WEST SENECA COMMUNITY CENTER
1300 Union Road
West Seneca, NY 14224

DRAFT

DEER TASK FORCE PROCEEDINGS
Minutes #2021-06
October 19, 2021

Task Force Facilitator Cynnie Gaasch called the meeting to order at 6:00 P.M.

ROLL CALL:

Present - Cynnie Gaasch, Facilitator
Sheri Courteau
Amanda Escobar
Robin Foster
Mary Earsing
James Hinton
Peter Holdsworth
Saundra Mercado

Excused - Joseph Cantafio, Councilman
Jonathan Brotka

WELCOME

Task Force Facilitator Gaasch welcomed all to the meeting and stated there will be an opportunity for the task force and audience to ask questions after Mr. Rockefeller's presentation but there will not be time for public comments until the November meeting.

INTRODUCTIONS

Mr. Peter Holdsworth grew up in West Seneca and moved back after living and working out of state. He is very passionate about wildlife and is excited to be a part of the task force.

APPROVAL OF MINUTES

Ms. Gaasch asked if there were any edits to the September meeting minutes. Ms. Mercado noted the presentation by Sandy Baker was in 2019, not 2009, and asked for the correction to be made. Secretary Martin stated she will review the meeting and correct the minutes or make note of the correct year in this meetings minutes.

PRESENTATION AND QUESTIONS WITH RYAN D. ROCKEFELLER, WILDLIFE BIOLOGIST 1 – BIG GAME, NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Mr. Rockefeller stated he is a big game biologist in region 9 and has given presentations to similar groups. Presentation attached.

- ✓ Deer are a great resource
- ✓ There are about a half a million hunters in NYS pay revenue for conservation departments yielding over 10 million pounds of venison are harvested
- ✓ There is a drop in the number of hunters and deer populations are growing
- ✓ Management plans include culling, surgical sterilization, and immunocontraception
- ✓ Nonlethal methods do not immediately reduce the deer population
- ✓ Need broad public involvement

Ms. Gaasch: What is zone 9C?

Mr. Rockefeller: The state is divided into wildlife management units and how species and regulations are

managed around NYS. At the time the zones were delineated, a unit called 9C was drawn around the greater Buffalo area and big game hunting was prohibited by the Environmental Conservation Laws. The DEC cannot override this statute.

Mr. Holdsworth: 9C, generally, is west of Transit Road and Southwestern Boulevard, and continues up to Tonawanda Creek creating the box around Buffalo.

Ms. Escobar: Thank you for doing the presentation, I have learned quite a few things, this was very informative. One of the main community concerns that is being raised in West Seneca is overdevelopment. In your experience, does increasing natural habitat or preserving land, creating tougher restrictions on land development, has it helped reduce the negative impacts on the deer population in a town?

Mr. Rockefeller: I've talked with other biologists and my counterpart in Albany about this question, my knee jerk reaction is that on a short term basis that is cleared the deer will be displaced, and for a certain amount of time there will be an uptick in the communities around this, and they may have been using those areas, but because the green space that was their core area is not available they are in the community; but deer thrive in the suburbs to begin with. I don't think preserving green space will solve the issue.

Ms. Escobar: What I'm asking is will putting restrictions on development or increasing the natural habitat will help in the long term.

Mr. Rockefeller: It may give some places for deer to revert to out of the communities, but only as long as you're doing some type of management on top of that. Once there are too many deer in one space, they are perfectly happy living among the rest of the suburbs.

Ms. Escobar: Or used to being fed.

Mr. Hinton: Can you talk about the cost of non-lethal disposition of deer?

Mr. Rockefeller: I am not an expert but a counterpart in Albany gave me the initial cost of between $1,000 - $2,000 per deer. It would be more expensive on the front end to capture and perform surgery and then essentially nothing after that; for contraception, the initial cost is around $500 and will be ongoing as the results might last one to two years at best and continuous medication is necessary. Another consideration is that the deer become wise to this and are harder to find to medicate causing the man hours to increase.

Mr. Hinton: I read some information indicating it is around $300 per dart on average and could be expensive maintaining.

Ms. Courteau: To clarify, is that $1,000 - $2,000 per deer?

Mr. Rockefeller: Yes.

Dr. Foster: One of the main reasons a community might look into non-lethal management is concerns about animal welfare, are you familiar with any research that looks at things like surgical sterilization from that perspective, what is the survival rate, are there issues with infection, are there impacts on the welfare of the deer long term?

Mr. Rockefeller: I am not familiar with research on the negative impacts, but I will look into this. One thing I forgot to mention with surgical sterilization is just the stress of capture and release, deer are very high strung animals and just capturing a deer to collar or tag them can cause capture myopathy – when a deer is stressed that it releases so much lactic acid into its muscles it can seize up and die a few days later.

Ms. Mercado: I can tell you as a New York State licensed wildlife rehabilitator that deals with deer, that approximately 65 – 70% of the deer that we have to sedate will die within four days of capture myopathy so it comes to a point when there is a live adult deer that has a broken leg that we do not go out and capture them because if we do sedate them treat them amputate whatever we have to do they are fine for three or four days and suddenly they just die. So we don't take adult deer that have one broken leg. If they have two broken legs obviously, they need to be euthanized but they will survive with a broken leg and outrun a fox or coyote or jump a six foot fence no problem and can have baby fawns and live a very healthy and happy life but capture myopathy is most definitely a huge impact on the deer and the welfare of the deer and trying to put them through the sterilization is going to throw things over the top.

Mr. Holdsworth: You mentioned does that consume oral contraceptives are not considered fit for human consumption, is that correct?

Mr. Rockefeller: Yes, that's correct. For the most part, drugs used for wildlife, immobilization drugs, for example, and I imagine most contraceptives as well, there has not been enough research and veterinarians are not going to say when the withdrawal period is for those drugs. The DEC has a blanket statement that any animal that has been immobilized should not be consumed or recommend it be consumed. Deer that are rehabilitated and released are tagged to indicate this.

Mr. Holdsworth: Because West Seneca borders communities where hunting does occur, mainly in Elma and Orchard Park, I'm curious what the DEC's position would be on West Seneca potentially deploying oral contraceptives in deer that could migrate into those areas where they could be hunted how would hunters know if their animal was safe to consume? It would surprise me if the DEC would approve of that.

Mr. Rockefeller: Referred to a slide showing a deer with a large ear tag. Any deer that would be medicated and released would need to have ear tags. But the ear tags can get caught and fall off, or a smaller button tag could be used, but they could be hard for a hunter to see.

Mr. Holdsworth: How would they be tagged if they were being fed oral contraceptives? They would have to be darted and sedated to be tagged, correct?

Mr. Rockefeller: Yes, they would have to be tagged.

Ms. Courteau: I've reached out to a few other communities; do you know any communities close to us that have had success with a program or a flop with a program that is sort of comparable to West Seneca? For example, Cheektowaga, Lackawanna, Orchard Park.

Mr. Rockefeller: We've received calls from concerned citizens from some of the communities and others we haven't. Most of those communities are using police officers for targeted removals in specific locations over bait. For the most part, they are very effective, very safe, and I don't know how many people realize it's going on and some of the communities are removing hundreds of deer each year. Overall, as far as negative calls compared to the positives, I don't know that I've been involved in those issues.

Ms. Mercado: In regards to Orchard Park I know you did a presentation there and in regards to the town I know they did decide not to do any culling and as far as the success rate of educating the people and stopping the feeding of the deer and doing proper landscaping and gardening that would prevent them from destroying the landscapes and therefore not coming to because the food source changed. I know there was an interview with Chief Denz from Orchard Park on WKBW in 2016 and in regards to the thinning of the deer there has not been a surge of deer related crashes or major property damage from animals since then and over the last ten years, I know you mentioned about the accidents with car and deer that its increasing, actually over the last ten years it has not increased at all. If you look back ten to fifteen years, there were approximately 180 deer accidents in the FOILs. To date actually 2020, we had 190 so there has not been a change in that even though people are regarding and saying that population has increased.

Mr. Rockefeller: Are you speaking of deer vehicle collisions just in Orchard Park? Where were those? I am not familiar with what those numbers are?

Ms. Mercado: The FOILs are done by the Police department and it tells you how many deer accidents you have and Orchard Park / West Seneca are about the same they are less than 200 which actually the NYSDEC declared that 194 accidents is not a public safety issue and that it was not a reason to even consider a kill program because it was not enough accidents and there were no personal injuries on any of those accidents or any deaths.

Mr. Rockefeller: I'm not sure deer vehicle accidents are increasing or its just awareness of them. I don't know if I misspoke, I don't have any numbers in West Seneca or Orchard Park saying they're increasing but in general complaints and awareness has grown.

Mr. Hinton: The number I looked up and information I received, between 2014 and 2018 in Erie County there was 545 incidents.

Ms. Mercado: But we're not looking at Erie County, we're strictly talking about West Seneca.

Mr. Hinton: There was no specific numbers I received in West Seneca, I'll have to talk to the sheriff, but as an overall it's not a big issue.

Ms. Mercado: Oh exactly, thank you, yes, and actually I do have the specifics with each town. We've already presented that previously but it is available for anybody who would like to see those numbers I have them. I do have another question, I'm sorry ii hope you don't mind. In regards to Lyme disease, I know you mentioned that it's a concern to the public and obviously you guys do a lot of studies and it is very important however you were saying the factor of deer carrying ticks is something that the residents are concerned about what I'm wondering is what is the percentage of deer carrying ticks that are Lyme disease carrying ticks? In other words, deer ticks versus dog ticks which the majority of ticks on deer are dog ticks that cannot carry Lyme disease, but what is the ratio in your studies between how many deer carry Lyme disease ticks in other words deer ticks versus squirrels, opossums, raccoons, birds, and lizards that also carry actual ticks and actually they carry more percentage wise of deer ticks that carry Lyme disease than deer actually do?

Mr. Rockefeller: That's a good point, one misconception is that deer are the cause for Lyme disease because there's a tick that feed off of them called the deer tick. Deer are probable the most sought after blood meal for a female deer tick that is looking to lay eggs, because they are such a large mammal, they can support quite a

few deer ticks. But deer do not spread Lyme disease to the ticks, it's the rodents that have the Lyme disease. There's a little bit of a discrepancy, people think of they have deer they have Lyme Disease; it's really if you have deer you have ticks and if you have rodents the ticks then get Lyme Disease from the rodents.

Mr. Hinton: I can add some information, in Erie County there were 66 cases of Lyme Disease in 2018, 5.7% per 100,000 in population, and Erie County is 4th lowest in NYS.

Ms. Mercado: Ok, I have another question. I have done a lot of research above and beyond what we are doing here, and I know of another town that had to do an environmental impact study before they even thought about doing any kind of deer control programs and I was wondering is this something the DEC or West Seneca is planning on doing prior to even entertaining a deer control program that would involve culling of the deer?

Mr. Rockefeller: I'm thinking that would be more of a question for West Seneca than myself. Most programs like this will require some type of SEQURA but I believe it must be brought about by the municipality. The DEC would be an involved party.

Ms. Mercado: I understand that the state normally does the EISs as far as I know so I didn't know if the DEC was working in cooperation?

Mr. Rockefeller: They definitely would, that would be in our permits department, I would probably get a little information back from that. I have not had a SEQURA review come across related to a deer program, I'm not sure if any blanket ones have been done but I can find that out.

Ms. Mercado: That would be great. I do have another question (member of audience said something inaudible)

Ms. Gaasch: Let's move on to the public. Comments will be limited to three minutes.

Theresa Rickert: Will deer starve in the winter, where could they be moved to, no one wants them.

Rick Rickert: West Seneca is the last man standing, all of the towns in the Buffalo area has done something to get the deer population down. We can wrap our trees and spray our flowers but it's not getting down to the solution of lowering the population of the deer. I could rattle off the towns and I know each town, what they have done. There still is thousands of acres in Orchard Park, Elma, Hamburg that is legal for hunting; Lackawanna, Cheektowaga, Amherst, Clarence, North Tonawanda, and Tonawanda has a nuisance permit and some people say its an unfair thing to have the bait and shoot, but every ounce of meat goes to the foodbanks in the area. I believe we should have a nuisance program in this town and get a good healthy deer herd before the old time Buffalo winter comes and we will have starving deer in our backyards.

Drew Dorr: I am resident of West Seneca. I own a deer processing business, family run for 25 years. We have contracts with Cheektowaga and a couple other towns. I just want to state that and I would like to talk to someone afterwards, and see if I could present what we do a couple numbers and how we do things to the town to the board, to the citizens and explain our end of it, add some facts and explain our end of things.

James Burnette: I'm from Lackawanna. Knowing that we have an insane 180 day coyote season, I was wondering if the problem was too many deer or not enough apex predators? I have a funding question for you, does your gran to the DEC depend heavily on the sale of hunting, fishing, and trapping licenses, and if so does inordinate pressure from the hunting and trapping community and the agricultural community make recommendations by

biologists on the issue of bag limits and the length of the hunt and trap seasons for apex predators difficult to implement properly?

Mr. Rockefeller: To the first question, of course we incur revenue from license sales. Pitman Robertson Act which is like an excise tax on the manufacturing of hunting goods and firearms trickles down from the federal government to state agencies. Personally, I can't say that really plays any role in our management decisions. We try to effectively promote the tradition of hunting and fishing because that is what we are delegated to do at the DEC but overarching all of that is our responsibility to effectively manage wildlife populations in balance with their ecosystem and to protect human health and safety associated with wildlife issues so when it comes down to the decisions we are always referring to the science behind that, what one person's personal opinion and view point, it really isn't taken in front of the science. As far as coyotes go, they are a predator, they might be one of our top predators in NYS, but I wouldn't call them an apex predator of white tail deer, I would call humans the ultimate apex predator in the mortality source for deer in NYS either through deer vehicle collisions or hunting. Coyotes are effective at removing fawns or sick adults. They get about a month to do that and then their opportunity is over. The coyote season is long and deer season is very long in NYS, many states don't have a closed season on coyotes; I would have to look a the numbers, but I don't think coyote hunters are doing enough to impact coyotes especially around West Seneca where it would have any bearing on the population of deer in those areas.

Mr. Holdsworth: Does the DEC earn any revenue from culling programs or nuisance permits, does the DEC have any financial stake in the those programs in New York?

Mr. Rockefeller: No, none whatsoever. When we're reviewing nuisance applications or issuing a deer damage permit, I have to be careful what things I put into what funding source. Our hunting license revenue goes into our conservation fund, it's earmarked and can only be used for conservation work. The hunters help fund the implementation of these management programs.

Ms. Mercado: I have a question with regards to the population. I'm hearing from a few people it's overpopulated, has the DEC actually done any population studies to see what the population is and whether or not it truly is over population as well, since there have been programs implemented in other towns in regards to culling of the deer has the DEC determined if the programs are successful and if so what kind of programs are you doing to do that to find out its successful because you said that it will continue on and never stop so it's a revolving door, you're not solving the problem, all you're doing is making the deer population go down temporarily and the food sources suddenly become more wonderful and easily accessible and so then the does instead of having one or two baby fawns, are now going back to having three and four, and within a couple of years you have the vacuum effect of you're actually increasing the size of the herd by culling it versus leaving nature alone, stopping the food sources that are attracting them into the suburbian areas, changing the zoning, getting their access in regards to this lady saying well, they're eating my trees why do I have to wrap them? Well the fact of the matter is what are (inaudible comments from audience) you ask how are we going to get the deer and corral them back into the woods, if the food sources are gone from the gardens they're going to go back into the grasslands and into the wetlands and they're going to stay in their natural habitat as small as that may be. (Inaudible comment from the audience)

Mr. Rockefeller: I have not been involved in any deer censusing in and around the Buffalo area, but I mentioned it's the impacts that we're concerned with; every habitat can hold a different amount of deer. You can set parameters, I think it's almost irrelevant up front. After you start a management program and if monitor if whether the herd has increased or decrease see how it's effected the impacts you're experiencing that would be

helpful. There are other ways to monitor the health of a herd, for example, looking at bone marrow of deer that have died to determine if they are well fed; if they are well fed then the habitat is supporting them. Often times our social carrying capacity is at or below what the ecological carrying capacity. I think the deer in West Seneca are fine if they're having twins and triplets. If you're referencing the rebound factor, deer will tend to compromise body size and weight before they compromise their reproductive potential. Small deer that are malnourished will still have twins, just smaller.

Joan Dorr: The number of deer/vehicle collisions are the reported ones; they don't include the ones that are not reported. Our family has seen how the deer suffer after being hit and left to die.

Darren Dorr: Started the deer processing and stated they will cut them for free like we do in other towns; more than 4,000 pounds are donated to a foodbank each year.

Mr. Holdsworth: Cornell has been studying community deer management for decades now, are you familiar with what they do on their campus, and can you share that with us?

Mr. Rockefeller: I have read about what they do on their campus but cannot recall enough to speak about it. but Cayuga Heights, a community right next to Cornell, has partnered with Cornell and done alot of research and study. They've tried contraception, surgical sterilization, culling, and controlled hunts. Cornell and the surrounding area have been enrolled in a deer management focus area, a controlled hunt on a larger scale and they can allow recreational hunting.

Ms. Gaasch: Thank you Ryan for being here tonight.

WORK SESSION

Survey Questions Discussion

Why was the first survey not enough and there is a need for a second survey:

- ✓ Need targeted questions
- ✓ Give public an opportunity to respond
- ✓ Questions need to be multiple choice, not open ended
- ✓ DEC cautions – do not ask the public what to do as they won't understand the implications
- ✓ Ask questions about people's behavior, cannot require address, more likely to be honest if survey is anonymous
- ✓ Maps with quadrants could be used with the town divided into 8 – 10 areas
- ✓ Survey software program Robin uses: tracks the general area of the respondent, can include visuals, can skip to another question based on "yes" or "no" response
- ✓ It's worth asking questions such as: do you enjoy feeding the deer and what are your specific concerns
- ✓ Survey can allow for ranking of concerns, select top three, or a multiple choice response – but don't allow for open ended responses
- ✓ Where are the locations deer are a concern with traffic (deer/traffic collisions)
- ✓ Estimate annual property damage
- ✓ Social media sites can be used to share the survey site and fliers with a scannable code for those who are not
- ✓ What demographic data is desired: age group, sex, level of education, likeliness to attend in-person education programs or would prefer online programs, what topics – this will provide information on where

education can be targeted

- ✓ Would parents like their children to learn about this in school, opportunities for state grant money available
- ✓ Interest in incentive programs to deter deer – this would be useful for the education aspect, not the survey
- ✓ What is an acceptable cost - list ranges to choose from
- ✓ Can some brief information be provided on the survey – Robin stated this is possible
- ✓ Have you experienced a collision with deer
- ✓ Important consideration is the public's perceptions
- ✓ Robin: structures surveys in the following way: demographics, fact based questions, perception, and then personal behavior
- ✓ Important to provide actual costs for the options and the implications, for example meat is not edible if they are given medication
- ✓ Cynnie – 2 phases, ask through the survey what are you comfortable experiencing as a taxpayer; the task force will make the recommendation. Robin concurred with this type of question and the next step would be the educational efforts

Ms. Gaasch stated Robin is going to place cameras for research. Dr. Foster stated six cameras will be placed to capture video of the deer in the different locations and it will be used to score the deer's body weight. This will provide a baseline for the task force; it is not a scientific study. The locations will be at Ms. Courteau's house, Mr. Brotka's house, the Oxbow, Burchfield Nature and Art Center, Mill Road Park; the Mill Road Park camera may be permanent. Ms. Courteau suggested Princeton Estates and Fisher Court would be a good location. Ms. Martin suggested the Soccer Park on Seneca Street. Ms. Gaasch stated the Oxbow would be a good location for a permanent camera.

Ms. Gaasch stated the Environmental Commission might be able to absorb the monitoring of the deer issues.

Mr. Holdsworth suggested planting red oak saplings and monitor their growth as an indication of deer activity.

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Margaret A. Martin, Deputy Town Clerk

Deer Task Force Qs for Ryan Rockefeller Link to DEC's page on Deer Management: https://www.dec.ny.gov/animals/7211.html LInk on Deer and Moose Feeding Prohibitions https://www.dec.ny.gov/animals/7197.html

- **What is the official role of NYS DEC in relationship to deer and other animals?**
  DEC is granted authority by the ECL to establish rules and regulations for some, but not all, aspects of deer hunting and deer management.
  Section 11-0105
  The State of New York owns all fish, game, wildlife, shellfish, crustaceans, and protected insects in the state, except those legally acquired and held in private ownership.
  Section 11-0303
  DEC is directed to restore, maintain, and improve the state's fish and wildlife resources, and make these resources accessible for recreational purposes to the people of the state. DEC is directed to carry out programs that (a) promote natural propagation and maintenance of desirable species in ***ecological balance****, and (b) lead to the observance of sound management practices, having regard to (1) ecological factors, including the importance of* ***ecological balance*** *in maintaining natural resources; (2) the compatibility of production and harvesting of fish and wildlife crops with other necessary or desirable land uses; (3) the importance of fish and wildlife resources for recreational purposes; (4) requirements for* ***public safety****; and (5) the need for adequate protection of private premises and of the persons and property of occupants thereof against abuse of privileges of access to such premises for hunting, fishing, or trapping.*
  ECL § 11-0521
  DEC is authorized to issue permits to take deer that are destructive to public or private property or are a threat to public health or safety.
  ECL § 11-0903
  DEC is granted limited authority to establish regulations for the open seasons, bag limits, and manner of taking deer.

- **Can you speak to what happens when people are feeding deer?**
  Intentionally providing food for deer is sometimes suggested to reduce browsing on plants people wish to protect. However, this approach is just as likely to have the opposite effect. Deer tend to congregate at sites where food is provided, and they continue to eat their natural foods and preferred plants, so in many cases plant damage near feeding locations increases. Supplemental feeding also increases deer survival and reproduction, leading to population growth, which increases the negative impacts of deer. In addition, some foods may be detrimental because they do not meet the nutritional requirements of deer in winter. Deer are ruminants like a cow and have a multi-chambered stomach, with a more complicated digestive process. If food types are suddenly changed, it can take considerable time for the digestive process to adapt to the new food. During this time the animal receives little nutrition when it needs it most. Lasty. Deer feeding can also increase the number of deer-vehicle collisions or other nuisance problems if the feeding occurs near highways, residences, or agricultural operations.

- **If the Town were to decide to perform a cull, what permits are required from DEC and what is the process for obtaining them?**
  Population control through hunting is particularly challenging in urban and suburban areas. Due to local discharge ordinances and restrictions by landowners there is typically little land accessible to recreational hunters in these areas, so localized strategies developed and applied at the community level are usually necessary for effective deer management. These may include

controlled hunts and culling. Shooting deer in a non-hunting context requires a Deer Damage Permit (DDP) and is referred to as culling. State law gives DEC the authority to allow some actions under a DDP that are prohibited for hunting, such as use of bait, shooting deer at night with the aid of lights, shooting deer in parts of the state that are closed to deer hunting, and use of crossbows in areas where crossbow hunting isn't allowed. This flexibility tends to make culling more effective than hunting at reducing deer populations in urban and suburban settings.

Consensus on deer management is often difficult to achieve, however, and it can become a contentious and controversial issue in a community. Community members may have widely varying perspectives on deer and be passionate about their opinions and priorities. Development of a deer management program in some communities has taken several years and involved legal challenges from residents who disagree with the majority. Other communities have abandoned their planning attempts due to the conflict generated. However, once a town decides to obtain a Deer Damage Permit (DDP) the process is relatively simple, requiring a Deer Damage Permit Application accompanied by the Municipality's Deer Management Plan and other supporting documentation outlining the details of the plan and culling operation.

- **If the Town were to pursue contraception as part of its deer management program, what permits are needed for that? Does the DEC offer any resources for the deer capture necessary for that method?**
  People who are disturbed by the idea of killing animals often wish to control deer populations by reducing the birth rate rather than increasing the death rate. Yet, even with effective fertility control, this wouldn't be a good way to reduce impacts of deer because it would just keep populations from growing; it wouldn't lower them. Deer can live to be 20 years old, so population reduction would happen slowly, if at all. Without hunting or culling, most deaths would be from vehicle collisions, which isn't a prudent or humane method of removing deer. (On low-speed roads, DVCs commonly result in considerable suffering followed by slow death or permanent crippling.) Meanwhile, the negative social and ecological impacts of deer would continue at levels which were found to be unacceptable by the community when they decided to initiate deer management efforts.

  Currently, effective fertility control on a population-wide scale has not been achieved except in small, isolated populations in enclosures or on islands. Deer have such a high reproductive rate that a few fertile individuals can produce enough young to replace the small number of deer that die each year in urban and suburban settings. Wary individuals who can avoid capture and treatment, along with immigrants moving in from neighboring areas, provide more than enough reproductive capability to overwhelm fertility control efforts in most cases. Even on an island of less than 9 mi2, a fertility control program that continued for 16 years was hampered by an inability to capture a high enough percentage of the deer, and meaningful population reductions only occurred in certain areas that provided the best access to the animals (Underwood, 2005; National Park Service, 2015).

  Immuno-contraception is the fertility control method that is often suggested by those seeking alternatives to lethal population reduction. ZonaStat-D is a contraceptive agent for deer that has been approved at the federal level by the Environmental Protection Agency. It contains porcine zona pellucida (PZP), which prevents fertilization, not ovulation. This technique doesn't prevent ovulation, so sterilized does will still go into estrus and mate. Because they won't get pregnant, however, they will go through several estrous cycles each year, creating an extended rutting

season. This could have several negative consequences, including more DVCs, increased stress and lower overwinter survival, and an increase in the local population due to bucks being attracted from neighboring areas. GonaConTM, a contraceptive agent developed by the U.S. Department of Agriculture, prevents does from going into estrus, but in field trials it seems to have a slightly lower success rate than PZP (Gionfriddo et al., 2009; 2011; Rutberg et al., 2013a). Immuno-contraception is neither effective on all treated animals nor a permanent treatment; does must be re-treated on a regular basis to maintain infertility. This becomes increasingly difficult as experience makes them more wary.

Surgical sterilization is the most reliable way to render a deer infertile, and for does it can be accomplished by either ovariectomy or tubal ligation. The latter technique doesn't prevent ovulation, so sterilized does will still go into estrus and mate just like with PZP. An ovariectomy program is not likely to have these consequences.

Although fertility control alone is not a viable method for reducing open populations, it may be useful in conjunction with other methods of population control in a limited area if immigration from surrounding areas could be minimized. If asked, DEC may allow surgical sterilization of does to be conducted under a DDP in a small, densely developed area where lethal removal doesn't seem feasible, if lethal population reduction methods are being employed in the surrounding area. The combination of a core sterilization area surrounded by a lethal control zone reduced the deer population in Cayuga Heights, New York by almost 40% in two years (P. Curtis, Cornell University, pers. comm.). Fertility control might also potentially be used to keep a population stable after it has been lowered to an appropriate level through hunting or culling.

Even in these limited circumstances, though, the logistical and financial burdens entailed in current fertility control methods would present a significant obstacle to implementation of meaningful programs in most communities. All fertility control methods are extremely labor-intensive and expensive because deer must be captured for treatment and marking and virtually all does must be treated to prevent population growth. Capture, anesthesia, and surgery also create stress and may result in injury or death of captured deer. If a community decides that these costs are acceptable to them and they wish to pursue fertility control in a small highly developed area where shooting deer doesn't seem feasible, they may receive a DEC permit to use surgical sterilization as part of a deer management program. However, because of the ineffectiveness of fertility control for reducing populations or impacts, lethal population reduction methods must also be used concurrently in nearby areas.

DEC also facilitates the continued development of fertility control techniques by authorizing novel scientific research. Numerous field research projects on both sterilization and immuno-contraception of deer have been and are being conducted in New York communities, beginning with Irondequoit in the 1990s and continuing through projects currently ongoing in Hastings-on-Hudson and Staten Island.

- **What are the illnesses/ diseases that deer can pass to humans or family pets? Are there real concerns and cases of illness in Western New York?**
  Many parts of New York are considered high-risk areas for human infection with Lyme disease, based on the density of infected black-legged ticks (Ixodes scapularis). Reducing deer populations to very low levels can reduce tick densities and probably Lyme disease rates,

because deer are the primary food source for adult female black-legged ticks. However, less drastic deer population reductions may not lower the chances of human Lyme. Small mammals such as rodents and shrews, not deer, are the main tick hosts that pass on the Lyme-causing bacteria (Borrelia burgdorferi). Several other tick-borne diseases are less common but increasing in frequency. Deer are the principal hosts for the lone star tick (Amblyomma americanum), which can cause an allergy to the consumption of mammalian meat as well as transmit ehrlichiosis and other diseases to humans.

All mammals, including humans, can become infected with rabies. Once clinical signs appear, rabies is nearly 100% FATAL. Rabies is WIDESPREAD in NY and raccoons, skunks, bats, foxes, and coyotes make up most cases in the United States. However, every year several deer test positive for rabies.

Chronic Wasting Disease (CWD) is a transmissible spongiform encephalopathy (TSE) causing NEUROLOGIC DISEASE in mule deer, white-tailed deer, elk, and moose. It is caused by an infectious prion, which is a misfolded protein. CWD IS FATAL IN ALL CASES. Most animals will survive for a year or more, but death is inevitable. TRANSMISSION occurs directly through contact with an infected animal or indirectly through contact with a contaminated environment. Live animals shed prions in saliva, feces, and urine, which can bind to soil and remain infectious. DIAGNOSIS of CWD is most often done by testing the obex region of the brain or the retropharyngeal lymph nodes. Testing will determine if CWD prions are present or not detected. There are NO TREATMENTS or vaccines available. Prevention is the most cost-effective control measure.
HISTORY CWD was discovered in captive mule deer in 1967 in Colorado but wasn't identified in the wild until 1981 when Colorado found an affected elk. The origin of CWD is unknown but may have originated from scrapie. Scrapie, CWD, and "mad cow" disease are in the same family of diseases known as "transmissible spongiform encephalopathies."

No human cases of CWD have been reported. However, the Centers for Disease Control and Prevention (CDC) recommends that no one knowingly consume CWD-positive animals. In CWD-positive areas, the CDC recommends that hunters consider testing harvested animals before eating the meat. Cooking the meat does not inactivate the CWD prion. CWD can negatively impact deer and elk populations. Once the prevalence (% of animals infected) reaches critical points, populations may begin to decline. Deer infected with CWD do not live as long as unaffected deer. Males (bucks) are more likely to be infected than females (does). Prions are resistant to normal disinfection procedures that kill most disease agents like bacteria or viruses. Once CWD is established in a wild population, it has been nearly impossible to eliminate the disease. When CWD is found in captive deer and elk herds, those animals are often euthanized to prevent further spread of the disease to wildlife.

- **Does the DEC have any resources available to assist municipalities that want to conduct a deer count?**
It is true that baseline data should be collected, and a monitoring program established. Setting a goal of a certain density or number of deer in the community is not useful for several reasons:

    - *The problem is the impacts the deer are causing, not the deer themselves.*

- *There is no clear way to set a target number, because local conditions (habitat quality, land-use, public desires) determine the number of deer that can live in an area.*
- *It's very difficult to get an accurate count of deer populations.*
- *Can be very expensive*

- **How many other local towns use the nuisance permits for culling (bait and shoot) and are these towns successful with the maintenance?**
  Numerous municipalities within Western New York acquire DDPs on an annual basis and report success at maintaining populations at more tolerable levels. Anecdotally, fewer complaints are received by DEC from municipalities with existing deer management programs involving removal.

- **Is there a way for the DEC to see what the proper deer/land ratio is, and what our current deer numbers are?**
  The deer-related problems that directly affect human activities are the ones that receive the most public attention. In recent decades, frequently mentioned concerns have included deer-vehicle collisions (DVCs) on roads, deer eating crops in agricultural areas and landscaping plants in residential areas, and the potential role of deer in the increase of tick-borne illnesses such as Lyme disease. The relationship between deer abundance and these impacts will vary among communities. Therefore, no standard deer abundance objective can be established. Rather, assessment of deer impacts provides a meaningful metric for evaluating the appropriateness of an existing deer density.

- **We are seeing deer issues specifically around new developments, where they are being displaced. Can you speak to how development impacts deer?**
  Over a very short duration, new development activity may displace deer. However, deer are very adaptable and able to adjust to an ever-changing landscape.

  The current pattern of human land use is ideal for creating and sustaining high-density deer populations because open areas such as residential developments and agricultural fields are interspersed with forested areas, providing plentiful edge habitat as well as a variety of nutritious crops and ornamental plantings that supplement the natural food available to deer. Suburbs have been referred to as "deer factories" because they provide such good conditions for deer populations to grow.

- **Is there a way for the DEC to help with our zoning/building issues?**
  Decisions regarding local zoning/building are left up to the local municipality. DEC may offer up information in their field of expertise for consideration.

- **Would it make sense for the DEC to partner with WS Police to work on public awareness and ultimately ticketing for violations with feeding the deer?**
  Yes. This is something that should be discussed with NYSDEC Division of Law Enforcement.

Suburban Deer Management and Community Response

Ryan Rockefeller

Wildlife Biologist

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An Important Resource

Photo: Adirondack Ecological Center

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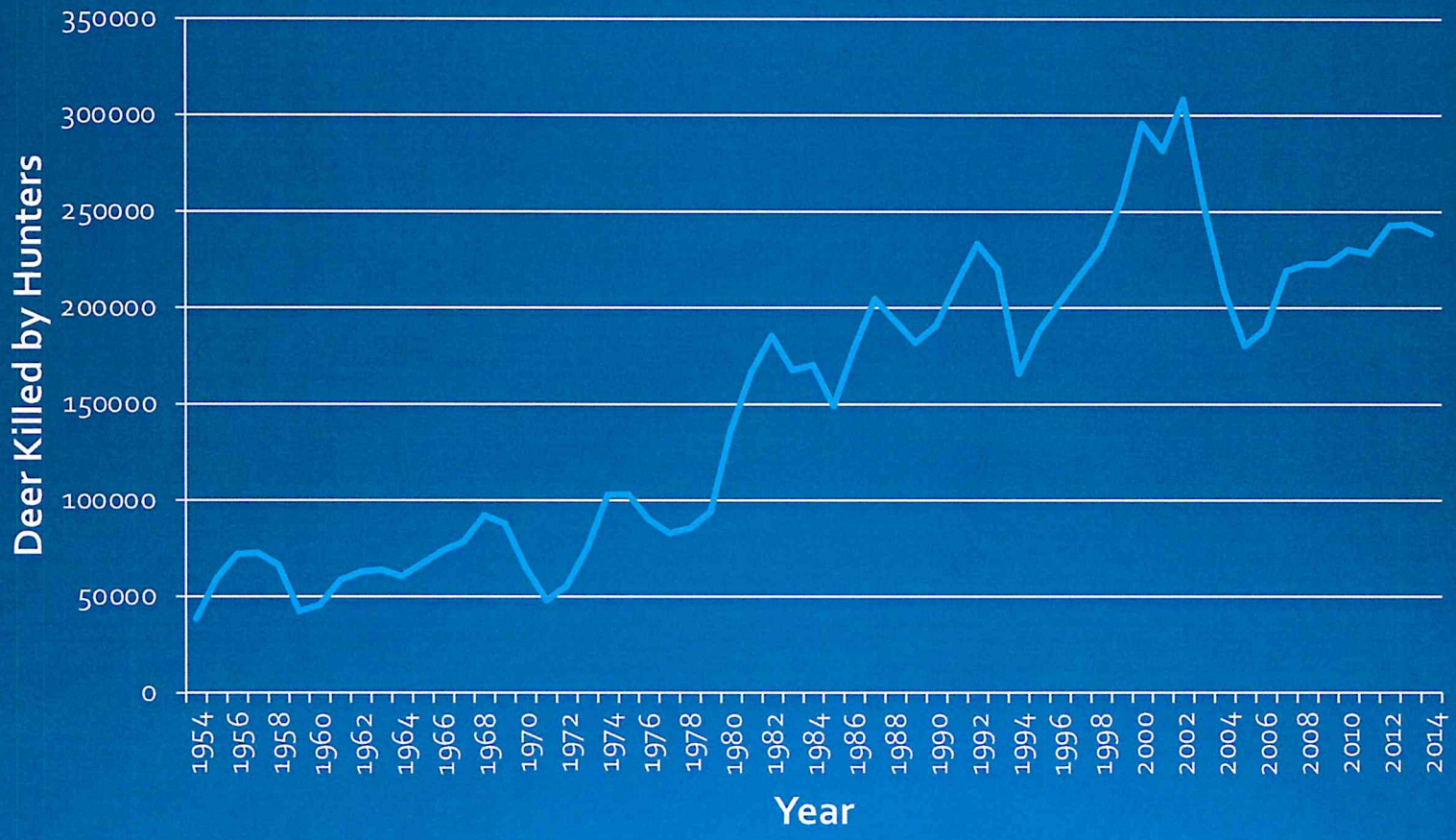
New York Deer Population Trend



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Highly Adaptable

- Thrive in edge habitat
- Grazer/browsers: eat both woody and herbaceous vegetation

Photo: Dick Thomas

Photo: Dick Thomas

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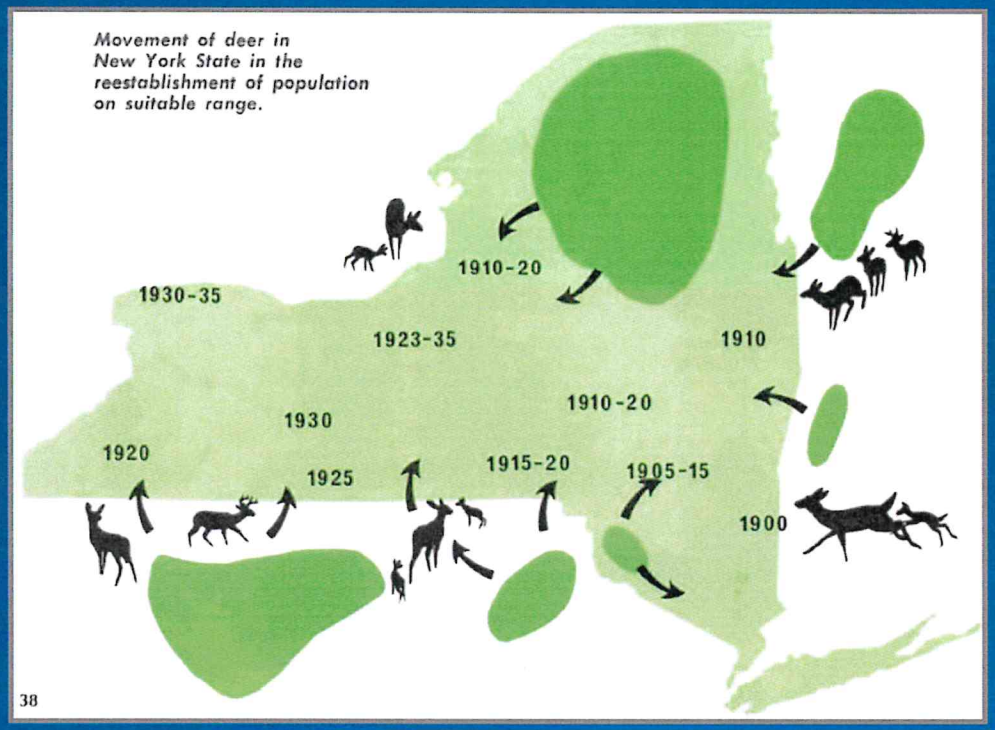
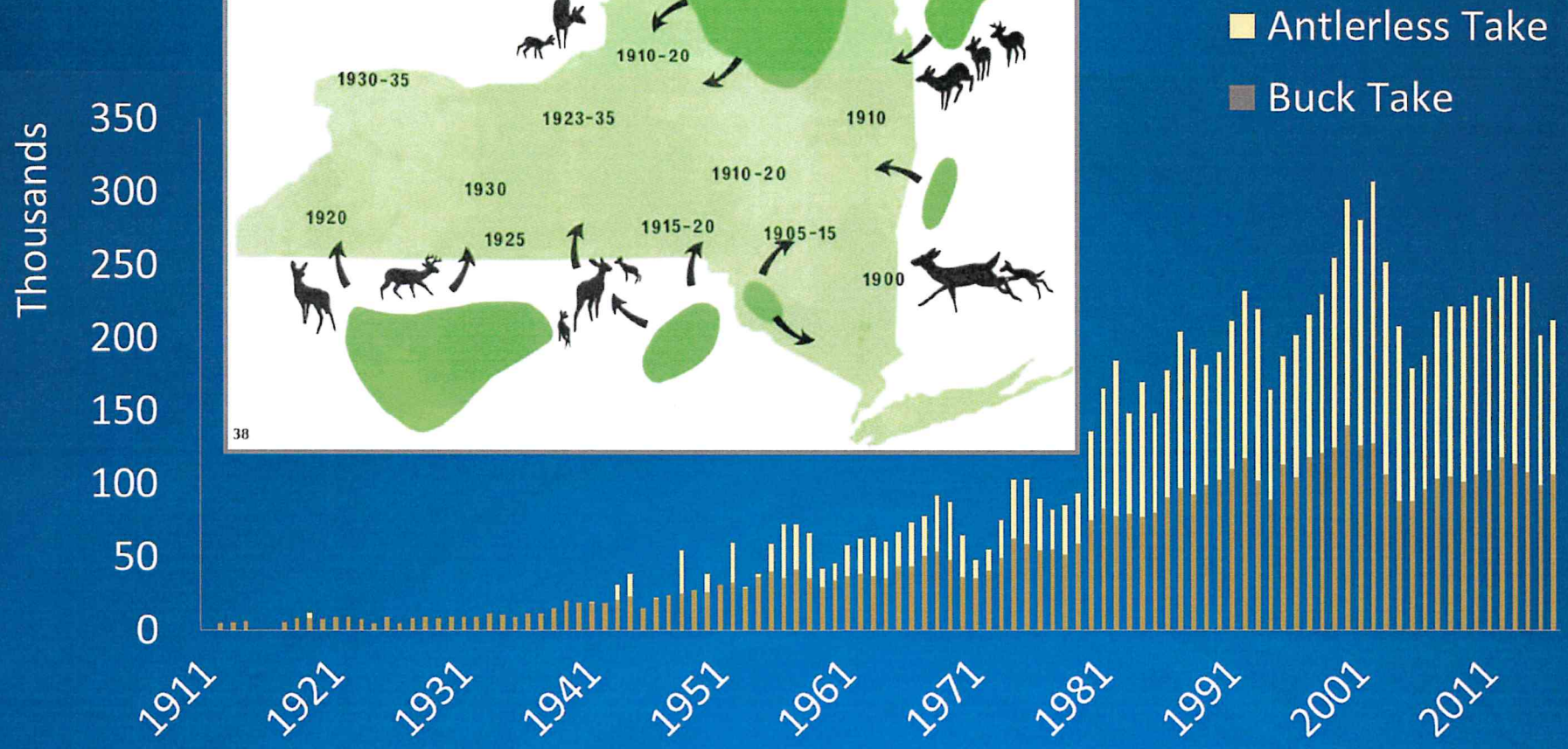
Resilient





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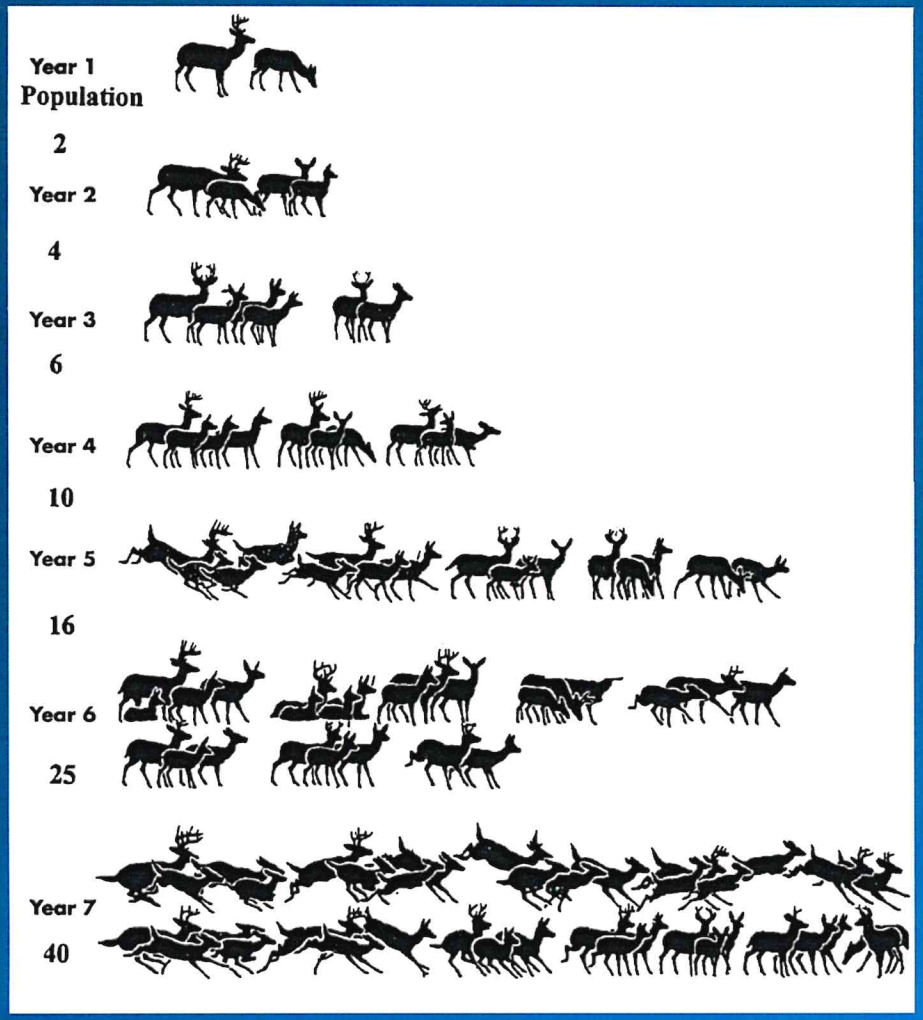
Population Dynamics

- Does breed at 1 year old
- Fawns born in May and June
- Average 2 fawns per year
- Populations can double every 2-3 years

Population Dynamics



Under conditions of NO immigration, emigration, mortality, or population growth limitation:

2 deer to 40 deer = 1900% increase in 7 yrs.

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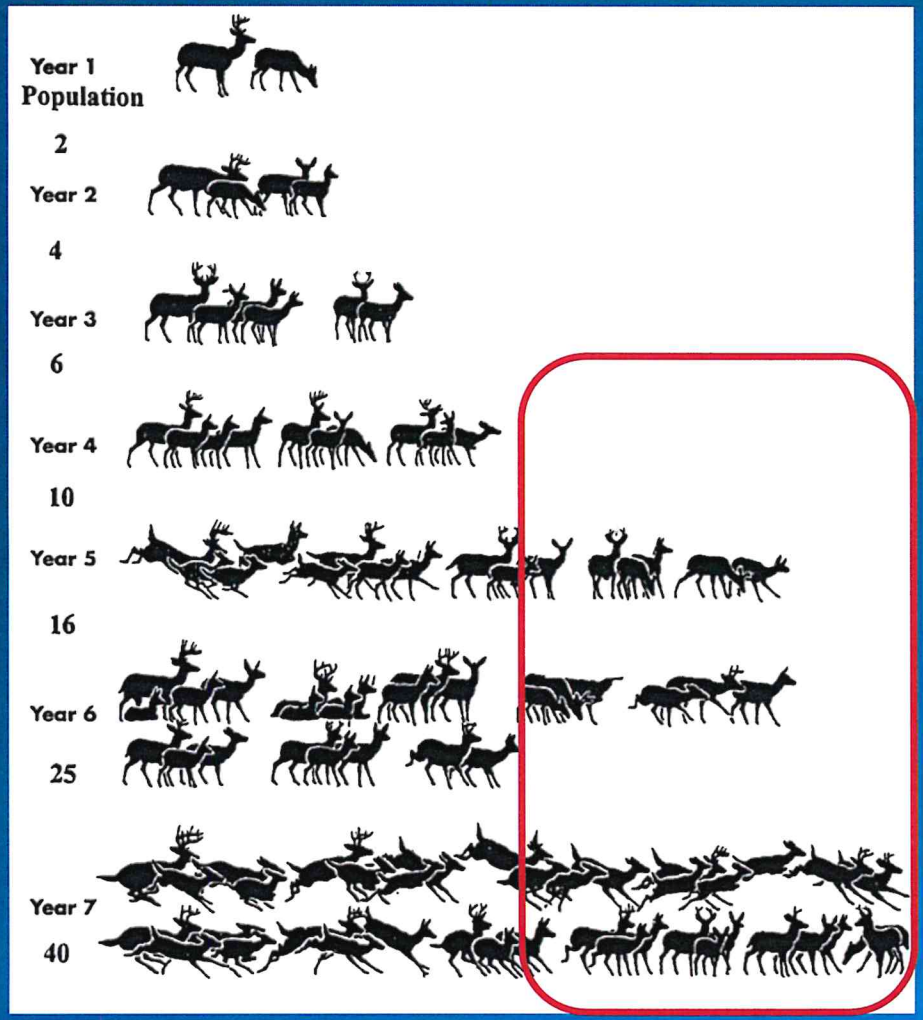
Population Dynamics



30 – 40% of animals must die every year to maintain population stability

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Mortality

- Principal sources of mortality in *wild/rural* areas: **predation**
- Principal historical predators: **mountain lions, wolves, humans**

Mortality

- Principal sources of mortality in *wild/rural* areas: **predation**
- Principal current predators:
  bears, bobcats, coyotes, humans

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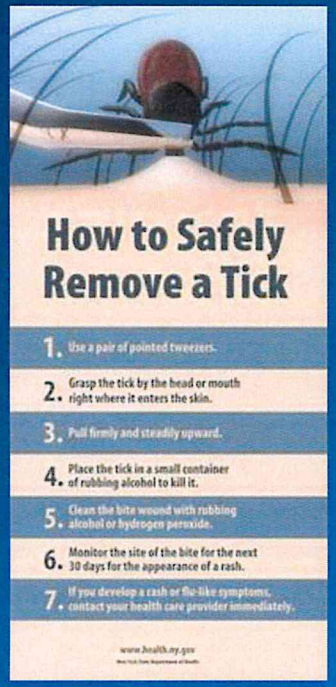
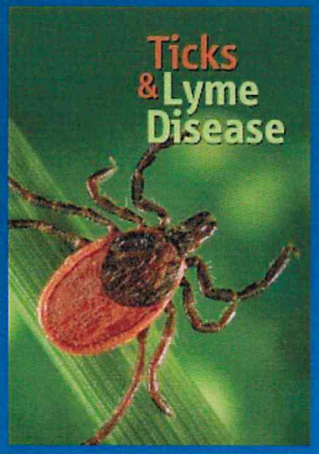
Mortality

- Principal source of mortality in *developed* areas:
  vehicle collisions

Societal Impacts

- Deer-vehicle collisions
- Potential for increased risk of tick-borne disease





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Societal Impacts

- Damage to agricultural crops
- Damage to landscaping plants

Ecological Impacts

- Reduced understory diversity
- Increased dominance of invasive plants (monocultures)

Ecological Impacts

- Reduced fauna abundance and diversity

Ecological Impacts

- Reduced survival of tree seedlings
- Reduced canopy diversity
- Altered species composition
- Fewer canopy trees

Failure of Forest Regeneration

Don’t Feed Deer!

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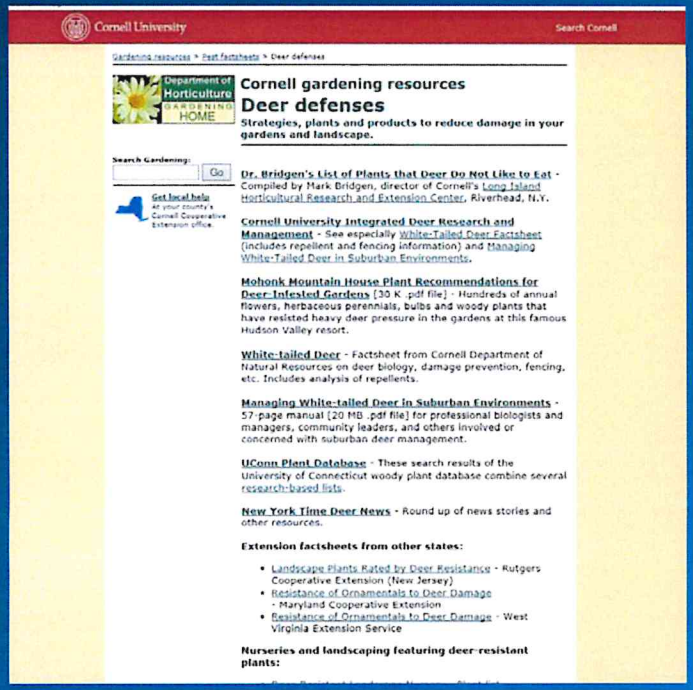
Management Options


Cornell University — Search Cornell

Gardening resources > Pest factsheets > Deer defenses

Department of Horticulture GARDENING HOME

Cornell gardening resources

Deer defenses

Strategies, plants and products to reduce damage in your gardens and landscape.

Search Gardening: Go

Get local help at your county's Cornell Cooperative Extension office.

Dr. Bridgen's List of Plants that Deer Do Not Like to Eat - Compiled by Mark Bridgen, director of Cornell's Long Island Horticultural Research and Extension Center, Riverhead, N.Y.

Cornell University Integrated Deer Research and Management - See especially White-Tailed Deer Factsheet (includes repellent and fencing information) and Managing White-Tailed Deer in Suburban Environments.

Mohonk Mountain House Plant Recommendations for Deer-Infested Gardens [30 K .pdf file] - Hundreds of annual flowers, herbaceous perennials, bulbs and woody plants that have resisted heavy deer pressure in the gardens at this famous Hudson Valley resort.

White-tailed Deer - Factsheet from Cornell Department of Natural Resources on deer biology, damage prevention, fencing, etc. Includes analysis of repellents.

Managing White-tailed Deer in Suburban Environments - 57-page manual [20 MB .pdf file] for professional biologists and managers, community leaders, and others involved or concerned with suburban deer management.

UConn Plant Database - These search results of the University of Connecticut woody plant database combine several research-based lists.

New York Time Deer News - Round up of news stories and other resources.

Extension factsheets from other states:

- Landscape Plants Rated by Deer Resistance - Rutgers Cooperative Extension (New Jersey)
- Resistance of Ornamentals to Deer Damage - Maryland Cooperative Extension
- Resistance of Ornamentals to Deer Damage - West Virginia Extension Service

Nurseries and landscaping featuring deer-resistant plants:

- Vulnerability Reduction
  - ✓ Tick bite avoidance
  - ✓ Lower speed limits
  - ✓ Warning signs
  - ✓ Fencing / Barriers*
  - ✓ Chemical repellents
  - ✓ Scare devices
  - ✓ Dogs
  - ✓ “Deer-resistant” plantings

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Management Options

- Population Reduction
  - ✓ ~~Recreational Hunting~~ **ECL § 11-0907**
  - ✓ Controlled or managed hunt
    - Landowners can dictate:
      - Days and times of day hunted
      - Implements used
      - Specific locations
      - Hunter numbers
      - Hunter characteristics (proficiency, ethics, etc.)
    - Municipality or organization can set up system for vetting hunters and communicating with landowners

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Management Options

- Population reduction
  - ✓ Culling permit (Deer Damage Permit)
    - Issued when hunting is not possible or sufficient
    - Outside of hunting season, using non-hunting techniques
    - Shooting can be done by volunteers or professionals
    - Various implements depending on locations
    - Permit specifies methods, locations, quotas
    - Capture and kill option possible
    - Typically, must make use of venison

VENISON DONATION COALITION

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Management Options

- Reproductive reduction
  - ✓ Surgical sterilization (*permanent*)
    - Only practical on females (one buck can breed many does)
    - Tubal ligation
      - Prevents fertilization, not ovulation
    - Ovariectomy
      - Prevents ovulation
    - May be incorporated into a management plan to supplement lethal removal.
  - ✓ Immunocontraception (*temporary*)
    - Porcine zona pellucida (PZP)
      - Prevents fertilization, not ovulation
    - GonaConTM
      - Prevents ovulation
    - Not registered for use in NYS
      - Requires a scientific research license

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Considerations

- Animals culled by rifle die instantly (98% in kangaroo study)
- Most deer shot properly with bows die within seconds (traveled on average 50-60 yards in Tompkins County programs)
- 8% wounding/non-recovery rate in Tompkins County programs
- Natural deaths almost always involve suffering
- Deer killed by vehicles almost always involves suffering (majority make it off the road and are never seen)
- Deer are shot to protect many societal interests
- Deer killed by vehicles are typically wasted
- Deer killed by culling are typically used for food
- Deer that die after sterilization should not be consumed

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Community Deer Management

- Broad public involvement is crucial
  - Provides valuable feedback to community leaders
  - Increases mutual understanding among stakeholders
  - Reduces likelihood of negative backlash
  - Establishes strong foundation for defending decisions
- Communication and transparency

- Other communities' experiences
  - deeradvisor.org
- Coordination with neighbors

Assuming…

- Respect
- Openness
- Agreement on method for reaching decisions
- Belief that an acceptable solution is worth seeking

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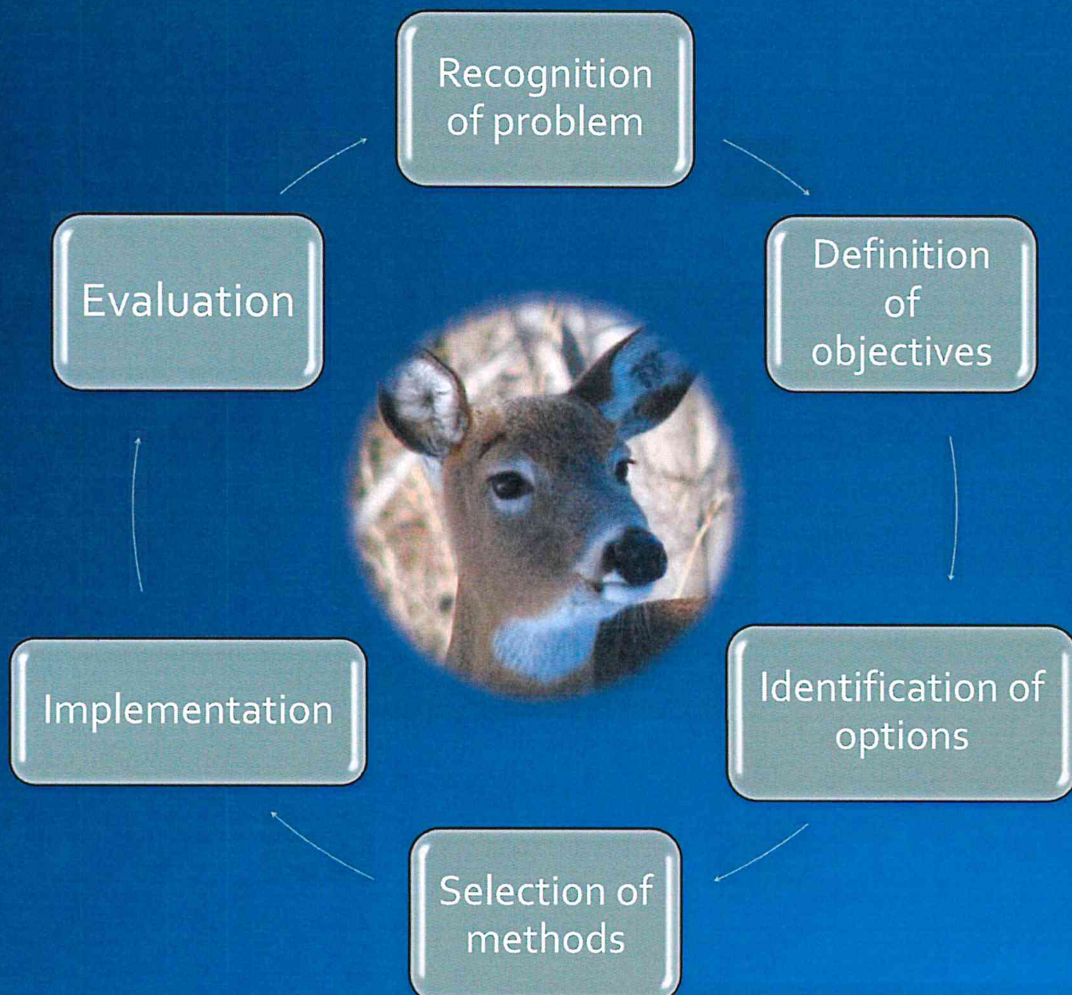
Community Deer Management



- High awareness of the issue within the community

better or more efficient?

See next page

Department of Environmental Conservation

1. Recognition of Problem:
    - High awareness of the issue
    - Consensus there is a problem
    - Clarification of problems – list them

2. Definition of Objectives:
    - Measurable (metrics, complaints, deer collisions, etc.)
    - An exact count is not necessary, all environments support different amounts
    - Look at impacts

3. Identification of options: the most difficult part of the process
    - Less expensive holistic approaches – lowering speed limits, warning signs, fences, plantings
    - Culling and sterilization

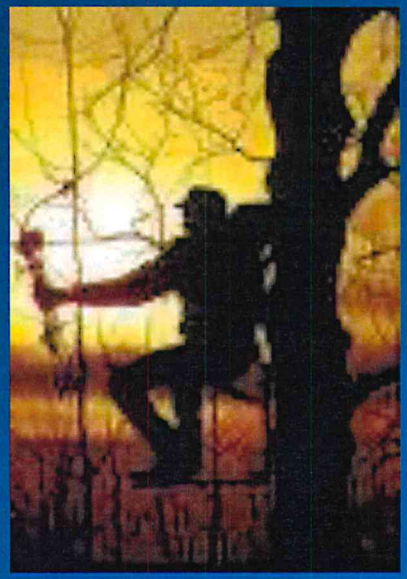
4. Selection of methods
    - Acceptable to community
    - Affordable – cost must be worth the results

5. Implementation
    - Many details – notification, safety protocols, payment, donation, contact people

6. Evaluation –
    - Any improvements or efficiencies
    - Negative impacts

Initial Education Phase

- The process
- Local impacts
  - Survey of residents
  - Ecological assessment
- Deer biology
  - Reproductive rates
  - Mortality
  - Population regulation
- Management options
  - Reduction of vulnerability
  - Deer population reduction
  - Deer population control



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Community Deer Management

No matter what management options (if any) are chosen, there will need to be a coordinated and **continuous** effort.

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Additional Information

Cornell University community deer management resource:

- deeradvisor.org

DEC pages on deer overabundance and community deer management:

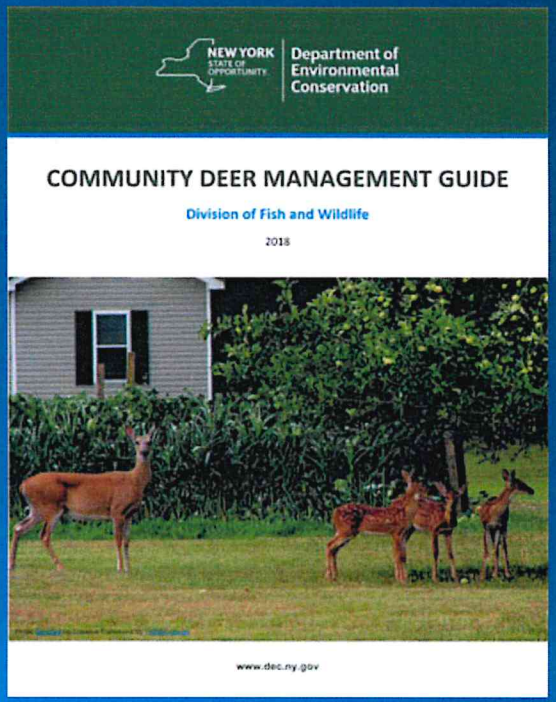
- http://www.dec.ny.gov/animals/104911.html
- http://www.dec.ny.gov/animals/104961.html

Impacts of deer on forests and wildlife:

- deerandforests.org

How to monitor deer impacts on your land:

- aviddeer.com



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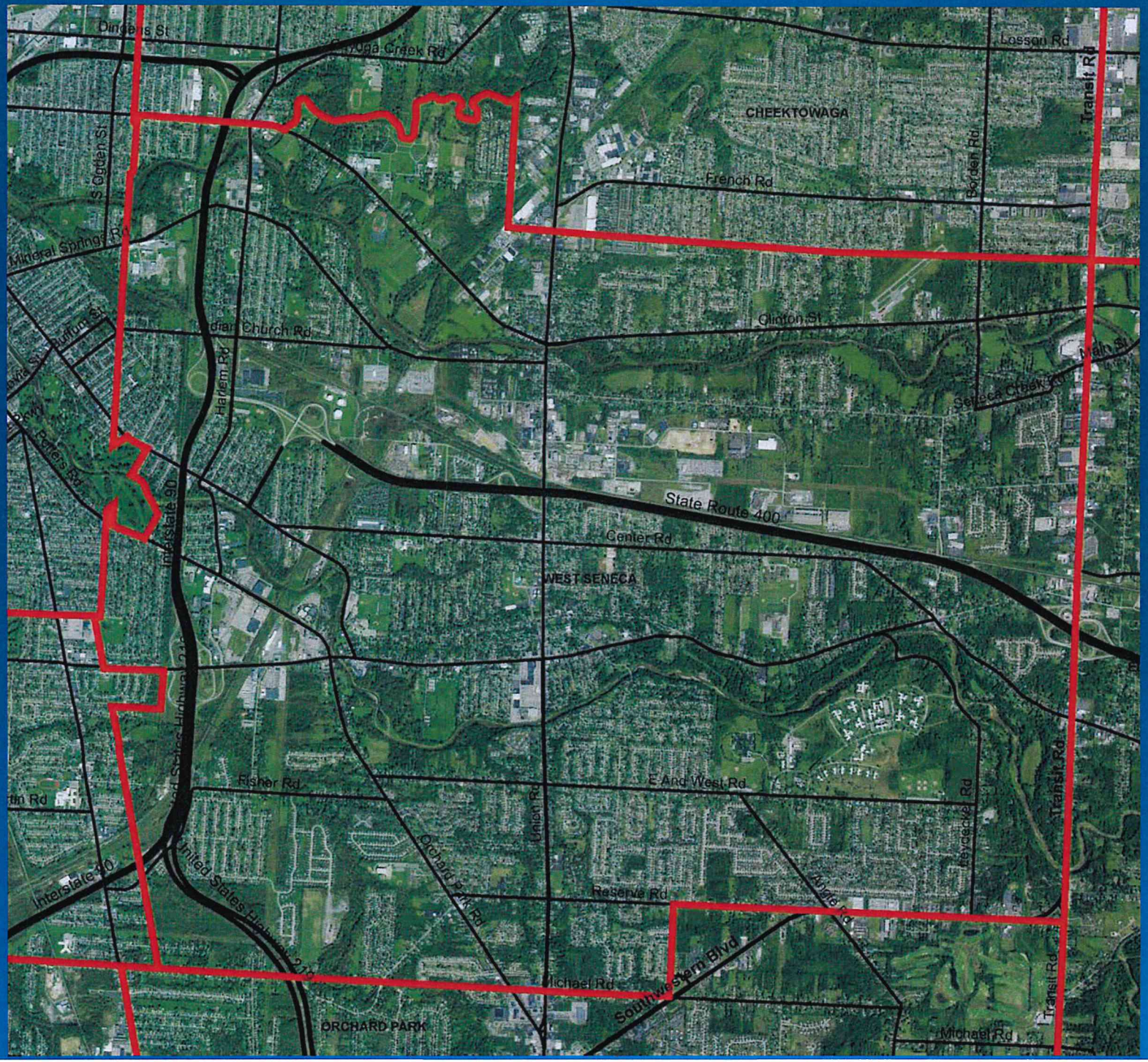
Dingens St
Losson Rd
Transit Rd
CHEEKTOWAGA
French Rd
Borden Rd
S Ogden St
Mineral Springs Rd
Clinton St
Harlem Rd
Seneca Creek Rd
Interstate 90
State Route 400
Center Rd
WEST SENECA
Fisher Rd
E And West Rd
Union Rd
Orchard Park Rd
Reserve Rd
Michael Rd
Southwestern Blvd
ORCHARD PARK

Safety Considerations

- The statewide annual average for hunting-related shooting accidents is 3.2 per 100,000 hunters; the vast majority of those shot themselves or their companion.
- There have only ever been two two-party bowhunting accidents recorded in the state; in both cases the hunter shot his companion.
- There have been no non-target animals shot in community deer management programs in New York.

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