



Too Many Deer! A Case Study in Managing Urban Deer Herds



Part I - Description of Wesselman Woods Nature Preserve

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Wesselman Woods Nature Preserve (WWNP) is an urban nature preserve located in Evansville, Indiana. Evansville is in southwestern Indiana, on the banks of the Ohio River, and is the third-largest city in the state of Indiana. The rapidly expanding metropolitan area has more than 250,000 residents. WWNP is located entirely inside the city limits of Evansville and is surrounded by typical urban development for at least a mile in every direction. West of WWNP is residential, south is a large baseball field, a freeway, a large park-like psychiatric facility, and then, about one mile away, it becomes residential. North of WWNP is residential. About a half mile north is the Pigeon Creek Floodplain, which contains a large stream meandering through city and suburbs. East of WWNP is a large shopping mall, several car dealers, and a series of stores, gyms, and other commercial facilities, extending for several miles to the east.

The woods includes 220 acres of old growth bottomland hardwood forest that has never been logged. The forest is unusual, with a very high density of large trees. It is dominated by tuliptree and sweetgum, with significant components of several oak species, hackberry, and sugar maple. It is very flat and tends to be swampy in the spring. There are a number of trails through the woods, many of which include boardwalks over the wetter areas. While the woods has not been thoroughly studied, historically it contained a high diversity of plant species, including several rare orchids.

Wesselman Woods was established as a state nature preserve in the 1930s and as a city park in the 1960s. In 1972 a field station was built on the edge of the preserve, which is staffed by four people who primarily work as environmental educators of school groups. Three of the staff, including the director of Wesselman Woods, are hired and paid for by the city of Evansville; the other staff person is hired and paid for by the nonprofit Wesselman Woods Nature Preserve Society, which assists Wesselman Woods in a variety of ways.

In 1998, the director of Wesselman Woods established a Natural Resources Committee. Several local scientists teaching at two local universities served on the committee. The committee has decided that the deer population at WWNP is too high and the herd should be reduced substantially.

Study Questions:

1. What evidence would you want to see before you agreed that the deer population is too high?
2. Deer are herbivores. What effects do you think a high deer population would have on Wesselman Woods?
3. Let's assume that you agree that the deer population is too high. What solutions would you propose for solving the deer population problem?
4. What other solutions might people propose?
5. Who are the stakeholders in the Wesselman Woods deer herd management? (Hint: someone who drives by the woods would be a stakeholder, due to the risk of a collision).

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Part II - Public Hearing Scenario

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Public Hearing Scenario

Phil: "My name is Phil Smythe. I'm the Director of Parks, and I'll chair this meeting. This meeting is a public hearing to discuss the problem of the Wesselman Woods deer herd, which may be too large for the health of the deer. Our goal here is to permit any interested citizens to comment on the deer herd, especially any ideas you may have for managing or reducing the herd. I want to remind everyone to please be civil, and we'll try to get everyone a chance to talk. Please be brief! I'll ask Lisa to summarize the situation, and then we have a bunch of people who've already signed up to speak. After they speak, any of you who want to say something will have a chance."

Lisa: "I'm Lisa Jones, and I'm the Director of Wesselman Woods. Wesselman Woods is designed to protect all living things, and that includes flowers. We have too many deer, and so we want to reduce the herd. When you walk through our woods you may have noticed how few flowers we have. Our deer herd has browsed back most plants less than four feet tall. I've talked to Robert Williams, our Indiana Department of Natural Resources (DNR) manager, several times and we've got permission to shoot deer. Therefore, we're going to have sharpshooters come in and reduce the herd size by shooting over corn bait. Dr. Snebbir, can you comment on the problems with high deer populations?"

Rick: "I'm Dr. Snebbir, and I'm a plant ecologist at the University of Evansville. One of the first things we noticed was the high and prominent browse line within the woods. Secondly, there are numerous fecal pellets scattered throughout the woods and a quick transect analysis indicates that there are more than 25 deer in the woods. Since then we've concluded that at least 45 deer currently inhabit the woods. This woods has a "K" of only 4 or 5 deer, so clearly the deer population is abnormally high. This is negatively impacting the forage species the deer consume and is probably also negatively impacting the deer health. Without an immediate substantial reduction, we predict that local extirpation of flora components will continue, recruitment of tree species will largely stop, and the deer herd will suffer from disease, genetic defects, and starvation, with a high likelihood of population eruptions into the surrounding neighborhood."

Lisa: "I'd also like Robert Williams, our regional DNR game biologist, to describe what the DNR's perspective is on managing our deer population."

Robert: "The deer in Wesselman Woods are indeed a management problem. There is a heavy browse line throughout the woods, and several rare and unusual plant species have not been seen in the woods in the last five years. We have seen herds of at least 15 deer, and last year eight deer were hit by vehicles in the area of Wesselman Woods. Now, one of the issues that we've discussed is what options are available to Wesselman Woods. According to Indiana state law, the deer are the property of the state and the DNR is responsible for approving any plan that involves trapping or hunting the deer. Initially, Lisa wanted to know if the deer could be trapped and relocated. I'm afraid the DNR will not

approve trapping. First of all, every part of Indiana already has many deer. Secondly, trapping and relocating deer is extremely stressful, and we anticipate that at least 50% would die within one week after being released."

Rick: "What about shooting the deer? Isn't that a problem within city limits?"

Robert: "We will not approve any use of rifles within city limits. Bow hunting would be permissible, but the success rate is usually too low for effective herd reduction. Our recommendation would be to hunt with shotguns, ideally shooting from an elevated position. You could increase the hunt success by shooting over baits of field corn."

Phil: "Thank you, Robert. Let's open the meeting to the public. First speaker, please state your name first."

Billy Bob: "I'm Billy Bob Baxter, and I've personally killed more than 50 deer. There are a lot of us around who like to kill deer, so why don't you just open it up to hunters for a weekend? Keep the public out, and we'll come in and shoot them for you. It would be a good old time, and we'd sure get rid of them deer for you-all."

Phil: "Thank you. Next speaker, please state your name first."

Cheryl Lee: "I'm Cheryl Lee, and I'm sixteen years old. I go to Central High and I come to Wesselman Woods every week to feed the deer. I read *Bambi* when I was eight, and I just cried and cried to find out how cruel hunters can be. Deer are wonderful animals and I just love them. So do my girlfriends, and we think that hunting them would be mean. I'm on the cheerleading team, and we're going to do this cheer at the game tomorrow: Two, four, six, eight, who do we really hate? Bambi-slayers! Bambi-slayers! Bambi-slayers suck!"

Phil: "Thank you. Next speaker, please state your name first."

Don: "I'm Don, and I've been a train engineer for 30 years. I see albino deer on the train tracks all the time, and I just want to say that they ain't dumb or diseased, like Lisa said in that news interview. Albinos are just as smart and as good as any other deer, and they can be a real source of quality. Many people worship albinos, and in Australia there are albino aborigines who have lived there for hundreds of years. A lot of people don't understand but we train engineers have time to think and we know a lot of things that scientists just don't understand. Take caffeine for example. Some people think that caffeine makes you hyper, but I know that what it really does is it cleans your brain out, so you can think better. But scientists don't want you to know that, because that way they can use it and you don't know that. Anyhow, about albinos..."

Phil: "I'm sorry, Don, but your time is up. Thank you for your helpful insights into this situation."

Ernestine: "I'm Mrs. Ernestine Franklin, and I've lived right here next to Wesselman Woods for 83 years. I used to walk over here every day and look at the flowers, and it just makes me sick that so many of my beautiful friends are gone. Those deer eat everything, and we need to stop that! There are no more fringed orchids, no more yellow ladyslippers, the gentians are almost gone, and the flowers just don't do well anymore. We need to get rid of all of the deer and let the flowers have a chance to grow back. I'd even like to see the park closed to people for a year, just to let the flowers recover."

Phil: "Thank you. Next speaker, please state your name first."

Frank: "I'm Frank Wagner, and I'm the President of the Tri-State Bowhunting Sportsmen's Association. We're a group of committed ethical hunters who prefer to shoot a bow instead of a gun. Bows are what you need here. They are quiet, you don't have to worry about bullets hitting passing cars, and we know what we're doing. We'd love to have Wesselman Woods as our hunting area. I mean, we are willing to do this for you! Find the deer, shoot them, clean them, haul them away, everything. All you gotta do is ask me. It's a no-brainer."

Phil: "Thank you. Next speaker, please state your name first."

Harry: "I'm Harry, and I have had problems with animals in my yard. What I did was to build a fence, and now Jerry's dumb dogs don't come and poop on my yard anymore. So what I don't understand is why don't you build a fence tall enough to keep deer out? Then just do a drive and chase them out, and it's not a problem. I know fences are not cheap, but I'd be happy to donate 5 bucks for this, and I'm sure most other people would too."

Phil: "Thank you. Next speaker, please state your name first."

Gloria: "I'm Gloria, and I've traveled around the world. In Africa, there is a natural balance which we are missing. Why is Africa balanced? Wild dogs, that's why! What we need here is some packs of wild dogs. They'd run the deer down and control the population, and the best thing is it's all natural-like, see?"

Phil: "Thank you. Next speaker, please state your name first."

Irene: "I'm Irene. What I don't understand is why we let the deer keep having more babies. If there are too many deer, the humane thing to do is to prevent them from reproducing and let the population diminish by itself. Surely scientists have a good contraceptive which we could use. Maybe giving them a shot, or maybe do a vasectomy on the males? I just don't like to think of shooting them."

Phil: "Thank you. Next speaker, please state your name first."

Jim: "I'm Jim, and I'm a Vietnam vet. I know what firearms are like, and we don't need shooting around here. Sure, there are too many deer. I know because they come out and push over my pine trees and they eat my roses. However, I'm a Vietnam vet and I don't want guns going off or I'll have flashbacks. Also, who wants dead and wounded deer laying around in their yards? How do we know the deer won't be running around bleeding all over the neighborhood?"

Phil: "Thank you. Next speaker, please state your name first."

Karl: "I'm Karl, and I've lived here all my life. Maybe there are too many deer, but we shouldn't just kill them. I think you should catch the deer and move them out into the country. Surely some farmer would be happy to let you release them on his land!"

Phil: "Thank you. Next speaker, please state your name first."

Linda: "I'm Linda. I'm a mother of three beautiful children and we hike through the woods regularly. I like the deer, and they are what WWNP is about! This is not a place for flower-sniffers to wander around, it's a place for real people. We come to see the deer, and if we lose some plants, so what?"

Phil: "Thank you. Next speaker, please state your name first."

Mary: "I'm Mary. Deer, like all wild things, are our spiritual sisters. We should never kill anything, and Mother Nature will balance everything out if we let it. I'm a member of PETA, and we are very upset at the idea of cruelly shooting these innocent victims. We intend to stop it. We'll run a massive protest if this stupid plan continues!"

Phil: "Thank you. Next speaker, please state your name first."

Nathan: "I'm Nathan, and I work for a local food bank. I'd just like to say that if you do harvest these animals, donate the meat to the food bank. We can find lots of poor people who could use the food."

Phil: "Thank you. Are there any other speakers?"