DEER Overabundance and Community Deer Management

By Sue Booth-Binczik, Wildlife Biologist, New York State Department of Environmental Conservation

Contact: susan.booth-binczik@dec.ny.gov

Do residents of your community say they're fed up with deer ruining their landscaping and spreading ticks through their yards? Are car crashes with deer a frequent occurrence on your roads? Do local woods look wide open under the trees, without much undergrowth to block your view? If these situations sound familiar, your community probably has an over-abundance of deer. My role with the New York State Department of Environmental Conservation is to help municipalities identify and address problems caused by deer overabundance.

Understanding the Problem

Deer numbers in New York grew throughout the last century, a trend that was welcome at first but eventually became cause for concern, especially in urban and suburban areas. It turns out that deer adapt very well to living alongside people, and they find suburbs to be excellent places to live and reproduce. The highest deer densities in the State can now be found in residential communities.

Deer do so well in suburbs because they have plenty of food and shelter there and few sources of mortality. Deer eat almost any kind of vegetation, and they thrive in areas with a mixture of forest and open space. In residential communities, open lawns, golf courses and cemeteries tend to be mixed with wooded parks, stream corridors and undeveloped fringes of commercial and industrial properties, creating ideal deer habitat. Most predators avoid human development, and hunting also tends to be absent or very limited in residential areas. Having evolved under high predation levels, deer have a very high reproductive rate; their population size can double every 2-3 years. When there's plenty of food available, an average of 30-40% of the deer in a population have to die every year to keep the population from growing. This doesn't happen in residential areas where local laws and landowner opinions have severely constrained hunting. In these communities, most deer mortality is from vehicle collisions, which generally isn't enough to stop populations from growing.

High deer populations create numerous problems for their human neighbors. There are estimated to be over 70,000 deer-vehicle collisions a year in New York, causing financial losses and sometimes injury or death for drivers and passengers.

Deer chew their way through yards and gardens, devastating flowerbeds, vegetable plots and expensive landscaping. They cause millions of dollars of crop damage annually. They are implicated in the increasing tick numbers and spread of Lyme and other tick-borne diseases in many parts of the State.

Deer can devastate natural areas, too. At high densities, deer reduce the biodiversity of plants and animals that live in the lower layers of forests. By suppressing the growth of native plant species, deer make it easier for invasive exotics to take over. Perhaps most alarming, an overabundance of deer results in young trees being eaten at such a rate that they are unable to replace old trees that die and fall. If deer densities aren't reduced, Northeastern landscapes may look drastically different in future years, as forests turn into more open ecosystems.

Tackling the Problem

There is no easy or fast solution to deer overabundance in a community. No matter what approach is taken, managing deer numbers is a long-term commitment. It also requires the support and cooperation of community residents, which means that the first step is usually outreach and education.

When concerns arise about deer-related impacts, typically a committee is formed to explore the issue. This committee needs to gather information on the concerns of community residents and the impacts they're experiencing, the causes of deer overabundance and the factors that control population growth, and possible actions that can be taken to address the community's problems. They then share what they have learned with the community to provide the foundation for an

informed decision-making process.

Deer management can become a contentious and controversial issue, as people have widely varying perspectives on deer and are often passionate about their opinions and priorities. To reduce the risk of lengthy conflict, committee members must be dedicated to conducting an inclusive and respectful process that allows all opinions to be heard and considered. Municipal leaders should ensure that a variety of perspectives are represented on the committee and that extensive outreach takes place to involve all segments of the community in the planning process. Whatever decisions are reached, it's unlikely that everyone in the community will agree with them, but everyone should be able to agree that the decision-making process was valid and that the decisions are supported by the majority of the community.

One of the committee's initial steps is often to conduct a survey of community residents. This can provide information on the type and severity of deer-related impacts being experienced, locations in the community where problems are most severe, and opinions on whether some community-level action should be taken to reduce these problems. It's best not to include questions in the survey about specific types of action that might be taken, as the goal at this point is simply to define the issue and assess the need for action.

Assuming there is widespread agreement that something should be done to reduce deer-related impacts, the next phase of the process is setting objectives. These objectives will guide management decisions. Objectives should be defined based on the impacts that have been identified by the community, and should not be stated in terms of deer numbers or densities. The focus needs to be on the problems the deer are causing, because that's the only way to know whether things are improving. For example, the rate of deer-vehicle collisions is likely to be one of the impacts of concern for most communities. Your community might decide to set an objective of getting the number of collisions down to 25% of the current level. Keeping track of the annual number of collisions will then let you know how you're progressing toward your goal as you implement your chosen actions.

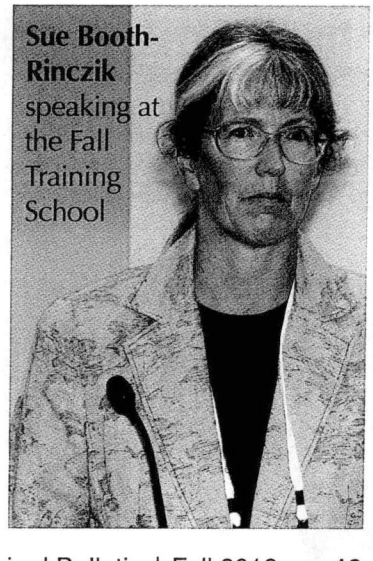
Once objectives have been defined, it's time to consider the array of possible actions that can help you reach those objectives. These actions fall into two general categories: those that reduce the community's vulnerability to the negative impacts of deer, and those that reduce deer populations. It's most effective to tackle the problem from multiple directions by implementing both types of actions. Choosing which actions to implement is the most difficult and potentially contentious part of the planning process for many communities. I and other DEC staff can help by providing information on deer biology and management options. Bringing in a trained facilitator to guide discussions may also be useful.

The first category of actions includes things like deer-resistant gardening, fencing, lower speed limits, warning signs, wider grass buffers along roads, and good practices for tick bite avoidance. These can all help, and following tick bite avoidance procedures is always important, but unless actions are also taken to control deer populations, any decrease in impacts is likely to be temporary at best. As deer become more numerous, strategies like these will become less effective.

The second category includes recreational hunting and culling, which is the term for shooting deer outside of a hunting context. Expanding access and opportunity for hunters is the simplest and least expensive way for a community to reduce deer numbers. Hunting in residential areas is most commonly done with bows and crossbows, because State law allows archery equipment to be used in closer proximity to buildings than firearms. Even properties just a couple of acres in size or smaller can be safely, humanely and effectively hunted with archery equipment. Municipal leaders can facilitate deer population reduction by encouraging landowners to allow hunters on their property, opening parks and other municipal-owned lands up to hunting, and removing or modifying any local ordinances that restrict discharge of firearms or bows and thereby limit hunting. Local governments don't have the authority to specifically restrict or prohibit hunting except on their own land; that authority rests with the State.

Landowners always have the power to control how hunting occurs on their property (within the bounds of State laws and regulations), and that ability can be formalized at the community level through a controlled hunt. In municipal controlled hunts, residents choose whether they want their property to be included. Rules are agreed upon that may specify such aspects as what level of shooting accuracy prospective hunters must demonstrate, when hunting can occur, and what notifications must take place. There may be a hunt coordinator who is responsible for things like screening hunters who apply to participate, assigning specific hunt locations, and serving as a communication conduit.

In some situations, hunting alone may not lower deer numbers enough for a community to meet its impact reduction goals. DEC can issue permits that allow communities to conduct culls using techniques such as baiting and shooting at night to remove deer more efficiently. Culling can be done by either volunteers (usually local hunters) or hired professionals. No matter what population reduction approach is used, access to the properties that support most of the deer is necessary for success.



Sue Booth-Rinczik speaking at the Fall Training School