

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 Lyme 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 enclosure 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's 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. 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).

***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 than 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 or 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 enclosure 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 enclosure, 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 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 pharmacologic 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 on to 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* 35:494-501 (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.

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](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 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".

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 12/9/2009-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 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 are 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-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.

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 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.

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 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 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.*

Comment 57-4 (Steven H. Shiffrin, 12/13/10, See also Page 37 of Public Hearing Transcript 12/6/10): 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_IssuesNew"1020Folder/Deer%20Presentation.pdf](http://hastingsgov.org/Pages/HastingsNY_IssuesNew)

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 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. 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 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 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.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.

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.*

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.*