecosystem, its habitat and its food web. Japanese barberry (*Berberis thunbergii)*, originally introduced in the United States as a landscape plant, headlines the bill of invasive plants in New Jersey whose rampant spread is aided by the deer. The National Park Service (NPS) writes: "Japanese barberry forms dense stands in natural habitats including canopy forests, open woodlands, wetlands, pastures, and meadows and alters soil pH, nitrogen levels, and biological activity in the soil. Once established, barberry displaces native plants and reduces wildlife habitat and forage. White-tailed deer apparently avoid browsing barberry, preferring to feed on native plants, giving barberry a competitive advantage. In New Jersey, Japanese barberry has been found to raise soil pH…and reduce the depth of the litter layer in forests."[19]

3. Decline in Overall Health of the Herd. Often deer in superabundant populations are malnourished, undersized, and sickly. No longer are there carnivorous predators to prey on the weakest of the herd, remove the sick and decrepit, and thereby improve the overall health of the herd. Moreover, where hunting is allowed, the hunters do not help the situation because they traditionally take the healthiest, largest, strongest from the herd.

4. Collisions with Automobiles. The state spent $730,000 removing 15,000 dead deer from roadways in 2005, most a result of a collision with an automobile.[20] Nationally, there are an estimated 1.5 million deer-motor vehicle collisions each year, resulting in about 150 occupant deaths and more than $1 billion in vehicle damage.[21]

5. Distribution of Lyme Disease. According to the American Lyme Disease Foundation, northern New Jersey is considered a "High Risk" zone. From 1997-2003, 15,386 new cases were reported in New Jersey, an average of over 2,000 new cases per year.[22] Lyme disease is carried by black-legged ticks (*Ixodes scapularis*) which are commonly called "deer ticks" because the white-tailed deer is the principal host of the adult-stage tick. As deer roam throughout suburban communities, they spread deer ticks, each potentially carrying Lyme disease.

6. Damage to Agricultural Crops. A 1998 statewide survey conducted by Rutgers' New Jersey Agricultural Experiment Station (NJAES) Center for Wildlife Damage Control estimated that deer cause over $10 million worth of damage to crops annually.[23]

7. Damage to Residential Plantings. Many of northern New Jersey's residential landscapes are subjected to deer damage of varying severity. As noted in the introduction, homeowners living in areas of high deer populations must weigh the value of various protection methods, each with its own degree of: (1) Effectiveness; (2) Landscape Impact/Aesthetic Impact; (3) Maintenance Required; (4) Cost; and (5) Risk.

Measures to decrease the deer population

The state manages the overall deer population primarily through regulated sport hunting. Recent measures to increase the harvest include "lengthening the hunting seasons, increasing the bag limits, increasing the number of hunting permits issued, and offering incentives for hunters to harvest more antlerless deer (does and fawns)."[24] Sport hunters harvest approximately 60,000 deer annually.[25] Many environmental organizations endorse hunting as a means to control deer populations, including the New Jersey Audubon Society and Wild New Jersey.[26] Some of the harvested deer are donated to food banks through the program Hunters Helping the Hungry.

But, as noted above, sport hunting is not a viable means of population control in suburban communities. To confront this issue, the NJDEP, Division of Fish & Wildlife promotes alternative methods of controlling deer populations under the Community-Based Deer Management Permit (CBDMP) program. They write, "Since the CBDMP program was instituted [in 1995], the Division of Fish and Wildlife has approved a wide variety of nontraditional and experimental methods to control deer populations in suburban communities. Programs to trap and transfer deer, trap and euthanize deer, use chemical fertility control, and shoot deer by volunteer and paid agents outside of the regular hunting season dates have been permitted."[27] CBDMP programs have been instituted within Essex, Hunterdon, Mercer, Morris, Somerset, and Union counties. Some methods have proven costly and ineffective, such as trap and release/euthanize and chemical fertility control. The method which has been highly effective (along with being somewhat controversial) is for a town to hire a company of professional sharpshooters to cull the herd. The harvested deer are then donated to food banks.

Part II: Designing landscapes with strictly "deer-resistant" plants

Designing a landscape with only deer-resistant plants is an effective solution for dealing with potential deer damage. Most homeowners select this method because it adds no additional cost or maintenance. The risk is minimal. Only in times of extreme overpopulation or food scarcity would deer venture to eat these plants. Sometimes people turn away from this approach because they are leery about which plants are reliably deer-resistant and they fear the planting will be uninteresting, drab, and monotone. Contrary to those fears, there is a reliable method for selecting appropriate deer-resistant plants and many beautiful design options.

Which ornamental plants are "deer-resistant" in my neighborhood?

The landscape industry created the term "deer-resistant" to categorize certain plants that are seldom, if ever, grazed upon. Plants which are *less* seldom grazed upon, are *more* deer-resistant, and vice versa. Technically, no plant is "deer-proof" because when faced with starvation, deer will eat practically anything. For that reason, no nursery or landscaper will guarantee deer-resistance. Although, deer damage to highly resistant plants usually amounts to nothing more than minor nibbling. Such was the case at one residence in Morris County where extreme overpopulation led to deer nibbling on blue spruce, andromeda, spiraea, and barberry, all considered ironclad deer-resistant plants.[28] While that case is a rarity, some other plants which once adorned "deer-resistant" lists as recent as 10 years ago are thoroughly devoured in particular areas of extreme (densities 50-60+) overpopulation such as white pine, fir, blue holly, burning bush, and rhododendron. To further complicate the issue of deer-resistance, certain plants which demonstrate resistance in one area of the country are sometimes reported to show no resistance in another.[29]

For that reason, the most reliable approach to determining which plants are deer-resistant in your particular area is to cross-reference a regional list from a reputable source with a neighborhood list taken from personal observations around your home. For residents of northern New Jersey, the most reputable regional list was compiled by Rutgers University Cooperative Research & Extension (RCRE) and is posted on their website as well as included with this paper in Appendix A. The RCRE prefaces their list:

> The following is a list of landscape plants rated according to their resistance to deer damage. The list was compiled with input from nursery and landscape professionals, Cooperative Extension personnel, and Master Gardeners in Northern N.J. Realizing that no plant is deer proof, plants in the *Rarely Damaged*, and *Seldom Severely Damaged* categories would be best for landscapes prone to deer damage. Plants *Occasionally Severely Damaged* and *Frequently Severely Damaged* are often preferred by deer and should only be planted with additional protection such as the use of fencing, repellents, etc. Success of any of these plants in the landscape will depend on local deer populations and weather conditions.

As noted in the preface, this list was compiled by a wide variety of sources, including many landscape professionals and gardening experts from northern New Jersey. Over 500 landscape plants are rated and the ranking system is clearly explained and easy to use. To be extra safe, cross-reference the Rutgers list with a list of plants from your neighborhood that you never see

damaged. In some areas it will be wise to stick only with plants rated "Rarely Damaged," while in other areas you can safely incorporate plants rated "Seldom Severely Damaged," as well. With this approach, you will tailor your list to the severity of deer damage in your area and you can be confident you will have the most accurate deer-resistant list attainable.

Although, a significant caveat is that some of these deer-resistant plants might be considered invasive species. Discussed earlier in Part I, invasive species are non-native organisms that have been introduced from a foreign ecosystem and pose an ecological threat to our native ecosystem. Invasive species can dramatically alter a natural landscape. For example within 40 years, from 1910 to 1950, the Asian fungus *Endothia parasitica* practically eliminated the once abounding American chestnut from the eastern deciduous forest.[30] Similarly, Dutch elm disease destroyed the American elm. Currently purple loosestrife and Japanese barberry are rapidly altering ecosystems as they spread profusely throughout the wetlands and the forest understory, respectively. Both are still commonly sold as ornamental plants.

Created in March 2004,[31] the Invasive Species Council (ISC) of New Jersey is still in its infancy and has not established a state-sanctioned invasive species list nor have any particular plant species been legally banned from landscape use, as in Massachusetts.[32] Nonetheless, invasive species pose a serious threat to a balanced ecosystem, hence the recent formation of the ISC of New Jersey. The United States Department of Agriculture, National Invasive Species Information Center website offers links to each state's invasive species list. Since New Jersey is without an official one, that website links to the Native Plant Society of New Jersey's invasive species list.[33] Twenty of the 63 plants on their invasive species list are *also* recommended on the Rutgers deer-resistant list either as "Rarely Damaged" or "Seldom Severely Damaged." While these cross-referenced plants (listed in Appendix B) offer the value of being deer-resistant, their continued landscape use could worsen the imbalance in the ecosystem of New Jersey.

Suggests for using only deer-resistant plants in a landscape design

Many great landscapes can be created designing within the pallet of deer-resistant plants Here are some suggestions how:

1. The principles of good landscape design do not change. Remain true to the intent of the design by a replacing non-resistant plant with a resistant one that *has the same function*. Many landscape architects and designers create a design working within categories of plants before ever thinking in terms of a particular plant. Some such categories are: shade trees, ornamental trees, upright evergreens, evergreen shrubs, flowering shrubs, and flowering perennials, to name a few major ones. If the intent of the design is to frame the house by locating an upright evergreen on the corner of the house, you can stay true to the design concept by selecting a deer-resistant upright evergreen. Some examples of effective swaps are:

White Pine	→	Japanese Black Pine
Yew	→	Boxwood
Rhododendron	→	Andromeda
Hydrangea	→	Viburnum
Hosta	→	Catmint
Tulips	→	Daffodils
Geranium	→	Moonbeam Coreopsis
English Ivy	→	Pachysandra

2. Use a deer-resistant scheme only in the front yard planting. Design a backyard planting that will be protected from the deer by, for example, deer fencing. In this situation, a larger variety of plants can be worked into the total landscape.

3. Utilize the woods, if available, as a backdrop to hide deer fencing. By design, deer fencing is indented to avoid catching your eye. But 8-foot high netting running through an open field in your backyard will unavoidably catch the eye. So in cases where there are woods in the backyard, run the deer-fencing through the woods and the netting will essentially disappear into the background texture of the woods.

4. Select an ornamental tree, even if it is a deer favorite, whose lowest branches are above the deer's reach. An average sized white-tailed deer cannot browse above 4-feet. To be on the safe side, let's say 5-feet. Selecting trees like this keeps the entire pallet of ornamental trees available for use. You can add some variety and interest to a landscape by using a purple plum or 'Royal Burgundy' Japanese cherry. If you choose a young tree whose branches are below the deer's browsing line, install a tree guard to protect its lowest branches until they grow above the browse line.

5. Plant in masses. Admittedly, fewer total plants are available for your use when limited to deer-resistant plants. But, then again, a vast variety of plants does not necessarily mean the landscape will look good, rather often a landscape with too many different plants causes an uncoordinated patchwork look. I suggest select a few favorite plants and work them into masses that sweep along side each other or through one another. Most often this approach is done for groundcovers where, for example, a mass of myrtle sweeps around a mass of liriope. But the same concept looks great with small and large shrubs, and especially ornamental grasses. Just a few sweeping masses will not feel like a monotonous planting scheme, but rather an artful selection of a few great plants. Planting in masses allows for the flower bloom to have more impact and also for contrasting textures to have a greater visual impact. Example: Sweep masses of dwarf fountain grass and blue oat grass amongst masses of Virginia sweetspire and 'Gold Flame' spiraea. Behind this, plant a mass of andromeda or spruce as an evergreen backdrop. If the site is shady, a mass of ferns can look great.

6. Incorporate rocks/boulders as ornamental accents. A great way to add variety and interest to a planting is to intersperse some ornamental boulders or rocks. They come in a variety of sizes and textures from granite boulders to moss rocks. Select a flat-top rock and place it at the edge of a planting bed or a patio to create a natural stone benches that also ties into the theme of interspersed rocks among the plantings.

7. Use an ornamental rock or a sculpture as the focal point. A popular design concept is to create a focal point in a landscape. This relaxes the viewer because there is a defined place for the eye to focus on first glance and thereafter wander off across the rest of the landscape. Often focal points are created with specimen plants such as a Japanese maple. Though not a deer favorite, this tree can be severely damaged by deer. Certainly no one wants their $500 Japanese maple eaten. Use an ornamental rock or a stone sculpture in the place of this specimen plant. Often a mass planting around a sculpture aids in its role as a focal point.

8. If you choose to take a risk, take a small risk. For example, say you do not mind using a deer-resistant planting, except you especially love hydrangeas. Do not plant a large mass of hydrangeas on the edge of the woods and expect deer-repellent to protect them. Rather, install one or two hydrangea between the patio and the house where they can be appreciated from the patio in the summertime, but also where the task of applying deer-repellent will not be overly taxing. And in a worst case scenario, if the deer eat the hydrangea, the financial loss is not too great.

9. Another risk that might be worth taking is to disguise vulnerable plants with a strong scent. Deer rely heavily on their sense of smell to detect predators. Deer have been found to avoid certain highly fragrant plants because, it is presumed, the deer fear the strong scent could be masking the scent of an approaching predator.[34] These plants include catmint, onions, honeybush, lavender, mint, sage, society garlic, and thyme.[*] Massing some of these aromatic plants around some that are more vulnerable *might* keep them safe from deer damage.

10. Utilize a combination of these suggestions tailored to meet your priorities and desires.

---

[*] Catmint (*Nepeta spp.*), Onions (*Allium spp.*), Honeybush (*Melianthus major*), Lavender (*Lavandula spp.*), Mint (*Mentha spp.*), Sage (*Salvia officinalis*), Society garlic (*tulbaghia violacea*), and Thyme (*Thymus spp.*)

Part III: The effectiveness and practicality of the various "deer-proofing" methods

For some, installing a landscape with only deer-resistant plants will not be the desired course of action. In that case, each individual will have to determine the best course of action for protecting their plantings from deer damage. For the sake of creating a vocabulary to discuss and compare various "deer-proofing" methods, I have rated each in terms of five factors:

1. Effectiveness:	Its ability to prevent deer damage.
2. Maintenance:	The amount of time required for upkeep.
3. Cost:	Rated by comparison to other methods.
4. Landscape Impact:	Visual impact on a landscape.
5. Risk:	Frequency and scope of potential failure.

The rankings are based on qualitative judgments I made from research, interviews, and professional experience. I provide supporting arguments and data where available. For the sake of comparison, I rated deer-resistant planting as well.

Solely Deer-Resistant Planting

Effectiveness:	High
Maintenance:	Low
Cost:	Low
Landscape Impact:	Medium
Risk:	Low

As discussed in Part II, a deer-resistant landscape planting adds no additional cost or maintenance while being highly effective and low risk. The significant variable is landscape impact, which boils down to a personal decision of aesthetics. Some will feel that a planting of this sort can be beautiful and meet their desires, while others will insist on incorporating plants outside of the deer-resistant pallet. If the latter be the case, consider the following options for "deer-proofing."

Deer-Fencing

Effectiveness:	High
Maintenance:	Low
Cost:	High ($4,000 - $10,000 professionally installed)
Landscape Impact:	Medium
Risk:	Low

A properly installed deer fence is the only sure way to keep deer from your yard. The maintenance involved is minimal requiring a weekly inspection for any damage to the fence. The risk involved would be if a large enough tree or branch fell on the fencing and created an avenue for deer to enter. Generally, this would be uncommon. Cost turns some people away, but depending on the size and scope of the landscape project, the cost could be factored into the budget. Installed by a professional, the fencing costs approximately $10-$12 per linear foot.

Enclosing a ¼-acre backyard would cost around $4,000 and a 1-acre backyard around $10,000. The significant variable here is landscape impact. Deer-fencing must be 8-feet high at a minimum. Many recommend 10-foot high fencing. Enclosing an entire property or even just a backyard can create a "caged" feeling. The deer-fence netting is relatively thin and designed to cause a low visual impact on a landscape.

Alternative Deer-Fence Options – Double-Row Fencing and Solid Normal Fencing

For these methods, the ratings are the same as normal deer fencing. Double-row fencing entails installing two 4-foot or 5-foot tall fences side by side with a 4 to 5-foot gap between them.[35] Deer do no attempt jump over both fences because they are not broad leapers. Further, deer do not attempt to land in the middle because, it is presumed, they would feel trapped. This method allows a landscape to utilize lower ornamental fencing than 8-foot high deer fencing. The cost of the fence is doubled. Another alternative deer fence works on the principle that deer need to see a safe landing site before they jump. Install a solid 6-foot high fence around a backyard. Assuming level ground, a deer's eye level will be between 4 and 5-feet above the ground – they will not be able to see over the fence and ascertain whether it is safe for them to take a leap.

Commercial Deer Repellents

Effectiveness:	Medium
Maintenance:	High
Cost:	Low ($25 - $500 per application)
Landscape Impact:	Low
Risk:	Medium

The advantage of commercial deer repellents is that they have no visual impact on the landscape and are low cost (lower than fencing). Cost per application can vary significantly depending on total amount of plants requiring protection and whether you apply the repellent yourself or hire a professional service. If you apply the repellent yourself and protect just a few select plants, each application might cost around $25. On the other end of the spectrum, if you have a large landscape planting which is sprayed regularly by a professional service, applications could run from $100 - $500 per application.

Depending on the deer density, repellents can be highly effective or entirely ineffective. When food is scarce, deer will force themselves to disregard the repulsive odor and take a bite. For some suburban areas of northern New Jersey, deer repellents have provided no protection.[36] There is a higher degree of maintenance involved because repellents have to be applied regularly, especially in the late winter when food is scarcest and in the early spring when new growth requires frequent applications. Further, deer have been known to become accustomed to a particular repellent and for that reason it is important to rotate brands. The market offers numerous liquid spray repellents to include: Bobbex, Chew Not, Deer Away, Deerbusters, Deer Ex, Deer Off, Deer Out, Deer Scram, Deer Solution, Deer Stopper, Deervik, Hinder, Liquid Fence, Not Tonight Deer, Plantskydd, Ropel, and Tree Guard. Furthermore, applying Milorganite, a fertilizer made from human waste, has been shown to repel deer.

When depending on deer-repellents there is a significant risk because if an application is missed, or if seasonal conditions limit the effectiveness (for example, excessive rain) the deer can in one night devour a fully established garden. Many gardeners report positive results using repellents and each of these repellent manufacturers boast reports near 100% effectiveness on their product labels and/or websites. This could be the result in many situations. Nevertheless, you must be aware of the risk involved, especially where deer densities run high.

Homemade Deer Repellents

Effectiveness:	Low
Maintenance:	High
Cost:	Low
Landscape Impact:	Low
Risk:	High

Homemade deer-repellent recipes generally include some combination of hot pepper juice, Tabasco sauce, eggs, and/or ammonia mixed with water and spread on and around vulnerable plants. Some people mix their repellent with Wilt Pruf to aid it sticking to the leaves. In addition to these liquid repellents, some people spread dried blood meal on the ground. Others hang strong scented soaps (for example, Irish Spring), human hair (clumps from the barber), and/or dried clumps of garlic in socks or stockings throughout their plantings. All of these applications consume a large amount of time to concoct and apply. Often they have to be alternated and aggressively reapplied after rainfall in order to provide consistent effectiveness. Some people swear by their homemade repellents but generally they only work in areas of moderate or low deer densities. There should be no expectation of any of these methods being reliable.

Ultrasonic Deterrent System – Nature Technologies' DeerTech 880

Effectiveness:	High
Maintenance:	Low
Cost:	High ($1,200-$10,000 installed) ($99+ per month maintenance fee)
Landscape Impact:	Medium
Risk:	Low

Nature Technologies Inc. was recently founded to market the DeerTech 880 ultrasonic deer deterrent system. Based in Pleasantville, NY, the company services all of northern New Jersey. DeerTech 880 is a device that gives off a high-pitched frequency, above the range of human hearing, which for a deer sounds as if they were standing next to a jet engine. Several beacons must be installed throughout a landscape in ensure total coverage. Deer avoid the beacons because they are uncomfortable being around the deafening noise where they cannot detect approaching predators. The literature available on the internet is mostly PR from the company itself that speaks very highly of system. I have no reason to doubt the alleged effectiveness. The maintenance is performed by the company which also applies some deer repellents on the property. The landscape impact entails several beacons among the plantings.

They stick out kind of like a small bird feeder on a pole would. The risk would be that when you had a power outage, the beacons would not radiate for that time period.

Motion Activated Deterrent System - ScareCrow Motion Activated Sprinkler

Effectiveness:	Medium
Maintenance:	Medium
Cost:	Low ($75 per sprinkler)
Landscape Impact:	Medium
Risk:	Medium

The ScareCrow device attaches to the end of a garden hose and will squirt water whenever an animal (or human) triggers its battery operated motion detector. The cost is low at $75 per device. The customer reviews on Amazon.com speak very highly of the effectiveness of the system. The manufacturer's website offers a video link of the device in action: <http://www.contech-inc.com/videos/scarecrow/crowloop_high.mov>. The drawback is that the sprinkler does make a small visible appearance in the landscape. Protecting more area will require more sprinklers which would compound the visual impact. The risk is that if the battery dies, or the device malfunctions, your plantings are sitting ducks. Although, deer are creatures of habit and they might not venture back into your yard after being scared several times. This device might find its ideal usage by protecting a small planting bed. In this case, only one device would be required and should sufficiently protect the bed from deer damage.

Unreliable Methods

While these methods listed below have been suggested at one time or another, they offer no reliable protection from deer damage.

- Guard Dog. A guard dog will only work in the particular case where the dog lives permanently outdoors and has free range to roam the property. Reports have shown that deer will learn the length of a dog chain and eventually not fear the dog.

- Scare tactics: noise-makers, loud music, bright lights. Not only have these methods proven unreliable after a few days, but they cause public disturbance issues.

- Protecting a small garden with fishing line or thin string wound around it. Some report that deer are confused about the fishing line they cannot see, and after bumping into it, retreat from the area. Some people walk along the line daily rubbing their fingers on it leaving human scent. Some hang suspended aluminum pie plates from the strings to scare the deer away when they bump into them. These strategies *might* deter deer from a small garden patch, but they cannot be considered consistent and reliable protection.

- Create a 50-foot or wider clearing between the forest edge and the home landscaping because deer tend to avoid open fields. While this might be true of herds in very rural areas where the deer still fear wild predators and hunters, the suburban deer exhibit no fear of open spaces.

- Trap and release. Despite the high-cost, high-effort, and low-survival rate of relocated deer, this option also offers no protection from other deer entering your neighborhood.

- Feed the deer. Installing a salt lick or corn feeder at the edge of a property has been shown to cause the deer to congregate there and avoid browsing on the nearby landscape plants. But, this method comes with no guarantees that one day they will not venture into the yard and eat the landscape plants. Furthermore, from an ecological standpoint, feeding the deer only exacerbates the issue of deer overpopulation in northern New Jersey.

Not Viable Methods:

- Poisoning. Aside from being illegal, this leaves rotten deer carcasses in the vicinity of your home and the poison enters the food chain.

- Mothballs. Toxic to humans and animals.

- Electric fencing. Electrical fencing is often used to protect farmland and has proven very effective in that situation. Local ordinances generally prohibit electric fences from residential areas.

- Hunting the deer. Not permitted due to safety zones around houses.

Conclusion

Guided by the information provided throughout this paper, let's revisit the questions posed in the introduction.

Q1. How severe is the influence of deer in my neighborhood? How extreme a measure should I take to protect my landscaping from deer damage?

Have you ever seen deer in your yard? In a neighbor's yard? How often? Have you ever noticed deer damage in your yard or a neighbor's yard? Are there distinct browse lines at around 4-feet on certain plants? Are there any deer favorites like yew, hosta, arborvitae that are surviving with little or no damage? The greater the deer density, the more frequently you will see deer and deer damage in your neighborhood. Greater severity of damage is proportional to greater density of deer. The greater the density in your neighborhood, the more reliable measure of protection you should take.

Q2. Do I mind using only "deer-resistant" plants for my landscaping? Which plants are reliably deer-resistant in my neighborhood? What are some strategies for making a deer-resistant design look attractive?

If you do not mind using only deer-resistant plants for you landscaping, use Part II as a guide for selecting plants and design concepts.

Q3. Are there certain plants which are not "deer-resistant" but that I love so much they must be included in my landscape? If so, then, which method of protecting these plants is best for me? Deer-fencing? Deer-repellents? Others methods?

The answer to this question depends on the how many deer preferred plants you wish to incorporate into your landscape. If there are just a few, then you can take small-scale measures to reasonably protect the select few like deer repellents or the motion activated deterrent system. On the other hand, if you wish to include many deer-preferred plants, then more significant protection will be required such as deer-fencing or an ultrasonic deer deterrent system. Weigh the pros and cons of each method as discussed in Part III.

Personal Reflections

The information in this paper was intended to supplement good landscape design principles when planning a landscape in areas of deer overpopulation. In the process of research, I discovered the dramatic effect deer overpopulation is having on the native ecosystem of New Jersey. I recognize that the average resident is unaware of the impact of deer overpopulation. Goal levels of 10-20 deer per square mile are attainable, but only by acquiring a Community-Based Deer Management Program permit for professional harvesting. This is an approach that will meet with much public concern, but when educated of the dangerous impact of the current overpopulation, I hope, we will recognize this is the wisest course of action.

Appendix A

NEW JERSEY AGRICULTURAL EXPERIMENT STATION
RUTGERS COOPERATIVE RESEARCH & EXTENSION

E271

Bulletin

For a comprehensive list of our publications visit ***www.rce.rutgers.edu***

Landscape Plants Rated by Deer Resistance

Pedro Perdomo, Morris County Agricultural Agent
Peter Nitzsche, Morris County Agricultural Agent
David Drake, Ph.D., Extension Specialist in Wildlife Management

The following is a list of landscape plants rated according to their resistance to deer damage. The list was compiled with input from nursery and landscape professionals, Cooperative Extension personnel, and Master Gardeners in Northern N.J. Realizing that no plant is deer proof, plants in the *Rarely Damaged*, and *Seldom Rarely Damaged* categories would be best for landscapes prone to deer damage. Plants *Occasionally Severely Damaged* and *Frequently Severely Damaged* are often preferred by deer and should only be planted with additional protection such as the use of fencing, repellents, etc. Success of any of these plants in the landscape will depend on local deer populations and weather conditions.

Latin Name	Common Name
ANNUALS	
Rarely Damaged	
Ageratum houstonianum	Ageratum
Antirrhinum majus	Snapdragon
Brugmansia sp. (Datura)	Angel's Trumpet
Calendula sp.	Pot Marigold
Catharanthus rosea	Annual Vinca
Centaurea cineraria	Dusty Miller
Cleome sp.	Spider Flower
Consolida ambigua	Larkspur
Euphorbia marginata	Snow-on-the-Mountain
Helichrysum	Strawflower
Heliotropium arborescens	Heliotrope
Lobularia maritima	Sweet Alyssum
Matricaria sp.	False Camomile
Myosotis sylvatica	Forget-Me-Not
Nicotiana sp.	Flowering Tobacco
Papaver sp.	Poppy
Pimpinalla anisum	Anise
Rosmarinus officinalis	Rosemary
Seldom Severely Damaged	
Anethumus graveolens	Dill
Borage officinalis	Borage
Celosia sp.	Cock's Comb
Centaurea cyanus	Bachelor's Buttons
Cheiranthus sp.	Wallflower
Eschscholzia californica	California Poppy
Iberis umbellata	Candytuft
Lantana sp.	Lantana
Lobelia sp.	Lobelia
Matthiola sp.	Stocks
Ocimum basilicum	Basil
Perilla frutescens	Shiso
Petroselinum crispum	Parsley
Salvia	Salvia
Tagetes patula	French Marigold
Tropaeolum majus	Nasturtium
Verbena x hybrida	Verbena
Zinnia sp.	Zinnia
Occasionally Severely Damaged	
Begonia semperflorens	Wax Begonia
Coleus sp.	Coleus
Cosmos sp.	Cosmos
Dahlia sp.	Dahlia
Gerbera jamesonii	Gerbera Daisy
Helianthus sp.	Sunflower
Impatiens balsamina	Balsam, Touch-Me-Not
Impatiens walleriana	Impatiens
Ipomea sp.	Morning Glory
Pelargonium sp.	Geranium
Petunia sp.	Garden Petunia
Viola sp.	Pansy
BIENNIALS	
Rarely Damaged	
Digitalis purpurea	Common Foxglove
Seldom Severely Damaged	
Dianthus barbatus	Sweet William
Lunaria annua	Money Plant
Myosotis alpestris	Forget-Me-Not
Occasionally Severely Damaged	
Campanula medium	Canterbury Bells

THE STATE UNIVERSITY OF NEW JERSEY
RUTGERS COOK COLLEGE

Latin Name	Common Name

BULBS

Rarely Damaged

Allium sp.	Ornamental Onion
Colchicum sp.	Autumn Crocus
Endymion sp.	Bluebell
Eranthus hyemalis	Winter Aconite
Fritilaria imperialis	Crown Imperial, Fritilia
Galanthus nivalis	Snowdrops
Narcissus sp.	Daffodil
Scilla siberica	Siberian Squill

Seldom Severely Damaged

Camassia leichtlini	Camassia
Canna sp.	Canna Lily
Colocasia esculenta	Elephant Ear
Crocus sp.	Crocus
Gladiolus sp.	Gladiolus
Gloriosa superba	Glory Lily
Hyacinthus sp.	Hyacinth
Muscari sp.	Grape Hyacinth
Oxalis sp.	Wood Sorrel
Zantedeschia sp.	Calla Lily

Occasionally Severely Damaged

Caladium sp.	Caladium
Lilium sp.	Garden Lily

Frequently Severely Damaged

Tulip sp.	Tulip

FERNS

Rarely Damaged

Athyrium goeringianum (nipponicum)	Japanese Painted Fern
Cyrtomium falcatum	Holly Fern
Dennstaedtia punctilobula	Hayscented Fern
Dryopteris marginalis	Wood Fern
Matteuccia struthiopteris	Ostrich Fern
Onoclea sensibilis	Sensitive Fern
Osmunda cinnamomea	Cinnamon Fern
Osmunda regalis	Royal Fern
Polystichum arcostichoides	Christmas Fern
Thelyptens noveboracensis	New York Fern

GROUNDCOVERS

Rarely Damaged

Aegopodium podagaria	Bishop's Weed
Ajuga reptans	Bugleweed
Arctostaphylos uva-ursi	Bearberry
Convallaria majalis	Lily of the Valley
Epimediurn sp.	Barrenwort
Galium odoratum (Asperula odorata)	Sweet Woodruff
Lamium sp.	Spotted Deadnettle
Pachysandra procumbens	Allegheny Spurge
Pachysandra terminalis	Pachysandra

Latin Name	Common Name

Seldom Severely Damaged

Ceratostigma plumbaginoides	Plumbago
Gaultheria procumbens	Creeping Wintergreen
Liriope sp.	Lilyturf
Vinca major	Large Periwinkle
Vinca minor	Periwinkle

Occasionally Severely Damaged

Euonymus fortunei	Wintereeeper
Hedera helix	English Ivy

ORNAMENTAL GRASSES

Rarely Damaged

Acorus sp.	Japanese Sweet Flag
Andropogon sp.	Big Bluestem
Arrhenatherum elatius	Varigated Oat Grass
Arundo donax	Giant Reed
Calamagrostis sp.	Feather Reed Grass
Carex sp.	Japanese Sedge
Chasmanthium latifolium	Northern Sea Oats
Cortaderia selloana	Pampus Grass
Eragrostus curvula	Weeping Love Grass
Erianthus ravennae	Ravenna Grass
Fargesia sp.	Clump Bamboo
Festuca glauca	Blue Fescue
Hakonechloa macra	Hakonechloa
Helictotrichon sempervirens	Blue Oat Grass
Imperata cylindrica	Japanese Blood Grass
Juncus Effusus	Hard Rush
Koeleria glauca	Large Blue June Grass
Leymus arenarius glaucous	Lyme Grass
Miscanthus floridulis	Giant Japanese Silver Grass
Miscanthus sinensis	Japanese Silver Grass
Molinia caerulea	Purple Moor Grass
Molinia caerulea 'Variegata'	Variegated Purple Moor Grass
Panicum virgatum	Switch Grass
Pennisetum alopecuroides	Fountain Grass
Pennisetum orientale	Oriental Fountain Grass
Phyllostachys aurea	Golden Bamboo
Schizachyrium scoparium	Little Bluestem
Sorghastrum nutans	Indian Grass

Seldom Severely Damaged

Bambusa sp.	Bamboo
Carex pendula	Drooping Sedge
Hystrix patula	Bottlebrush Grass
Ophiopogon japonicus	Dwarf Mondo Grass
Phalaris arundinaceae	Ribbon Grass
Scirpus lacustris	Sedge

PERENNIALS

Rarely Damaged

Aconitum sp.	Monkshood
Agastache sp.	Anise Hyssop
Allium sp.	Ornamental Onion
Arabis caucasica	Rock-Cress

Latin Name	Common Name
Arisaema triphylum	Jack-in-the-pulpit
Armoracia rusticana	Horseradish
Artemisia dracunculus	Tarragon
Artemisia sp.	Silver Mound
Asarum canadense	Wild Ginger
Asarum europaeum	European Ginger
Aubretia deltoidea	Purple Rock-Cress
Aurinia saxatilis	Basket of Gold
Baptisia australis	False Indigo
Bruneria macrophylla (Brunnera)	Siberian Bugloss
Cactaceae sp.	Cactus
Coreopsis verticillata	Threadleaf Coreopsis
Corydalis sp.	Corydalis
Dicentra eximia	Fringed Bleeding Heart
Dicentra spectabilis	Bleeding Heart
Echinops ritro	Small Globe Thistle
Euphorbia sp. (except 'Chameleon')	Spurge
Helleborus sp.	Lenton or Christmas Rose
Hesperis matronalis	Dame's Rocket
Hyssopus officinalis	Hyssop
Iris sp. (may eat buds)	Iris
Lavandula sp.	Lavendar
Ligularia dentata	Bigleaf Goldenray
Ligularia 'The Rocket'	Rocket Ligularia
Limonium latifolium	Statice
Linaria vulgaris	Butter & Eggs
Lychnis coronaria	Rose Campion
Majorana	Marjoram
Marrubium vulgare	Horehound
Melissa officinalis	Lemon Balm
Mentha sp.	Mint
Myosotis sp.	Forget-Me-Not
Nepeta sp.	Catmint
Oreganum sp.	Oregano
Paeonia sp. (may eat buds)	Peony
Perovskio atriplicifolia	Russian Sage
Phlomis sp.	Greek Jerusalem Sage
Podophyllum	May Apple
Potentilla sp.	Potentilla, Cinquefoil
Pulmonaria sp.	Lungwort
Ranunculus sp.	Buttercup
Rodgersia sp.	Rodgers Flower
Ruta sp.	Rue
Salvia officinalis	Garden Sage
Santolina chamaecyparissus	Lavender-Cotton
Stachys byzantina	Lamb's Ear
Tanacetum vulgare	Common Tansy
Teucrium Chamaedrys	Germander
Thalictrum sp.	Meadow Rue
Thymus sp.	Thyme
Yucca filimentosa	Yucca

Seldom Severely Damaged

Achillea filipendulina	Yarrow
Achillea millefolium	Common Yarrow
Agapanthus sp.	African Lily
Alchemilla sp.	Ladys' Mantle
Anchusa sp.	Bugloss
Anemone x hybrida	Japanese Anemone
Anemonella thalictroides	Rue Anemone
Aquilegia sp.	Columbine
Armeria maritima	Sea Thrift
Asclepias incarnata	Swamp Milkweed
Asclepias tuberosa	Butterfly Weed
Asparagus officinalis	Asparagus
Aster sp.	Aster
Astilbe sp.	Astilbe
Bergenia sp.	Heartleaf Bergenia
Boltonia asteroides	White Boltonia
Cerastium	Snow-in-Summer
Chrysanthemum parthenium	Feverfew
Cimcifuga sp.	Snakeroot, Bugbane
Coreopsis lanceolata	Lance Coreopsis
Croscosmia sp.	Crocosmia
Cyclamen sp.	Cyclamen
Delphinium sp.	Delphinium
Dianthus sp.	Carnation, Pinks
Dictamus alba	Gas Plant
Digitalis grandiflora	Yellow Foxglove
Echinacea purpurea	Purple Coneflower
Erythronium	Trout Lily
Eupatorium coelestinurn	Mist Flower
Eupatorium rugosum	White Snakeroot
Geranium macrorrhizum	Hardy Geranium
Gypsophila sp.	Baby's Breath
Helenium autumnale	Sneezeweed
Heuchera sp.	Coralbells
Hypericum calycinum	St. John's Wort
Iberis sempervirens	Candytuft
Kirengeshoma palmata	Yellow Wax-Bells
Kniphofia tritoma	Red-Hot Poker
Liatris sp.	Blazing Star
Lobelia sp.	Cardinal Flower
Lupinus sp.	Lupine
Lychnis chalcedonica	Maltese Cross
Macleaya cordata	Plume Poppy
Mertensia virginica	Virginia Bluebells
Monarda didyma	Beebalm
Papaver orientale	Oriental Poppy
Patrinia scabiosifolia	Patrinia
Physostegia sp.	Obedient Plant
Polemonium caeruleum	Jacob's Ladder
Primula sp.	Primrose
Rheum rhabarbarum	Rhubarb
Rudbeckia sp.	Black-Eyed Susan
Salvia nemorosa	Meadow Sage
Saponaria sp.	Soapwort
Satureja montana	Savory
Scabiosa caucasica	Pincushin Flower
Sempervivum sp.	Hens and Chickens
Solidago sp.	Goldenrod
Stokesia laevis	Stokes' Aster
Symplocarpos foetidus	Skunk Cabbage
Tiarella cordifolia	Foam Flower
Tradescantia sp.	Spiderwort
Tricyrtis hirta	Toad Lily

Latin Name	Common Name
Trillium sp.	Trillium
Verbascum sp.	Mullein
Veronica sp.	Speedwell
Viola sp.	Violets

Occasionally Severely Damaged

Alcea sp.	Hollyhock
Aruncus sp.	Goat's Beard
Begonia grandis	Hardy Begonia
Bellis perennis	English Daisy
Campanula glomerata	Bellflower
Centaurea montana	Mountain Bluet
Chelone sp.	Pink Turtlehead
Chrysanthemum	Fall Mums
Chrysanthemum superbum	Shasta Daisy
Erigeron sp.	Fleabane
Euphorbia dulcis 'Chameleon'	Spurge
Filipendula sp.	Meadowsweet
Gaillardia sp.	Blanket Flower
Geranium clarkei	Hardy Geranium
Geranium sanguineum	Hardy Geranium
Geranium x cantabrigiense	Hardy Geranium
Geum sp.	Geum, Avens
Hemerocallis sp.	Daylily
Hibiscus moscheutos	Rose Mallow
Leucanthemum maximum	Shasta Daisy
Lysimachia clethroides	Gooseneck Loosestrife
Lythrum sp.	Purple Loosestrife
Oenethera sp.	Sundrops
Penstemon sp.	Penstemon
Phlox sp.	Phlox
Platycodon grandiflorus	Balloon Flower
Polygonatum sp.	Solomon's Seal
Sedum spectabile	Showy Sedum
Sidalcia malviflora	Checkermallow
Symphytum officinale	Comfrey
Trollius sp.	Globeflower

Frequently Severely Damaged

Eryngium sp.	Sea-Holly
Fragraria sp.	Strawberry
Geranium endressii	Hardy Geranium
Hosta sp.	Hosta
Pardancanda x norrisii	Candy Lily

SHRUBS

Rarely Damaged

Aralia spinosa	Devil's Walking Stick
Berberis sp.	Barberry
Buddleia sp.	Butterfly Bush
Buxus sempervirens	Common Boxwood
Calluna sp.	Heather
Caryopteris clandonensis	Blue Mist Shrub
Cephalotaxus harringtonia	Japanese Plum Yew
Cytisus sp.	Broom
Daphne sp.	Daphne
Elaeagnus angustifolia	Russian Olive

Latin Name	Common Name
Erica sp.	Heath
Ilex x 'John T. Morris'	John T. Morris Holly
Ilex x 'Lydia Morris'	Lydia Morris Holly
Juniperus horizontalis 'Prince of Wales'	Prince of Wales Juniper
Juniperus scopulorum 'Moonglow'	Moonglow Juniper
Leucothoe fontanesiana	Drooping Leucothoe
Mahonia aquifolium	Oregon Grape Holly
Mahonia bealei	Leatherleaf Mahonia
Microbiota decussata	Russian Cypress
Myrica pensylvanica	Bayberry
Pieris floribunda	Mountain Pieris
Pieris japonica	Japanese Pieris, Andromeda
Potentilla fruticosa	Bush Cinquefoil
Rhus aromatica	Fragrant Sumac
Sambucus racemosa	Red Elderberry
Sarcococca hookeriana	Sweet Box
Skimmia japonica	Japanese Skimmia
Viburnum dentatum	Arrowwood Viburnum

Seldom Severely Damaged

Abelia sp.	Glossy Abelia
Abies balsamea	Dwarf Balsam Fir
Andromeda polifolia	Bog Rosemary
Aronia arbutifolia	Red Chokeberry
Aucuba japonica	Goldust Plant
Callicarpa sp.	Beautyberry
Calycanthus floridus	Common Sweetshrub
Calycanthus occidentalis	California Sweetshrub
Chaenomeles japonica	Japanese Flowering Quince
Clerodendrum fargesii	Harlequin Glorybower
Clethra sp.	Sweet Pepperbush
Cornus alba	Red Twigged Dogwood
Cornus sericea	Red Osier Dogwood
Corylus sp.	Hazelnut
Cotinus coggygria	Smokebush
Cotoneaster apiculatus	Cranberry Cotoneaster
Cotoneaster congestus	Pyrenees Cotoneaster
Cotoneaster dammeri	Bearberry Cotoneaster
Cotoneaster horizontalis	Rockspray Cotoneaster
Cotoneaster salicifolius	Willowleaf Cotoneaster
Deutzia sp.	Deutzia
Elaeagnus umbellatus	Autumn Olive
Enkianthus campanulatus	Redvein Enkianthus
Forsythia x intermedia	Forsythia
Fothergila sp.	Fothergillia
Halesia carolina	Carolina Silverbell
Hamamelis virginiana	Common Witchhazel
Hibiscus syriacus	Rose of Sharon
Hippophae rhamnoides	Sea Buckthorn
Hypericum prolificum	St. John's Wort
Ilex aquifolium	English Holly
Ilex cornuta	Chinese Holly
Ilex glabra	Inkberry
Ilex verticillata	Winterberry Holly
Itea virginica	Virginia Sweetspire
Juniperus chinensis 'Armstrongii'	Armstrong Juniper

Latin Name	Common Name
Juniperus chinensis cv. *	Chinese Juniper
Juniperus chinensis 'Pfitzerana'	Pfitzer Juniper
Juniperus horizontalis cv. *	Creeping Juniper
Juniperus horizontalis 'Youngstown'	Youngstown Andorra Juniper
Juniperus procumbens 'Nana'	Japanese Garden Juniper
Juniperus sabin cv.	Savin/Tam Juniper
Juniperus scopulorum cv. *	Mountain Juniper
Juniperus squamata 'Blue Star'	Blue Star Juniper
Juniperus squamata cv. *	Singleseed Juniper
Kerria japonica	Japanese Kerria
Kolkwitzia amabilis	Beautybush
Lagerstroemia indica	Crape Myrtle
Leucothoe axillaris	Coast Leucothoe
Ligustrum sp.	Privet
Lindera benzoin	Spicebush
Magnolia x soulangiana	Saucer Magnolia
Osmanthus heterophyllus	Holly Osmanthus
Philadelphus coronarius	Sweet Mock Orange
Pinus mugo	Mugo Pine
Prunus laurocerasus	Cherry Laurel
Pyracantha coccinea	Firethorn
Rhamnus sp.	Buckthorn
Ribes sp.	Currant
Rubus sp.	Brambles
Sambucus canadensis	Blueberry Elder, Sweet Elder
Spiraea japonica	Japanese Spirea
Spiraea prunifolia	Bridalwreath Spirea
Spiraea x bumalda	Anthony Waterer Spirea
Symphoricarpos albus	Snowberry
Symphoricarpos x chenaultii	Coralberry
Syringa reticulata	Japanese Tree Lilac
Syringa vulgaris	Common Lilac
Viburnum carlesii	Koreanspice Viburnum
Viburnum opulus	Cranberry Bush
Viburnum plicatum tomentosum	Doublefile Viburnum
Viburnum prunifolium	Blackhaw Viburnum
Viburnum rhytidophyllum	Leatherleaf Viburnum
Viburnum x juddii	Judd Viburnum
Weigela florida	Weigela

Occasionally Severely Damaged

Cornus racemosa	Panicled Dogwood
Cornus sanguinea	Bloodtwig Dogwood
Corylopsis glabrescens	Fragrant Winterhazel
Euonymus alata	Winged Euonymus
Euonymus japonica	Japanese Euonymus
Hydrangea arborescens	Smooth Hydrangea
Hydrangea macrophylla	Bigleaf Hydrangea
Hydrangea paniculata	Panicle Hydrangea
Hydrangea quercifolia	Oakleaf Hydrangea
Ilex crenata	Japanese Holly
Ilex x meserveae	Blue Holly
Juniperus conferta	Shore Juniper
Kalmia latifolia	Mountain Laurel
Nandina sp.	Heavenly Bamboo
Prunus x cistena	Purple Leaf Sand Cherry
Rhododendron carolinianum	Carolina Rhododendron
Rhododendron catawbiense	Catawba Rhododendron
Rhododendron maximum	Rosebay Rhododendron
Rhododendron sp. *	Deciduous Azaleas
Rosa multiflora	Multiflora Rose
Rosa rugosa	Rugosa Rose
Rosa x hybrid	Hybrid Tea Rose
Syringa villosa	Late Lilac
Syringa x chinesis	Chinese Lilac
Syringa x persica	Persian Lilac
Vaccinum corymbosum	Highbush Blueberry

Frequently Severely Damaged

Euonymus fortunei	Wintercreeper
Rhododendron periclymenoides	Pinxterbloom Azalea
Rhododendron sp. *	Evergreen Azaleas
Rhododendron sp. *	Rhododendrons
Taxus sp.	Yews

TREES

Rarely Damaged

Aesculus parviflora	Bottlebrush Buckeye
Albizia julibrissin	Mimosa
Asimina triloba	Pawpaw
Betula nigra	River Birch
Betula papyrifera	Paper Birch
Cercidiphyllum japonicum	Katsura Tree
Ilex opaca	American Holly
Picea glauca 'Conica'	Dwarf Alberta Spruce
Pinus resinosa	Red Pine
Pinus rigida	Pitch Pine
Pinus thunbergiana	Japanese Black Pine

Seldom Severely Damaged

Acer griseum	Paperbark Maple
Acer palmatum	Japanese Maple
Acer pensylvanicum	Striped Maple
Acer rubrum	Red Maple
Acer saccharum	Sugar Maple
Aesculus x carnea	Ruby Horsechestnut
Amelanchier arborea	Downy Serviceberry
Amelanchier canadensis	Shadbush
Amelanchier laevis	Allegheny Serviceberry
Betula albo-sinensis	Chinese Paper Birch
Betula jacquemontii	Himalayan Birch
Betula lutea	Yellow Birch
Betula pendula	European White Birch
Chaenomeles speciosa	Common Flowering Quince
Chamaecyparis pisifera	Japanese Falsecypress
Chionanthus retusus	Chinese Fringe Tree
Cornus kousa	Kousa Dogwood
Crataegus laevigata	English Hawthorn
Cryptomeria japonica	Japanese Cedar
Fagus sylvatica	European Beech
Fraxinus pennsylvanica	Green Ash

*Check other rating categories to find additional species or cultivars of this genus.

Latin Name	Common Name
Fraxinus excelsior	European Ash
Gleditsia triacanthos	Honey Locust
Ilex x aquipernyi	Dragon Lady, San Jose Holly
Juniperus virginiana	Eastern Red Cedar
Koelreuteria paniculata	Goldenrain Tree
Liriodendron tulipifera	Tulip Tree
Metasequoia glyptostroboides	Dawn Redwood
Oxydendrum arboreum	Sourwood
Picea abies	Norway Spruce
Picea glauca	White Spruce
Picea omorika	Serbian Spruce
Picea pungens	Colorado Blue Spruce
Pinus densiflora	Japanese Red Pine
Pinus nigra	Austrian Pine
Pinus strobus	Eastern White Pine
Pinus sylvestris	Scotch Pine
Prunus serrulata	Japanese Flowering Cherry
Pseudotsuga menziesii	Douglas Fir
Salix matsudana tortuosa	Corkscrew Willow
Sassafras albidum	Common Sassafras

Occasionally Severely Damaged

Abies balsamea	Balsam Fir
Abies concolor	White Fir
Abies fraseri	Fraser Fir
Acer platanoides	Norway Maple
Acer saccharinum	Silver Maple
Aesculus hippocastanum	Common Horsechestnut
Cedrus atlantica	Atlas Cedar
Cercis canadensis	Eastern Redbud
Chamaecyparis obtusa	Hinoki Cypress
Chamaecyparis thyoides	Atlantic White Cedar
Chionanthus virginicus	White Fringe Tree
Cornus alternifolia	Alternate-Leaved Dogwood
Cornus florida	Flowering Dogwood
Cornus mas	Cornelian Cherry
Cupressocyparis leyandii	Leyland Cypress
Ilex pernyi	Pernyi Holly
Ilex x 'Nellie R. Stevens'	Nellie Stevens Holly
Larix decidua	European Larch
Liquidambar styraciflua	Sweetgum
Malus sp.	Apples
Prunus avium	Sweet Cherry
Pyrus calleryana	Callery Pear
Pyrus communis	Common Pear
Quercus alba	White Oak
Quercus prinus	Chestnut Oak
Quercus rubra	Northern Red Oak
Rhus typhina	Staghorn Sumac
Robinia pseudoacia	Black Locust
*Salix sp.**	Willows
Taxodium distichum	Bald Cypress
Thuja plicata	Western Arborvitae
Tilia americana	Basswood
Tilia cordata 'Greenspire'	Greenspire Littleleaf Linden
Tsuga canadensis	Eastern Hemlock
Tsuga caroliniana	Carolina Hemlock

Frequently Severely Damaged

Prunus sp.	Plums
*Prunus sp.**	Cherries
Sorbus aucuparia	European Mountain Ash
Thuja occidentalis	American Arborvitae

VINES

Seldom Severely Damaged

Celastrus scandens	American Bittersweet
Jasminum nudiflorum	Winter Jasmine
Wisteria floribunda	Wisteria

Occasionally Severely Damaged

Campsis radicans	Trumpet Creeper
Clematis sp.	Clematis
Hedera helix	English Ivy
Hydrangea anomala petiolaris	Climbing Hydrangea
Lonicera x heckrottii	Goldflame Honeysuckle
Parthenocissus quinquifolia	Virginia Creeper

Frequently Severely Damaged

Euonymus fortunei	Wintercreeper

*Check other rating categories to find additional species or cultivars of this genus.

Special thanks to our cooperators on this project:
Helen Heinrich, Certified Landscape Architect; James Messina, Certified Landscape Architect, Landscape Plus; Valerie Sudal, Garden Writer, The Newark Star-Ledger; and numerous landscapers, Master Gardeners, and nurserymen who provided ratings.

© 2004 by Rutgers Cooperative Research & Extension, NJAES, Rutgers, The State University of New Jersey.

Desktop publishing by Rutgers-Cook College Resource Center

Revised: April 2003

RUTGERS COOPERATIVE RESEARCH & EXTENSION
N.J. AGRICULTURAL EXPERIMENT STATION
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY
NEW BRUNSWICK

Distributed in cooperation with U.S. Department of Agriculture in furtherance of the Acts of Congress on May 8 and June 30, 1914. Rutgers Cooperative Extension works in agriculture, family and community health sciences, and 4-H youth development. Dr. Karyn Malinowski, Director of Extension. Rutgers Cooperative Research & Extension provides information and educational services to all people without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Rutgers Cooperative Research & Extension is an Equal Opportunity Program Provider and Employer.

Appendix B

Plants found on both invasive species and deer-resistant lists

Created in March 2004,[37] the Invasive Species Council (ISC) of New Jersey is still in its infancy and has not established a state-authorized invasive species list nor have any particular plant species been legally banned from landscape use, as in Massachusetts.[38] Nonetheless, invasive species pose a serious threat to a balanced ecosystem, hence the recent instituting of the ISC of New Jersey. The United States Department of Agriculture, National Invasive Species Information Center website offers links to various states' invasive species lists. Since New Jersey is without an official one, that website links to the Native Plant Society of New Jersey's invasive species list.[39] The following plants are cited on their invasive species list *and also* recommended for ornamental use on the Rutgers deer-resistant plant list. While these cross-referenced plants offer the value of being deer-resistant, their continued landscape use could worsen the imbalance in the ecosystem of New Jersey.

Botanical Name	**Common Name**	**Deer-Resistant Rating**
Achillea millefolium	Yarrow	Seldom Severely Damaged
Ajuga reptans	Common Bugleweed	Rarely Damaged
Albizia julibrissin	Mimosa	Rarely Damaged
Allium vineale	Field Garlic	Rarely Damaged
Arundinaria, Bambusa	Any Hardy Bamboo	Seldom Severely Damaged
Berberis thunbergii	Japanese Barberry	Rarely Damaged
Elaeaghus angustifolia	Russian Olive	Rarely Damaged
Dianthus armeria	Depford Pink	Seldom Severely Damaged
Hesperis matronalis	Dane's Rocket	Rarely Damaged
Lamium purpureum	Purple Dead Nettle	Rarely Damaged
Linaria vulgaris	Butter-and-Eggs	Rarely Damaged
Matricaria matricariodes	Pineapple Weed	Rarely Damaged
Mentha spicata	Spearmint	Rarely Damaged
Ranunculus acris	Common Buttercup	Rarely Damaged
R. bulbosus	Bulbous Buttercup	Rarely Damaged
R. ficaria	Lesser Celandine	Rarely Damaged
R. repens	Creeping Buttercup	Rarely Damaged
Verbascum thapsus	Common Mullein	Seldom Severely Damaged
V. blattaria	Moth Mullein	Seldom Severely Damaged
Wisteria floribunda	Wisteria	Seldom Severely Damaged

Bibliography

Books:

Hart, Rhonda Massingham. *Deerproofing Your Yard & Garden*. Storey Publishing. North Adams, MA. 2005.

Juhre, Robert G. *Preventing Deer Damage*. Printed by Author. 2000.

Singer, Carolyn. *Deer in My Garden*. Garden Wisdom Press. 2006.

Published Reports:

Final Report of the New Jersey Comparative Risk Project. Submitted by the Steering Committee of the New Jersey Comparative Risk Project. March 2003. Found on the internet at: <www.state.nj.us/dep/dsr/njcrp/njcrp-final.pdf>

Forest Health and Ecological Integrity Stressors and Solutions Policy White Paper. Published by the New Jersey Audubon Society. March 2005. Found on the internet at: <www.njaudubon.org/Conservation/PDF/ForestHealthWhitePaper.pdf>

Governor's Report on Deer Management in New Jersey. Submitted by: NJDEP, Division of Fish, Game and Wildlife. October 1999. Found on the internet at: <www.njfishandwildlife.com/pdf/govdrrpt.pdf>

Heinrich, Helen H. & Predl, Susan. *Can We Landscape To Accommodate Deer? The Tracy Estate Research Garden*. Located on the internet at: <http://wildlifedamage.unl.edu/handbook/Chapters/6ewdcheinrich.doc>

Landscape Plants Rated by Deer Resistance. Rutgers Cooperative Research & Extension, NJAES, Rutgers, The State University of New Jersey. 2004. Located on the internet at: <www.rce.rutgers.edu/deerresistance/>

Magazine Articles:

Kessler, Brad. *Oh, deer! What to plant to keep woodland creatures from nibbling on your flowers*. In "Metropolitan Home." 2002. Sept.-Oct., v.34, n.5, p.92, 94.

Kourik, Robert. *Strategies for Deer Control*. In "Landscape Architecture." 1994. Oct., v.84, n.10, p.34-37.

Martine, Christopher. *In Defense of Deer Hunting*. In "New Jersey Monthly Magazine." Reprinted at <www.wildnj.com/njm2.htm> 1997.

Merser, Cheryl. *Good Fences*. In "House Beautiful." 1996. Mar., v.138, n.3, p.50, 52-53.

Newspaper Articles:

Allee, Rod. "Deer Munch State Garden; Experts say Fences, Sprays No Deterrent." Herald News, Passaic County, NJ. April 17, 2005. Section Our Towns; p. C01.

Alterio, Julie Moran. "Deer Tearing Up Your Yard? High-tech Solution Blasts 'em." USA Today. October 27, 2005. Online at <www.usatoday.com/tech/products/2005-10-27-deer-tech_x.htm>

"A Smelly Deal." New York Times, New York, NY. October 8, 2006. Section 14NJ; New Jersey Weekly Desk; p. 21.

Atwell, Tom. "Act Now, of Your Garden May Become a Wintertime Salad Bar for Deer." Portland Press Herald, Portland, ME. October 8, 2006. Section Home & Garden; Maine Gardener; p. G3.

Banks, Susan. "Huge Deer Herds Hungry for Urban Landscaping." Pittsburgh Post-Gazette, Pittsburgh, PA. September 21, 1996. Section Lifestyle; p. D1.

Cheslow, Jerry. "If You're Thinking of Living In Watchung, N.J.; Stunning Vistas, but Entry Is Not Cheap." New York Times, New York, NY. March 11, 2001. Section 11; Real Estate Desk; p. 5. Correction Appended.

Faust, Joan Lee. "Gardening; Keeping Hungry Deer Out of Yards." New York Times, New York, NY. April 25, 1999. Section 14NJ; New Jersey Weekly Desk; p. 13E.

Faust, Joan Lee. "Gardening; More Ideas but Few Solutions to Deer Herds." New York Times, New York, NY. January 24, 1993. Section 13NJ; New Jersey Weekly Desk; p. 12.

Faust, Joan Lee. "Gardening; Taking Measures to Cope with Deer." New York Times, New York, NY. March 15, 1992. Section 12NJ; New Jersey Weekly Desk; p. 14.

Flagler, Joel. "Choices That Keep Deer From Snacking." The Record, Bergen County, NJ. March 16, 2000. Section Lifestyle; p. H6.

Flagler, Joel. "Prevent Deer From Snacking on New Growth." The Record, Bergen County, NJ. May 10, 2001. Section Lifestyle; p. F3.

Fuoco, Linda Wilson. "Some Tips on Preventing Deer Browsing." Pittsburgh Post-Gazette, Pittsburgh, PA. June 10, 1998. Section Metro; p. N4.

Hubley, Jack. "Deer vs. Diversity." Sunday News, Lancaster PA. October 3, 1999. Section Sports; p. C15.

Leichman, Abigail. "A Pox on Pests; But Beyond Curses, There Are Steps To Take To Protect Your Garden." The Record, Bergen County, NJ. June 12, 2003. Section Home; p. F01.

O'Donnell, Nancy. "Keep Deer From Landscape." The Times Union, Albany, NY. January 8, 2006. Section House-Home; p. H3.

"Oh, Deer; Stakeholders Want Herd Viewed as part of Ecosystem." Pittsburgh Post-Gazette, Pittsburgh, PA. July 28, 2002. Section Sports, p. D16.

"Rogers, Paul. "Feeding Habits of Deer; Their Daily Menu Might Surprise You." Sunday Telegram, Worcester, MA. Section Homes; Roots of Wisdom; p. L1.

Rogers, Paul. "Oh, Deer! They're Now No. 1 Pests; And Many Types of Plants Please Their Taste Buds." Sunday Telegram, Worcester, MA. October 14, 2001. Section Homes; Roots of Wisdom; p. G1.

Rogers, Paul. "There Are Many Simple Tricks to Discourage Mooching Deer." Telegram & Gazette, Worcester, MA. November 7, 1996. Section Features; Roots of Wisdom; p. C11.

Stange, Mary Zeiss. "Why Deer Hunts Can Be Humane." USA Today. December 20, 2005. Section Editorial, p. 13A.

"When Cute Deer Go Bad" New York Times, New York, NY. March 20, 2005. Section 4; Editorial Desk; p. 12.

Whitaker, Barbara. "But If the Deer Have iPods…" New York Times, New York, NY. June 5, 2005. Section 14CN; Connecticut Weekly Desk; p. 13.

Internet Sources:

DeerBusters. <www.deerbusters.com>

Deer-Resistant Landscape Nursery. <www.deerxlandscape.com>

Deer Solutions in Maine. <www.deersolutionsinmaine.com>

Hunters Helping the Hungry. <www.huntershelpingthehungry.org>

Insurance Institute for Highway Safety. <www.iihs.org>

Internet Center for Wildlife Damage Management website concerning deer. <http://icwdm.org/wildlife/deer.asp>

National Park Service. <www.nps.gov>

Native Plant Society of New Jersey. <www.npsnj.org >

New Jersey Audubon Society. <www.njaudubon.org>

New Jersey Department of Environmental Protect (NJDEP), Division of Fish, Game and Wildlife website concerning white-tailed deer. <www.nj.gov/dep/fgw/deer.htm>

New Jersey Department of Environmental Protect (NJDEP), Division of Science, Research and Technology website posting the final report of the New Jersey Comparative Risk Project. 2003. <www.state.nj.us/dep/dsr/njcrp/>

New Jersey Skylands. <www.njskylands.com>

New York Botanical Garden, Catalog of Invasive Plant Species of the United States. <http://sciweb.nybg.org/science2/hcol/inva/index.asp>

Predator Pee by Lexington Outdoors, Inc. <www.predatorpee.com>

Rutgers Cooperative Research & Extension at New Jersey Agricultural Experimental Station list of deer resistant plants. <www.rce.rutgers.edu/deerresistance/>

United States Department of Agriculture, National Invasive Species Information Center. <www.invasivespeciesinfo.gov/index.shtml>

Wild New Jersey. <www.wildnj.com>

Wireless Deer Fence. <www.wirelessdeerfence.com>

References

[1]NJDEP Website posts this information: http://www.nj.gov/dep/dsr/trends2005/pdfs/wildlife-whitetail.pdf

[2] Merser, Cheryl. *Good Fences*. In "House Beautiful." 1996. Mar., v.138, n.3, p.50, 52-53.

[3] Population estimate based on various sources. Deer range figure based on: NJDEP, Division of Fish, Game and Wildlife, *1998 Annual Report*, posted at: http://www.state.nj.us/dep/fgw/anrpt982.htm. Total land area figure from: U.S. Census Bureau, posted at: http://quickfacts.census.gov/qfd/states/34000.html.

[4]NJDEP, Division of Fish, Game and Wildlife, *1998 Annual Report*, posted at: *www.state.nj.us/dep/fgw/anrpt982.htm.*

[5] Cheslow, Jerry. "If You're Thinking of Living In Watchung, N.J.; Stunning Vistas, but Entry Is Not Cheap." New York Times. March 11, 2001. Section 11; Column 2; Real Estate Desk; Pg. 5. Correction Appended.

[6] *Forest Health and Ecological Integrity Stressors and Solutions* Policy White Paper. Published by the New Jersey Audubon Society. March 2005. Pg. 5.

[7] Ibid.

[8] Ibid.

[9] Ibid.

[10] Faust, Joan Lee. "Taking Measures to Cope With Deer." New York Times March 15, 1992: Section 12NJ; Pg. 14; Column3; New Jersey Weekly Desk.

[11] *Community-Based Deer Management*, NJDEP, Division FGW. Updated August 16, 2006. <www.state.nj.us/dep/fgw/cbdmp.htm>

[12] *Governor's Report on Deer Management in New Jersey*. Submitted by: NJDEP, Division of Fish, Game and Wildlife. October 1999.

[13] Moyer, Ben. "Not All Hunters Help Manage Deer Herd." Pittsburgh Post-Gazette December 18, 2005: Section Outdoors; Pg. D-16.

[14] Martine, Christopher. *In Defense of Deer Hunting*. In "New Jersey Monthly Magazine." 1997. Reprinted at <www.wildnj.com/njm2.htm>

[15] <www.wikipediia.org>

[16] *Forest Health and Ecological Integrity Stressors and Solutions* Policy White Paper. Published by the New Jersey Audubon Society. March 2005. Pg. 6.

[17] Hubley, Jack. "Deer vs. Diversity." Sunday News, Lancaster, PA October 3, 1999: Section Sports, Pg. C-15.

[18] Ibid.

[19] National Park Service, Plant Conservation Alliance's Alien Plant Working Group website for Japanese Barberry. <www.nps.gov/plants/alien/fact/beth1.htm>

[20] "A Smelly Deal." New York Times. October 8, 2006. Section 14NJ; Column 1; New Jersey Weekly Desk; Pg. 21.

[21] "Deer-Vehicle Collisions: No Easy Solutions But Some Methods Work Or Show Promise." Advisory by Insurance Institute for Highway Safety. October, 2003.

[22] American Lyme Disease Foundation website statistics posted at: http://www.aldf.com/usmap.shtml.

[23] Rutgers' New Jersey Agricultural Experiment Station (NJAES) Center for Wildlife Damage Control Survey posted at: http://www.rcre.rutgers.edu/pubs/deerdamage/.

[24] *Community-Based Deer Management*, NJDEP, Division FGW. Updated August 16, 2006. <www.state.nj.us/dep/fgw/cbdmp.htm>

[25] "Summary of Deer Harvested in NJ, 1972-2005 by Season and Year." NJDEP, Division of Fish & Wildlife website.

[26] NJAS Policy White Paper. March 2005; and, Martine, Christopher. *In Defense of Deer Hunting*. In "New Jersey Monthly Magazine." Reprinted at <www.wildnj.com/njm2.htm> 1997.

[27] *Community-Based Deer Management*, NJDEP, Division FGW. Updated August 16, 2006. <www.state.nj.us/dep/fgw/cbdmp.htm>

[28] Interview with Brian Walker, Deer Repellent Program Supervisor, CLC Landscape Design, Inc. 11/14/06.

[29] Hart, Rhonda Massingham. *Deerproofing Your Yard & Garden*. Storey Publishing. North Adams, MA. 2005. Pgs. 74-86.

[30] *Forest Health and Ecological Integrity Stressors and Solutions* Policy White Paper. Published by the New Jersey Audubon Society. March 2005. Pg. 11.

[31]New Jersey State Press Release on the Governor's formation of an Invasive Species Council. March 5, 2004. <www.state.nj.us/cgi-bin/governor/njnewsline/view_article_archives.pl?id=1786>

[32] Massachusetts Prohibited Plant List. <www.mass.gov/agr/farmproducts/proposed_prohibited_plant_list_v12-12-05.htm>
[33] <www.invasivespeciesinfo.gov/unitedstates/nj.shtml>
[34] Hart, Rhonda Massingham. *Deerproofing Your Yard & Garden*. Storey Publishing. North Adams, MA. 2005. Pg. 72.
[35] Kourik, Robert. *Strategies for Deer Control*. In "Landscape Architecture." 1994. Oct., v.84, n.10, p.34.
[36] Interview with Brian Walker, Deer Repellent Program Supervisor, CLC Landscape Design, Inc. 11/14/06.
[37]New Jersey State Press Release on the Governor's formation of an Invasive Species Council. March 5, 2004. <www.state.nj.us/cgi-bin/governor/njnewsline/view_article_archives.pl?id=1786>
[38] Massachusetts Prohibited Plant List. <www.mass.gov/agr/farmproducts/proposed_prohibited_plant_list_v12-12-05.htm>
[39] <www.invasivespeciesinfo.gov/unitedstates/nj.shtml>

APPENDIX F

Draft Fencing Ordinance

VILLAGE OF CAYUGA HEIGHTS
***PROPOSED LOCAL LAW "A"* OF THE YEAR 2011**

A LOCAL LAW AMENDING SECTION 9, "FENCES AND WALLS," OF THE VILLAGE OF CAYUGA HEIGHTS ZONING ORDINANCE

Be it enacted by the Board of Trustees of the Village of Cayuga Heights as follows:

SECTION I. PURPOSE AND INTENT.

The purpose of this Local Law is to amend Section 9, "Fences and Walls," of the Village of Cayuga Heights Zoning Ordinance to provide a definition of fences and walls and to permit the erection, under the stated conditions, of taller fences than had previously been permitted within the Village of Cayuga Heights (the "Village"). The intent of this Local Law is to provide Village residents greater flexibility in their decisions concerning the height of fences, landscaping and design, and, specifically to protect the health, safety, and welfare of Village residents and their property from injury and damage due to deer population growth within the Village.

SECTION II. AUTHORITY.

This Local Law is enacted pursuant to the grant of powers to local governments provided for in (i) Section 10 of the Municipal Home Rule Law to adopt and amend local laws not inconsistent with the provisions of the New York State Constitution or not inconsistent with any general law relating to its property, affairs, government or other subjects provided for in said Section 10 of the Municipal Home Rule Law, (ii) Section 10 of the Statute of Local Governments and (iii) Section 7-700 of the Village Law.

SECTION III. AMENDMENT OF ZONING ORDINANCE.

As of the effective date of this Local Law, the text of Section 9, "Fences and Walls," of the Village's Zoning Ordinance is deleted in its entirety and replaced by the following:

A. **DEFINITIONS.**

For the purposes of this Zoning Ordinance, the following terms will have meanings set forth below:

Fence or Wall - Any structure of any material or combination of materials, including a gate that is part of the structure, that is designed to enclose land, divide land, mark a boundary, create a barrier, limit access to or direct passage across land, provide screening, protect against a potential hazard, or serve a decorative purpose. A freestanding arch or arbor shall not be considered a fence or wall even if it otherwise satisfies the foregoing definition unless it is attached to a fence or wall, in which case it will be considered a part of that fence or wall. In no case will living plants, such as hedges, shrubs, bushes or trees, or earthen berms of not more than four (4) feet in height, be deemed or considered to be fences or walls

under this Ordinance, regardless of how these may be arranged or located, and regardless of whether these may serve the same or a similar purpose as a fence or wall. Terraces, steps and other similar improvements will not be deemed to be fences. Earthen berms that exceed four (4) feet in height above the natural grade will be deemed to be fences under the provisions of this Ordinance. The words "fence" and "wall" are used interchangeably in this Ordinance.

Height (of fences and walls) - The distance measured from the natural grade, or lowest point of a fence, whichever is lowest, to the highest point of any component part of the fence. "Natural grade" is the grade unaffected by construction techniques such as fill, landscaping, or berming. Examples of how measurements are taken may be obtained from the Village Engineer's Office.

Exclosure Fences - A fence that is designed and used to prevent animals from obtaining access to individual plantings or small groups of plants, flowers, gardens, lawn areas, shrubs, bushes or trees in order to assist with or promote their preservation, health or growth, and that exceeds four (4) feet in height but does not exceed eight (8) feet in height.

B. **PERMIT REQUIRED.**

A zoning permit shall be required for all fences. Prior to the erection or construction of any fence, the property owner must obtain a zoning permit signed by the Code Enforcement Officer of the Village of Cayuga Heights permitting the fence in the location(s) stated on the permit. In the event that any applicant for a zoning permit for a fence is denied such permit on the basis that the proposed fence does not comply with the terms and provisions of this Section 9, the applicant for the zoning permit shall have the right to appeal the Code Enforcement Officer's denial and request from the Village's Zoning Board of Appeals an area variance for the proposed fence. Any fence in existence as of the effective date of this Local Law may remain in existence, in its present location, provided that it satisfies the requirements of this Section 9, even if no permit for such fence had been issued.

C. **FENCES UP TO FOUR (4) FEET IN HEIGHT.**

A fence up to four (4) feet in height, and any exclosure fence that satisfies the conditions stated in subsection (D)(ii) below, may be erected or constructed at any location on any parcel of property.

D. **FENCES EXCEEDING FOUR (4) FEET IN HEIGHT.**

A fence that exceeds four (4) feet in height may be erected or constructed either

(i) provided that it satisfies the height limitations of Section 5 above and the yard set-back limitations of Section 6 above,

or

(ii) in such locations and with such conditions as stated in subsections (a), (b), and (c) below:

a. Requirements for construction:

Any portion of a fence that exceeds four (4) feet in height and that is located between a side or rear property line and the required side yard or rear yard set-back, as well as any exclosure fence that is erected at any location on the property, must be constructed so that (1) any portion of such fence that is more than four (4) feet in height, when viewed from a position that is at a right angle to the face of the fence, is at least 90% open, and (2) all of the structure and materials of such fence are the same color, with colors limited to black, brown, gray or green, with a non-florescent finish. Notwithstanding the foregoing, chain link fencing will not be permitted for the portion of a fence over four (4) feet in height, even if such fence material otherwise satisfies requirements (1) and (2).

b. Side Yards and Rear Yards:

A fence of not more than eight (8) feet in height, including exclosure fences, shall be permitted along a side or rear property line and between a side or rear property line and the required side yard or rear yard set-back, as defined in Section 6 above, and must satisfy the conditions stated in subsection (a) above.

c. Front Yards:

Exclosure fences that satisfy the conditions stated in subsection (a) above shall be permitted on a front property line and between a front property line and the front yard set-back provided that the total area enclosed by all exclosures fences located between the front property line and the front yard set-back does not exceed one hundred and forty-four (144) square feet of property, and provided that no side of any exclosure fence exceeds twelve (12) feet in length, or, in the case of an oval or rounded exclosure fence, no diameter exceeds twelve (12) feet in length. Provided that these conditions are satisfied, there is no limit on the number of exclosure fences that may be erected or constructed on a single parcel of property.

E. **FENCES EXCEEDING EIGHT (8) FEET IN HEIGHT.**

No fence exceeding eight (8) feet in height may be erected or constructed at any location on any parcel of property, unless it satisfies the height limitations of Section 5 above and the yard set-back limitations of Section 6 above.

F. **SWIMMING POOL FENCES.**

Swimming pools are required to be enclosed by fences in accordance with the applicable provisions of New York State law.

SECTION IV. SUPERSEDING EFFECT.

All Local Laws, resolutions, rules, regulations and other enactments of the Village of Cayuga Heights in conflict with the provisions of this Local Law are hereby superceded to the extent necessary to give this Local Law full force and effect.

SECTION V. VALIDITY.

The invalidity of any provision of this Local Law shall not affect the validity of any other provision of this Local Law that can be given effect without such invalid provision.

SECTION VI. EFFECTIVE DATE.

This Local Law shall be effective as of the date of filing with the New York Secretary of State, except that it shall be effective from the date of service as against a person served with a copy thereof, certified by the Village Clerk, and showing the date of its passage and entry in the Minutes of the Village Board of Trustees.