



Deer Management Program: Frequently Asked Questions

- 1. Why manage deer populations?** Deer are an important part of Lake County's natural areas. Like other native species, they are beautiful and play a role in local habitats. But in some of the highest-quality preserves, deer numbers are so high that their populations are out of balance. These large herbivores eat a great deal of plants. Left unchecked, over-browsing by deer damages habitat for other native plants and animals, including endangered species.

One of the Lake County Forest Preserves' key roles is to preserve a variety of healthy habitats for current and future generations to enjoy. To keep deer populations in balance, our policy is to manage them in the most humane, effective way possible. Deer management is an ongoing process that must be reanalyzed each year. Forest Preserves wildlife ecologists start with a clean slate and conduct aerial and ground-level surveys to monitor the deer population and its impacts on the floristic, or plant, quality of the preserves.

If we were to stop management, deer would quickly become overpopulated. Ecologically restored areas would revert into degraded habitat containing unhealthy deer. Deer reproduce regardless of habitat quality or food availability. If every female produced offspring each year, the amount of available food would decrease, resulting in overconsumption of native plants. This would harm many species of wildlife, including pollinators, as they would have fewer flowering plants available to them.

- 2. What has caused deer populations to increase?** Since European settlement occurred in the Chicago region, large game predators such as wolves and bears have been removed or pushed out of densely populated areas. This has resulted in local adult deer having no major predators besides people (hunting and vehicle collisions). Additionally, with the increase of edge habitat—where two habitats come together, such as a forest and a prairie—deer have flourished. Coupled with the following factors, populations continue to grow:
 - Lake County winters are not severe enough to naturally reduce herds.
 - Automobiles are now the only significant “predator” of deer in Lake County.
 - People can unintentionally compound the problem by feeding deer.
 - Most female deer start producing offspring at just two years of age. They breed for up to 12 years. Some give birth to twins or triplets.
- 3. How do overabundant deer affect habitats?** Deer are valuable parts of a balanced ecosystem, along with all other native plants and animals, but their populations must be monitored. Overabundant deer can:
 - Eliminate understory, or ground-level, vegetation, directly impacting plant and animal communities.
 - Nesting locations for ground-nesting birds.
 - Cover for woodland frogs and salamanders.
 - Sheltered resting sites for other wildlife.
 - Reduce vegetation so much that deer no longer have adequate food to sustain their own population, sometimes causing many deer to starve. They eat themselves out of house and home.



4. Do overabundant deer have other impacts on the surrounding communities? Yes. Overabundant deer also increase the risk for:

- Disease transmission between deer (e.g., chronic wasting disease).
- Parasite transmission to people (e.g., deer ticks, also called black-legged ticks, which can carry the bacteria that causes Lyme disease).
- Deer-vehicle accidents on roadways.

5. How do we monitor the impacts? Forest Preserves wildlife ecologists have built “deer exclosures” at several preserves. Deer cannot get into these fenced-off areas, but squirrels, chipmunks, groundhogs and other plant-eaters can. Outside these exclosures, deer roam freely and cause damage to crops, landscaping and garden plants. We measure and compare the plants in both areas to assess the effects deer have on habitats.

Data collected since 1988 show that deer pose a threat to the abundance and diversity of plants. Also, species preferred by deer are less vigorous and produce fewer flowers outside exclosures. In this way, we see directly that too many deer on the landscape reduces available food for other animals and the overall health and populations of native plants.

6. How do we monitor the deer populations? Aerial surveys are one method of counting populations. We conduct them during winter when deer are most visible with snow on the ground and few leaves on trees. Trained observers seated in a helicopter flying at low altitude count individual deer on the ground. The helicopter flies along parallel lines at equal distances until an entire preserve is counted.

Forest Preserves ecologists also diligently record data during deer removal. We analyze multiple years of age, sex, fertility and weight data so we can see a clearer picture of Lake County’s deer population. We determine the sex ratio, fecundity, age structure and health of the herd.

We input this data into scientifically vetted, well-established statistical models to estimate the true number of deer in an area. Since management began in 1988, individuals in herds have increased 23.73% in average weight. This number has not plateaued, which tells us we have not yet reached an optimal carrying capacity.

7. What deer management methods are available within the Lake County Forest Preserves? There are a variety of deer management options, each with advantages, disadvantages and associated costs. These methods fall into two categories: non-lethal management—including taking no action—and lethal management.

8. What method do you currently use to manage deer populations?

Forest Preserves staff keep up to date on developments in the field of deer management. This ensures we conduct our program using the most effective, efficient, humane methods currently available. The Illinois Department of Natural Resources must approve all methods prior to implementation.

The current method we use is deer removal by professional federal sharpshooters. The sharpshooters effectively and efficiently remove deer from overpopulated areas. Removal occurs during evening hours in fall and winter after preserves are closed to the public.



A sharpshooter is a highly trained individual capable of humanely removing a predetermined number of deer. Removal occurs:

- Using specialized equipment (e.g., noise-suppressed rifles).
- Over a short period of time.
- Under conditions not suitable to hunting by the public (i.e., during the night in small areas).

9. I noticed signs at a preserve saying deer management is ongoing from November to March. Does this mean management will take place every night for four months? No. During this timeframe, deer removal only takes place at night during the week. The sharpshooters change locations from day to day and week to week based on weather, deer observations and other factors. Once the deer removal goal at a preserve is met, we take the signs down and management there is complete for the season.

10. What do you do with the deer after removal? We record data for each individual animal—its location, sex, weight, age, gravidity and antler size and structure—and test tissue samples. We then bring the animals to a processing facility where they are turned into ground venison, which we donate to local food pantries. Typically, we donate three to five tons, or 6,000–10,000 pounds, of venison each year.

11. What is chronic wasting disease (CWD)? Chronic wasting disease is a disease of the nervous system that affects cervids, a type of animal that includes deer and elk. Caused by a prion, or abnormal protein, CWD results in nervous system degeneration. As the disease progresses, the animal begins to display abnormal behavior, weight loss and loss of control over normal bodily functions. There is no known treatment or cure.

CWD is contagious between deer and other cervids. Infectious prions pass between animals and from contaminated environments, including plants and soil, that accumulate prions over time. Animals may show no visible signs of illness for a year or more after infection. As a result, infected animals may spread the prion even though they look healthy. Prions are difficult to remove; environments may remain infectious for many years.

12. Do you test the deer population for CWD? Yes. We collect tissue samples from various sources of deer and have them examined by state-approved laboratories. There is no quick test to ensure a deer does not have CWD.

13. Is CWD transmissible to humans? According to the Illinois Department of Natural Resources, “CWD has been known to occur in deer and elk populations in the United States for years. In spite of ongoing surveillance for similar disease syndromes in humans, there has never been an instance of people contracting the disease from butchering or eating meat from CWD-infected animals. A World Health Organization panel of experts reviewed all the available information on CWD and concluded that there is no scientific evidence that CWD can infect humans. However, there is much that scientists still do not know about CWD, and we cannot state that transmission of CWD to humans is absolutely not possible.”

14. Is it safe to eat venison from Illinois deer? According to the Illinois Department of Natural Resources, “There is no scientific evidence that CWD is transmissible through consumption of meat from an infected animal. CWD has not been linked to the human TSE disease (Creutzfeldt-Jakob disease) in the way that bovine spongiform encephalopathy has been in Europe. The prion that causes CWD accumulates in certain parts of infected animals—the brain, eyes, spinal cord, lymph nodes, tonsils and spleen. Therefore, these tissues should not be



eaten. As a precaution, health officials advise that no part of any animal with evidence of CWD should be consumed by humans or other animals.”

- 15. Why don't you allow hunters to participate in reducing deer populations?** There are elevated safety concerns with hunting in urban areas such as Lake County. Many of the preserves are surrounded by residential development. To alleviate safety concerns, an application process, hunter education, proficiency tests prior to hunts and temporary preserve closures would all be needed. This would result in substantial administrative and law enforcement involvement that is currently cost-prohibitive.

At this time, sharpshooting provides significant advantages over a controlled public hunt in regard to public safety, efficiency and the ability to achieve deer removal goals. In addition, sharpshooters operate at night when staff are not actively working, the preserves are closed to the public and other preserve visitors are not affected.

Additionally, hunting season overlaps with the Forest Preserves' prescribed burns program and habitat restoration efforts. Hunting in the preserves would interfere with both, which would in turn interfere with hunters on the property. At this time, the Forest Preserves is unable to offer access to the preserves for hunting.

- 16. Other counties in the Chicago region offer bowhunting programs. Can you emulate them?** Regional forest preserves and conservation districts often vary greatly in size, policies and programs. Differences between habitats, deer densities, levels of urbanization, funding and staff capacity can all affect the ability of an agency to achieve its program goals. We regularly evaluate our program to increase effectiveness and efficiency.

At this time, a bowhunting program would not be economically feasible nor sufficient to achieve our program goals in the current landscape and at existing staffing levels.

- 17. Why don't you live-trap the deer and relocate them to somewhere with fewer deer?** Trapping and relocating deer is labor-intensive and costly. When we attempted it in the past, it was very stressful on the deer, often resulting in mortality. Further, relocating deer is prohibited by law in Illinois due to concerns about disease transmission from one deer population to another.

Also, removing an animal is only a temporary solution, as other deer would soon migrate in from surrounding areas. Staff would need to drive deer an extremely long distance to find an area that is not overpopulated. Overabundant deer are not only a Lake County issue, but a regional issue.

- 18. Why don't you use fertility control as a non-lethal method to reduce deer populations?** We evaluated the use of contraceptive agents and surgical sterilization for managing deer populations during development of our deer management program. Fertility control methods attempt to inhibit reproduction in deer. This may slow population growth in the short term, but then relies upon natural mortality to achieve a long-term reduction in deer abundance. So, these methods do not result in population reductions for four to 10 years.

A considerable amount of research is available on the use of contraceptives in free-ranging deer populations. Its effectiveness remains questionable. With contraceptive agents, it is usually necessary to treat greater than 70% of the females in most deer populations to be effective. This results in considerable implementation costs, since deer need to be captured and injected with the contraceptive agent by hand. They may require booster shots



over time. Due to problems associated with many of the contraceptive agents, the Food and Drug Administration has registered only one agent for use in wild deer. However, contraceptive methods are not currently approved for use in wild deer in Illinois.

Surgical sterilization has been shown to effectively prevent reproduction in female deer. However, its effectiveness is limited to small (fewer than 20 deer) populations with no movement of animals in or out. In large, open deer populations, such as those in the forest preserves, surgical sterilization is unlikely to be viable for slowing population growth. An additional limitation is the significant amount of effort required to capture and handle individual deer, as well as the need for trained veterinarians to conduct surgery. Surgical sterilization methods are currently not approved for use in wild deer in Illinois except under a research permit from the Illinois Department of Natural Resources.

- 19. Is the current management program improving habitat?** Yes. At preserves where deer are managed, research shows the overall health of deer herds and plant communities has improved. Areas that were once almost devoid of vegetation due to overconsumption now flourish with flowering plants.

Since the beginning of the deer management program in 1989, the average male deer's bodyweight has increased by 36.07%. The average female deer's bodyweight is up 10.9%. Overall, the herd's average bodyweight is up 23.73% compared to 1989. Further, the largest male has increased in size by 44.72% and the largest female has increased in size by 13.8% since the program began. This supports the program's effectiveness at increasing the long-term health of the deer herd and the habitats they live in.

- 20. How many deer will be removed?** When deer population reduction is the most appropriate method, the goal is to reduce numbers to an initial density of 15–30 deer per square mile, depending on plant community type. Deer populations throughout the forest preserves currently range from nine to 90 deer per square mile. This means not all preserves need their deer populations managed.

We adjust the population goal annually based on updated population counts and the regeneration of plant communities in response to reduction of deer numbers. Staff annually monitor vegetation to gauge the level of improvement within each habitat. When there is sufficient understory regrowth, we maintain deer populations at that level. In other words, once we reach the deer density goal at a preserve, we pause further management unless it is needed again.

- 21. How are management sites determined?** Preserves with the highest deer populations and highest-quality plant communities are considered top priority for deer management.

- 22. I love seeing deer while visiting the preserves. Will deer still be present in the future?** Yes, there will continue to be deer in the preserves. Managing deer populations leads to healthy herds; it does not remove deer entirely. Deer you see in the preserves are and will continue to be healthier because of this program.

- 23. Why is deer management the right thing to do?** Overabundant deer populations are harmful to other native animals and plants, and to the deer themselves. There are simply not enough food sources to sustain them all, leading some deer to die of starvation. Even with limited food, deer do not stop reproducing.



Contagious diseases such as chronic wasting disease (CWD) also have more opportunities to spread in denser, bigger deer herds. There is no known treatment or cure for CWD, which eventually kills the deer it infects.

Large game predators such as wolves and bears that historically kept deer populations balanced no longer live in Lake County. All these factors combine to increase deer populations beyond what nature can support. Management is needed to ensure the long-term health of Lake County's deer herds.

Deer are also natural hosts for ticks, which feed on mammalian blood. Though mice are considered the main environmental host for the bacteria that causes Lyme disease, female and male ticks often mate on deer. Generally, the higher the number of deer in an area, the greater the population of ticks. So, too, is the potential transmission risk to people of tick-borne diseases such as Lyme disease, babesiosis and others.

If we stopped deer management, rates of deer-vehicle collisions would increase. The typical cost to repair damage from such a collision is \$4,717, according to the Federal Highway Administration.

We understand and respect that many people have an emotional response to this program. Forest Preserves staff dedicate their careers to protecting and improving biodiverse, healthy habitats where thousands of native plants and animals can thrive together in balance with each other. We do not conduct deer management lightly or without substantial scientific evidence for its necessity and benefits.

24. I have a question or concern that is not addressed here.

Please contact our General Offices at 847-367-6640 or complete a contact form at LCFPD.org/contact to get connected with the appropriate staff.