



Common Ground: Toward balance and stewardship

*Recommendations of the Joint City of Bloomington-Monroe County
Deer Task Force*

October 2012

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Toward Balance and Stewardship**

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Finally, thanks to the community. Ours is a community that pays attention and takes seriously our collective responsibility to wildlife and each other. Thank you to all the people who have, over the last two years, made the effort to e-mail, call, attend a meeting, participate in outreach sessions and/or complete the survey. Your feedback has been critical to our work. Thanks for caring.

EXECUTIVE SUMMARY

Not that long ago, one could take a hike in local woods and never see a deer. As scarce as deer were in the forest, they were virtually non-existent in neighborhoods. Today, things are different. Not only are deer abundant in local woods, but deer are ever more common in many neighborhoods.

The increased presence of deer in the woods and in residential areas is the direct result of human action. We have fragmented wildlife habitat, sprawled ourselves across the landscape, provided deer with ideal “edge” environment and eliminated virtually all deer predators. As a result, deer are abundant. In some areas, and to some residents, deer are overabundant. Deer are not to blame for this situation -- we are.

As humans have created the issue, how do we most responsibly address it? When it comes to managing community deer, there is no simple fix. The issue is complex and contentious. Deer are sentient beings who have significant reproductive capacity and whose numbers can grow quickly within a very small area. Humans are sentient beings who also have the capacity to overwhelm the landscape and who tend to have very strong, sometimes discordant, opinions about deer. Addressing concerns about deer requires humans to collectively ask hard questions that are ecological, cultural and moral in nature.

The Joint City of Bloomington-Monroe County Deer Task Force is a citizen group created by local government in response to petitions signed by over 500 residents calling for city and county government to “do something” about deer. It was also a response to concerns expressed by ecologists and concerned residents about deer damage in Griffy Woods.

The primary charge of this group is to provide local decision makers with guidance on how to deal with deer concerns in a community where sentiment is divided, concerns are localized and public dollars scarce. Since September 2010, the Task Force has met to explore deer management approaches, educate and reach out to the community, assess community sentiment, review the science and consult with experts.

In its work, the Task Force was faced with two very different, but related, concerns: deer damage at Griffy Woods and deer in Bloomington neighborhoods. When it comes to deer at Griffy Woods, clear evidence points to ecosystem damage by deer – native tree seedlings are not regenerating; herbaceous plant species are severely compromised and possibly going locally extinct; invasive species are taking over some areas; the forest understory is unnaturally open; and understory-reliant birds and other animals are losing habitat.

When it comes to deer in neighborhoods, the analysis is not as clear cut. State biologists advise that Bloomington’s urban deer are not starving and are not close to reaching biological carrying capacity – the number of deer the suburban environment could support. Instead, biologists direct that deer abundance in neighborhoods is best indicated by “social carrying capacity,” defined as the level of deer-related interferences in human activities that residents find acceptable. The feedback received by the Task Force via e-mails, surveys and community outreach meetings, points out that many – but certainly not all –

residents have reached their carrying capacity for deer. Much of the resident concern with deer abundance is localized to the southeastern quadrant of the City. The Indiana Department of Natural Resources (IDNR) advises that neighborhoods should not be sanitized of deer simply because deer are an inconvenience to humans, nor should residents endure unreasonable property damage. Instead, there must be a careful balance among and between the needs of people, deer, other organisms and our shared environment.

The following recommendations are intended to foster a better balance. All recommendations were filtered through the lenses of humaneness, safety, cost and efficacy. These recommendations are integrated strategies and are intended to work in concert – each management strategy has its purpose and the Task Force recommends that the best deer management program is one in which all the proposed recommendations work together. However, we acknowledge that the administrative and political reality of the issue likely means that deer management strategies will proceed in a step-wise fashion.

SUMMARY RECOMMENDATIONS

1. Griffy Woods

The work of scientists at the IU Research and Teaching Preserve indicates that the deer population at the Griffy Woods is far higher than comparable forests in the region – as much as 13 times greater. Griffy's deer density appears to be detrimental to forest biodiversity and may be restructuring the overall forest community. Deer browsing at Griffy is compromising the survival of many herbaceous species and severely hampering the regeneration of many native tree seedlings. Tree seedlings represent the next generation of forest canopy trees. Browsing also encourages the establishment of invasive species. Excessive deer browsing poses the possibility of producing an "alternate stable state" - a condition in which a forest would never return to its natural state, even if browsing pressure were diminished by a permanent reduction of deer densities. Because of the clear evidence of environmental damage, we recommend the following:

- **Sharpshooting for immediate, substantial and humane reduction.** After consulting with ecologists, researchers and biologists from both the State and federal government, the Task Force recommends that deer should be managed through a local government-financed sharpshooting effort. To restore the ecological integrity of Griffy, a substantial number of deer need to be culled soon to avoid irreversible ecological damage. Sharpshooting is the most efficient way to cull the greatest number of deer in the most humane way possible. All deer culled in this effort should be donated to the local food bank. This effort is both an environmental and social service good.

Should sharpshooting not be feasible due to cost or other considerations, the Task Force recommends that a managed hunt is the second-best way to reduce the deer herd at Griffy. Whether reduced via sharpshooting or managed hunting, any deer effort at Griffy will require maintenance. It will be up to local government to decide whether to maintain the herd through sharpshooting, managed hunting or other means.

2. Neighborhood Deer

Neighborhood deer are different. Unlike their rural counterparts, urban and suburban deer have small home ranges, high survival rates and significant reproductive potential. Absent limiting factors, a suburban deer herd can double every three to four years within a relatively small geographic area. A typical suburban deer lives an average of 8-12 years. Long before an urban deer herd reaches biological carrying capacity, residents often reach their social carrying capacity for deer. The feedback received by the Task Force indicates that many residents have reached this point.

Instead of waiting for the deer herd to grow to a level at which virtually all residents perceive deer to be problematic and to a level at which deer begin to suffer from disease, starvation and more vehicle collisions, we should take preventive measures. The Task Force recommends that responsible measures be implemented now to limit herd growth and to limit the need to apply more wide-spread and costly deer management measures in the future.

For deer in urban and suburban environments, the Task Force recommends the following:

- **Prohibit the Feeding of Deer**

Many residents feed deer with the best intentions; however, feeding is not in the best interest of deer nor in the interest of neighborly relations. Improper diets provided during feeding can create health problems for deer and can increase the rate and spread of disease. While a city-wide feeding ban is necessary, alone it is not sufficient. Deer commonly browse on plants not intended as “deer food” and any ban on intentional feeding does little to deter deer from many neighborhoods.

- **Raise Fence Height Limits**

At present, city residents are allowed to construct fences up to eight feet in height in backyards and up to four feet in front yards and on corner lots. Biologists advise that an eight foot fence will exclude most deer, but a ten foot fence will exclude just about all deer. As most, but not all urban gardens are located in backyards, the Task Force recommends that fence height limits be raised to ten feet in backyards and be restored to the pre-2007 allowance of eight feet in front yards.

- **Deer and Development**

We might also mitigate deer damage through land use practices. For example, when a developer proposes to build a new project, the project is subject to layers of review to ensure the project’s environmental soundness. While features such as karst, stormwater, tree cover and erosion are part of the analysis, wildlife is not. It should be. Much development fragments wildlife habitat and proliferates “edge” environments. Deer thrive on the edge. By filtering a development proposal through the added lenses of wildlife displacement and habitat fragmentation, we have the opportunity to try to prevent deer-human conflicts before they occur. Similarly, we should consider the ways in which corridors might be used to better direct movement of deer around or through a community rather than dispersing deer throughout.

- **Urban Deer Zone -- City of Bloomington and Monroe County land immediately surrounding the City**

The State of Indiana created Urban Deer Zones (UDZs) in response to growing concerns of Indiana residents living in urban and suburban areas. The intent of a UDZ is to reduce the size of urban deer herds to better mirror the social carrying capacity of the community by extending the hunting season, increasing the bag limit and requiring that hunters take an antlerless deer before taking an antlered deer. By focusing primarily on female deer, this “Earn-a-Buck” requirement is an effective management tool to control and reduce deer numbers. UDZ status does not permit hunting where hunting is otherwise prohibited.

IDNR has advised that the area appropriate for a local UDZ may include the City of Bloomington plus Monroe County land immediately surrounding Bloomington. IDNR will not approve UDZ designation for the county only, absent inclusion of the city. The Task Force recommends that local officials seek UDZ designation for the city and applicable areas of the county, but that any hunting within city limits be strictly regulated and limited to five contiguous acres of greenspace. The boundaries of the UDZ would be defined by roads, geographic indicators and other easily-identified markers. The following describes how a UDZ would work in the county and how it would work in the city.

Monroe County

Both bow-and-arrow and firearm hunting are allowed in Monroe County, outside the City of Bloomington’s corporate boundaries. Most county land is decidedly more rural than land within the city and hunting has been practiced for many years. To strengthen bow hunting efforts in the county, the Task Force recommends that local officials seek UDZ status for appropriate areas of Monroe County. IDNR has advised that the whole of Monroe County is not suitable for UDZ designation as much of the county is state-owned land or otherwise rural; however, if paired with UDZ designation for the city, IDNR may approve a request for UDZ status for the concentric area of Monroe County land surrounding the corporate boundaries of Bloomington. Such designation of county land could lower deer densities and potentially prevent immigration of deer into more urban areas.

City of Bloomington

At present, it is illegal to discharge a firearm within city limits, but there is no prohibition on the discharge of a bow and arrow on private property. Therefore, city residents may currently bow hunt on private property without further city regulation, provided these residents obtain a hunting license and follow all State requirements. Some residents are already hunting, or allowing hunting, on their properties. We anticipate that even more may do so as they become frustrated with deer.

The absence of rules governing bow and arrow discharge is most likely a historical artifact, rather than an intentional silence. While a number of communities successfully implement urban deer hunts in areas of human habitation, in some areas of Bloomington, it’s just not suitable. First, many of the neighborhoods

experiencing the greatest concern with deer abundance are densely settled and keeping hunting at an adequate distance from occupied structures, from roadways, sidewalks, trails and other public ways, makes hunting in neighborhoods problematic. Secondly, in dense, core neighborhoods, lots are small and yards back up to yards. Hunting in this sort of environment would almost guarantee that the practice would be very visible and that a deer shot in one yard may expire in another, causing tension among neighbors. Hunting in these urban situations raises more problems than it solves, and, as some have observed, is just not in the spirit of Bloomington's community character.

However, hunting is an age-old, cost-effective way to reduce and maintain deer herds at sustainable levels. Therefore, the Task Force recommends that the option of hunting in densely-settled neighborhoods should be taken off the table, and the practice limited to five or more contiguous acres of greenspace where rigorous hunter proficiency and safety guidelines would be required. In this context, greenspace is operationalized using the City of Bloomington Environmental Commission's definition: a permeable surface (forested, shrub/grass covered areas, parks, golf courses, cemeteries and agricultural land) more than ten feet from any human-made development such as roads, parking lots and buildings.

- **Localized Management for Pocket Deer**

Allow for Trap and Kill Management Using Automatic Notification and Stress Level Monitoring

Deer tucked away in many neighborhoods have ample food, water and cover, and little reason to migrate out of residential areas. Any hunting allowance on five or more acres of greenspace will not address most of the pocket deer living in Bloomington neighborhoods. On the advice of State and federal biologists, neither hunting nor sharpshooting is suitable for neighborhoods experiencing the greatest deer pressure. Instead, the safest form of lethal management is a trap and kill effort.

The Task Force specifically recommends a form of trap and kill that employs an automatic notification system whereby biologists are notified as soon as a deer is trapped. Automatic notification is intended to minimize the amount of time a deer is trapped, thereby reducing stress to the deer. Deer are able to endure short-term stress and urban deer are acclimated to the presence of the fences and less likely to perceive the trap as anomalous. Deer would be baited for a few weeks leading up to the implementation of the project. Acclimated to both the cage and the food source, deer are less likely to perceive the closing of the trap as an "event" and less likely to be stressed by closure. Death would be administered via gunshot. To ensure that deer stress and suffering are minimized, biologists conducting the project would be measuring cortisol (stress) levels of deer throughout the process. If biologists determine that cortisol levels are rising as the project is conducted, the project would stop. This technique requires an adequate earthen backstop, and not all properties will be suitable for the effort

Deer do not recognize human-created boundaries, such as property lines. Meaningful and effective deer management must occur on a larger scale. Therefore, IDNR will not approve this technique as an effort by, and on behalf of, an individual property owner with a small parcel. Instead, request for this management technique must derive from a larger management unit, such as a large landowner, a homeowners' association, a neighborhood association, a business park or government. Because not everyone experiences deer to be problematic, the cost of this effort should be borne by residents perceiving deer to be a problem. Neighbors could pool funds.

- **Sharpshooting in appropriate greenspaces**

Another way to realize a quick reduction in the deer herd proximate to neighborhoods is to conduct a sharpshooting effort on greenspaces near neighborhoods to prevent immigration into neighborhoods. Sites are to be determined by the entity requesting the permit in association with the agency performing the sharpshooting. Sharpshooting requires a permit from the IDNR. The Task Force recommends that authorization for sharpshooting should also require permission from the City. Again, the IDNR will not approve this technique as an effort by, and on behalf of, an individual property owner with a small parcel. Instead, request for this management technique must derive from a larger management unit, such as a large landowner, a homeowners' association, a neighborhood association, a business park or government. Cost is to be borne by residents perceiving deer to be a problem.

3. Measurement and Monitoring

There is still much the community has to learn about deer. By resolution, the Task Force will sunset once it submits its recommendations to State and local government. However, deer are here to stay, and the "deer issue" is not going away anytime soon. We offer a number of suggestions for monitoring the deer herd and for administering any deer management strategies local government wishes to adopt. Recommendations for monitoring include, but are not limited to: establishment of a Deer Management Team, tracking deer-vehicle collisions regularly and in a way that accounts for traffic volume; establishing a deer complaint system; engaging citizen scientists to help participate in regular "e-deer" counts similar to the way bird watchers register their sightings; conducting pellet counts and monitoring urban vegetation.

4. Education

While the Task Force has reached out to the community to inform them of issues of deer feeding, fawns, driving tips, deer behavior and other topics, the public should continually be informed about these issues. Additionally, any deer management plans implemented by local government will require clear communication with and to the public. For these reasons, the Task Force provides a proposed outreach and communication plan.

5. Role of Citizens

It's not just up to government to solve issues of local deer concern. Citizens have a part to play too. There are many measures residents can take to mitigate deer damage and neighbor conflict. We can stop intentionally feeding deer; it harms deer more than it helps

them. We can make an effort to plant more deer-resistant plants. Toward that end, the Task Force has worked with the IDNR to develop a [custom list of largely native plants that resist deer browsing](#). We can fence our gardens and use repellants. We can be especially cautious when driving during rut and at dawn and dusk, when deer are on the move. We can all take steps to learn more about deer nature and work to better understand which concerns are imagined (such as unprovoked aggression) and which are real.



Both humans and deer are components of a larger biotic system whose health depends on balance. By fragmenting the landscape and disrupting trophic levels, humans have upset this balance. The recommendations offered by the Task Force are informed by science, public opinion and deer welfare and are motivated by an intent to effect better stewardship of a landscape that includes deer, people, plants and other elements of our shared life. This report recommends that lethal means be introduced where predation has long been absent in an effort to restore ecosystem balance at Griffy Woods, to better manage conflict with deer in neighborhoods, and to prevent the deer herd from growing.

Our community has a strong commitment to nurturing environmental integrity, fostering humane relationships with all animals and cultivating the common good. It is also a community where residents actively work to re-imagine and re-define their relationship with nature. The “deer issue” gives us an opportunity to responsibly re-define this relationship further. As the community conversation about how to best live with deer evolves, let’s approach this discussion as we approach many other issues of community concern – with reason and with compassion for each other and the natural world of which we are a part.

INTRODUCTION

Civilization is a state of mutual and interdependent cooperation between human animals, other animals, plants and soils, which may be disrupted at any moment by the failure of any one of them.

-- Aldo Leopold, 1933

Humans and deer are elements of a bigger system. This is an interconnected and interdependent system that includes plants, soils, water and other animals. It's a complex system whose health depends on balance.

While it is hardly a novel observation to point out that humans have upset this balance, when it comes the "deer issue," it is important to keep in mind that deer overabundance – both real and perceived – is the direct result of human action. Humans have eliminated most natural predators such as mountain lions and wolves. We have sprawled ourselves across the landscape and transformed it into a crazy quilt of fields, wood lots, gardens and lawns. We've enticed deer into our neighborhoods by providing fertilized lawns and by intentionally feeding deer. Where deer were once scarce, they are now abundant. In some areas, and to some residents, deer are overabundant.

Deer overabundance is experienced differently in different contexts. In neighborhoods, overabundance sometimes translates into lost garden food, damage to trees, damage to landscaping and increased deer-auto collisions. In natural, forested areas, overabundance translates into degraded and compromised ecosystems.

An overabundance of deer is not good for deer, humans or the environment. Left unchecked, a deer herd can double every three years. As the number of deer grows, the health of the landscape declines and deer eventually suffer from increased stress and illness. As the number of deer grows, human tolerance decreases and frustrated residents may take matters into their own hands, implementing methods that may be neither legal nor humane.

Deer, other animals (including humans) and forest ecosystems are the unfortunate victims of our attempt to tame nature. Since we've upset the balance, how do we most humanely, safely and effectively restore it? There are no easy answers to this question. The issue of deer management is both complex and contentious, and there is no one-time, one-size-fits-all simple fix.

In its work, the Deer Task Force was faced with developing recommendations to address two very different concerns: deer damage at Griffy Woods and complaints about deer in Bloomington neighborhoods. Assessing the influence of deer at Griffy Woods was a relatively straightforward process. Clear scientific evidence indicates that deer are damaging the forest ecosystem: native tree seedlings are not regenerating; herbaceous plant species are severely compromised and may be going locally extinct; invasive plant species are taking over; the forest understory is unnaturally open; and understory-reliant birds and other animals are losing habitat.

Assessing the deer situation in Bloomington neighborhoods was another matter. Urban deer have plenty of food and cover in neighborhoods. They are acclimated to human presence and are comfortable with the human built environment, routinely navigating sidewalks, traffic and backyard fences. Bloomington deer are not starving, nor have they reached biological carrying capacity. Instead, concern with deer in Bloomington neighborhoods is almost entirely social. Not all residents perceive deer to be overabundant, and concerns about deer tend to be concentrated in certain areas of the city. The challenge for the Task Force was to develop recommendations that were sensitive to different, oftentimes localized, social carrying capacities for deer.

With these very different concerns in mind – one ecological and one social – the Task Force offers this advisory report. This report is issued by a group of volunteers who have done their best to examine the science, work with the experts and listen to their fellow community members. It is not the only way to approach deer in our community, although we did work hard to come up with suggestions that we think are responsible, responsive, humane and in the best interest of deer.

No doubt this report will not please everyone – some will think it goes too far and others will think that it does not go far enough. It represents just one juncture in a continuing community discussion about how deer and humans can best live together. This report is advisory in nature: it will be up to elected officials in cooperation with the Indiana Department of Natural Resources to decide which recommendations to implement. Just as the voices of residents have been solicited and encouraged during the Task Force process, so too will public input be a vital part of the more formal policy-making process.

Ours is a community that cares deeply about animals, our shared environment and each other. As our community conversation about deer evolves, residents must be willing to work together toward solutions to the twin problems of deer overabundance and people getting angry at each other about it. As the “deer issue” is not going away anytime soon, let’s approach deer management with the hallmark traits that make our community great – creativity, kindness and respect toward humans and other animals.

ABOUT THE DEER TASK FORCE

The Joint City of Bloomington-Monroe County Deer Task Force was established by the Bloomington City Council and the Monroe County Commissioners in 2010. The group was formed in response to concerns expressed by members of the Bloomington Environmental Advisory Committee about deer damage at Griffy Woods and in response to a petition signed by over 500 residents calling upon the City and County to establish a task force to address concerns about deer in neighborhoods. The charge of the Joint Task Force is to explore ways to address social and environmental concerns about deer, to engage in public outreach, to solicit community feedback and to issue advisory recommendations. The Task Force will sunset once it submits its recommendations.

Since September 2010, the Task Force has met almost monthly to consult with experts, review management options, develop a communication plan, solicit and analyze public feedback and work through possible approaches. Throughout this process, the Task Force worked closely with the Indiana Department of Natural Resources (IDNR) to learn about deer and to examine various management options. In addition, the Task Force has sought advice from ecologists, anthropologists and biologists from IU, Purdue and the United States Department of Agriculture. We've toured "deer problem" neighborhoods, mapped the geography of resident concerns, worked with scientists from the IU Research and Teaching Preserve to learn more about deer at Griffy Woods and consulted with other communities that have dealt with urban deer concerns.

The Task Force has also worked to learn more about the public's concern with deer. All meetings of the Task Force have been open to the public to attend, observe and comment. We hosted a series of five community outreach meetings in 2011, set up booths at the Farmers' Market and issued a public opinion survey to which over 700 community members responded. We established a website and an e-mail address and developed an extensive set of "Frequently-Asked Questions." The Task Force has issued tips for living with deer and developed a custom list of largely native deer-resistant plants.

The Task Force has also reached out to the public through media. The group issued media pieces to educate residents about deer behavior, offer tips for driving during the rut, urge residents not to feed deer, explain the effects of deer herbivory on the Griffy ecosystem, and offer periodic updates on the work of the group. Members of the Task Force were featured on WFIU's *Noon Edition* and have been interviewed by the *Herald-Times*.

The Task Force is a citizen-based, volunteer group composed of 11 people from diverse backgrounds. Members were appointed based on their interest in the issue, their expertise and their ability to work with people of differing perspectives. The Task Force includes a City Council member, a County Commissioner, the Director of the City's Animal Care and Control, a retired editor and avid gardener, a wildlife rehabilitator, an ecologist and IU professor, the CEO of a local animal welfare organization, a hunter and competitive archer, a conservation biologist who studied bear-human conflicts in Japan and an anthropologist who studied deer-human conflicts in Scotland. A wildlife biologist from IDNR provides the group with technical advice and serves in a non-voting capacity. (Brief biographies of Task Force members can be found at the end of this document.)

JURISDICTION

Many residents look to the Task Force and local government to solve the deer issue. However, it is important to understand that the Task Force and local government do not have authority to manage deer in any way they see fit. Instead, any proposal to care for, manage or otherwise regulate deer on public or private property must first be approved by the IDNR.

According to the Indiana Code, wild animals belong to the people of Indiana, and IDNR is charged with protecting and managing Indiana wildlife on behalf of Indiana residents (I.C. §14-22-1-1). By law, the IDNR is required to consider the welfare of wild animals, the relationship of wild animals to other animals and the welfare of people (I.C. §14-22-2-6). IDNR sets the boundaries within which deer management options can be selected, but leaves it up to communities to decide specifically how and if management should occur. (IDNR, *Human Conflict with White-tailed Deer*, 2012).

MANAGEMENT CRITERIA

The recommendations contained in this report are motivated by the following considerations: 1) to do what is in the best interest of deer; 2) to manage deer-human conflicts at levels considered safe and acceptable to community residents; 3) to manage deer impact for a healthy forest habitat at Griffy Woods; and 4) to improve the public's knowledge and understanding of deer. In developing its recommendations, the Task Force asked the following questions of each possible management option: Is it effective? Is it safe? Is it humane? Is it cost-effective? Will the IDNR allow it?



No one deer management tool will magically solve all concerns with deer overabundance. The type and severity of deer conflicts within the community vary considerably and no single approach can be expected to be effective in all situations. Therefore, the recommendations of this report are intended to work as an integrated whole.

Similarly, the need for deer management is not going away anytime soon. The management approaches recommended in this report reflect a picture of the deer issue in our community at one point in time: ~2010-2012. Deer, humans and other ecosystem components are parts of an open system that is continually changing. We cannot accurately predict months or years in advance what the deer population will be, what people will want, or what habitat will look like. As our populations and habitats change, the suggestions of this report might be wholly inapplicable in future years. Responsible stewardship means that we will have to monitor actions and adapt any management program to changing conditions. For these reasons, it will be critical for local government to establish a team to administer any management strategies government wishes to implement and to monitor the deer situation going forward.

KEY TERMS

BIOLOGICAL CARRYING CAPACITY:

The number of deer in good physical condition that a parcel of land can support over an extended period of time. When population numbers approach or exceed this capacity, habitat quality decreases, the herd's physical condition declines and the likelihood of winter mortality due to poor nutrition or disease increases.

HOME RANGE:

The area within which a deer normally lives over the course of a year. This is the area traversed by a deer in its normal activities of foraging, resting, mating and caring for young.

OVERABUNDANCE:

A much-used and misused term. "Overabundance" does not always translate into "overpopulation." Overabundance tends to be understood in at least two ways. First, deer may be regarded as overabundant when they cause direct harm to, or are perceived to harm, human welfare. This harm may include damage to plants, vehicle collisions and threat of disease. This understanding directly relates to human self interest. Second, overabundance may also be invoked when deer populations reach densities that threaten the integrity of the biological world -- for example, when browse lines appear, when forest understory disappears, native species are compromised or when biodiversity becomes degraded (Rutberg 1997).

SOCIAL CARRYING CAPACITY:

The maximum number of deer that can coexist compatibly with local human populations. Social carrying capacity is a function of the sensitivity of the local human population to the presence of deer, and can be considerably lower than biological carrying capacity. Sensitivity of humans to deer is dependent on local land use practices, local population density, and attitudes and priorities of humans. Social carrying capacity is often reached well before biological carrying capacity is reached in urban situations.

HUMANE DEER MANAGEMENT POSITION STATEMENT

The humane treatment of deer was a critical component of the Task Force's decision-making process. On 26 September 2011, the Task Force adopted the following policy.

As stated by the World Organization for Animal Health and the American Veterinary Medical Association (AVMA), animal welfare means how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare, as indicated by scientific evidence, if it is healthy, comfortable, well nourished, safe, able to express innate behavior, and if it is not suffering from unpleasant states such as pain, fear and distress. Further, conservation and management of animal populations should be humane, socially responsible and scientifically prudent, including humane handling and humane slaughter.

The AVMA states that euthanasia is the act of inducing humane death in an animal with an emphasis on making the death as painless and distress free as possible. Euthanasia techniques should result in rapid loss of consciousness followed by cardiac or respiratory arrest and the ultimate loss of brain function. In addition, the technique should minimize distress and anxiety experienced by the animal prior to loss of consciousness. The specific method to be used should be determined based on a number of factors including location of the animal to be euthanized, safety aspects, whether the animal is captive or free-roaming, whether the animal is intended for human consumption and the experience of personnel performing the euthanasia.

The Joint City of Bloomington-Monroe County Deer Task Force endorses these statements.

The Task Force intends that priority be given to non-lethal mitigation strategies and that lethal means be employed when a determination is made that a problem exists that is unlikely to be solved using non-lethal means. Further, the Task Force recommends lethal management methods be employed where necessary to alleviate suffering, protect human life, prevent damage to the rest of the ecosystem or for the overall health of the deer population. If lethal means must be utilized, the most humane methods should be employed, as prescribed by the AVMA Guidelines on Euthanasia.

ABOUT DEER

White-tailed deer are one of Indiana's oldest native wildlife, once existing alongside saber-toothed cats and woolly mammoths. However, due to hunting and habitat destruction, deer were actually eliminated from Indiana by the late 1800s. The last reported deer was documented in 1892 and Indiana remained "deer free" until the species was reintroduced by State fish and wildlife biologists in 1934. By 1951, the number of deer in Indiana had grown to 5,000 and the deer harvest that year was almost 1,600. Today, the deer harvest exceeds 130,000 animals per year (Stewart 2011). In large part, this rebound is due human alterations of the natural landscape, including the creation of suburban and exurban developments and the elimination of virtually all non-human predators. Where deer were once scarce, they are now abundant.

The considerable growth of Indiana's deer population indicates the very resilient and adaptable nature of deer. Urban deer have adjusted to conditions of the human built environment: they thrive on a fragmented landscape, find nutrient-rich forage in neighborhood yards, live out their lives in a fairly small geographic range, are acclimated to the presence of humans. Urban deer live longer and have fewer predators than rural deer.

HABITAT: THE EDGE

Deer are edge species - they prefer those transitional spaces that are situated between forested areas and open spaces, such as agricultural land, grass land and human settlement. Ravines, creek draws, natural areas, and wooded parks create natural bedding areas and cover, while golf courses, open park land, fertilized lawns and flowering or vegetable gardens provide ample and varied forage opportunities.

Urban deer are also much more habituated to human presence (Storm et al. 2007, Etter et al. 2002, Swihart et al. 1995). Deer acclimated to people do not avoid areas of human settlement and lose their fear of humans. As a consequence, urban deer often exhibit a "refuge effect" in which deer are attracted to fertilized lawns and gardens as food supplements, are not afraid to cross roads and traffic to pursue food and otherwise do not avoid contact with humans.

DIET: MOVABLE FEAST

White-tailed deer are foragers. One of their many defense mechanisms is eating on the go. Deer will not camp out at a food source; instead, they eat a little here, move on, eat a little there, and so on. An average deer will consume between 4.5 and 11 pounds of food a day. When it comes to food preferences, deer love fertilized areas and no where is fertilizer more abundant than lawns, flower beds and gardens. Indeed, food found in suburban yards is sometimes more nutrient rich than that found in the forest (Swihart et al. 1995).

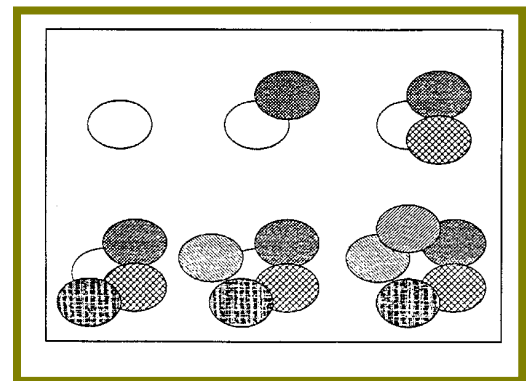
HOME RANGE

Compared to their rural counterparts, urban deer live out their lives within a relatively small geographic area (Grund and Woolf 2002). The home range of deer in developed landscapes ranges from 43 hectare (ha) (urban) to 158 ha (exurban). This compares with a home range of deer in forested areas of 171-181 ha and agricultural landscapes, 161-170 ha (Kilpatrick and Spohr 2000; Etter et al. 2002; Walter et al. 2002).

Home ranges are shaped by many factors: 1) population density is inversely related to home range; 2) local movement may be restricted if habitat is patchily distributed, resulting in insular areas where activity is concentrated; and 3) increased concealment sites (wooded areas used for cover) interspersed with feeding sites in suburban contexts may reduce the energy requirements of deer (Swihart et al. 1995).

Within suburban areas, female deer have smaller home ranges than male deer. White-tailed deer are organized into matrilineal groups in which related females are accompanied by their immediate offspring. Female deer typically remain in the area in which they are born and the home range of young female deer often overlaps with that of their mothers while males disperse (Porter et al. 1991; Nixon et al. 1994). Biologists have characterized the range of female deer

as a rose-petal configuration wherein family units exist in a form analogous to the petals on a rose (US DOI 1992).



Ovals represent the overlapping home ranges of female offspring from several generations. Source: U.S. Department of the Interior.

DEER TEMPERAMENT

Deer are not aggressive animals. By and large, they are very gentle. Given the choice of “fight” or “flight,” a deer will flee. However, like all mothers, a doe may become aggressive if she perceives her young are being threatened. Because deer have a longer evolutionary history experiencing canines as predators, a doe may more readily become aggressive at the sight of dog than a human.

Deer aggression did not inform the recommendations of this report, largely because aggression is more imagined than it is real. Yet, the Task Force received many inquiries from frightened residents wanting to know what to do if they encounter a deer. The short answer is to use common sense and observe the deer from a distance; keep your dog inside if deer are outside. For more tips on what to do if you encounter a deer, see “Tips for Living With Deer.”

REPRODUCTIVE POTENTIAL

In areas where there is sufficient food, shelter and water and an absence of predation, deer tend to have high reproductive potential and populations can increase quickly.

Deer populations increase, decrease or remain stable based on the balance between reproduction and mortality. In Indiana, deer reproductive rates are generally high and mortality of adult deer is relatively low. When mortality is limited, a deer herd could realistically double within three years.



In the Midwest, fawns generally have a reproductive rate of 1.13, although this figure can be as low as 0.6. Yearlings and adults generally have between 1.8 and 2.1 young each year, although this figure can be as low as 1.6 (Nixon 1991). At the same time, survival rates for urban, suburban and exurban deer are relatively high, ranging from 69 to 87% (Storm et al. 2007, Etter et al. 2002; and Beringer et al. 2002). A typical suburban deer lives an average of 8-12 years (Storm et al. 2007; Etter et al. 2002).¹

The following hypotheticals are intended to illustrate the reproductive potential of a deer herd in situations of limited predation. The hypotheticals were provided by the IDNR and are not representations of the local deer population. The models are not meant to be interpreted literally, although realistic numbers have been entered. ²

Two scenarios are provided below. *Hypothetical A* uses commonly accepted figures to model population growth. This hypothetical demonstrates that a deer herd can double in three years. *Hypothetical B* uses more conservative reproductive rates – rates well below commonly cited ranges. Using conservative figures, the second hypothetical illustrates that a deer herd can double in four years.

¹ Climate change might also influence deer reproduction. Milder winters increase deer body mass (Myserud et al. 2001) and winter survival (Loison et al. 1999), which favor population growth (Forchhammer et al. 1998.)

² Thanks to Indiana State Deer Research Biologist Chad Stewart for providing the initial hypothetical and for permission to reprint here.

HYPOTHETICAL A – The Moderate Model

YEAR 1

Assume at the beginning of Year 1, there are 100 deer in a herd: 50 are male, 20 are female fawns and 30 are female yearlings/adults. If fawns exhibit a reproductive rate of 1.13, yearlings and adults recruit at a rate of 1.8 and survivorship is a mid-range figure of 75%, the following is a possible growth scenario:

50 males
20 female fawns
 these fawns produce 22.6 young (reproductive rate of 1.13)
30 adults/yearlings
produce 54 young (reproductive rate of 1.8)
177 deer total
- 44 deer die

133 deer alive at the end of Year 1

YEAR 2

For the sake of simplicity, assume 25% mortality, which studies show is high for urban deer (fawns will likely exhibit a higher mortality rate.) At the beginning of Year 2, assume that the deer population starts out as follows:

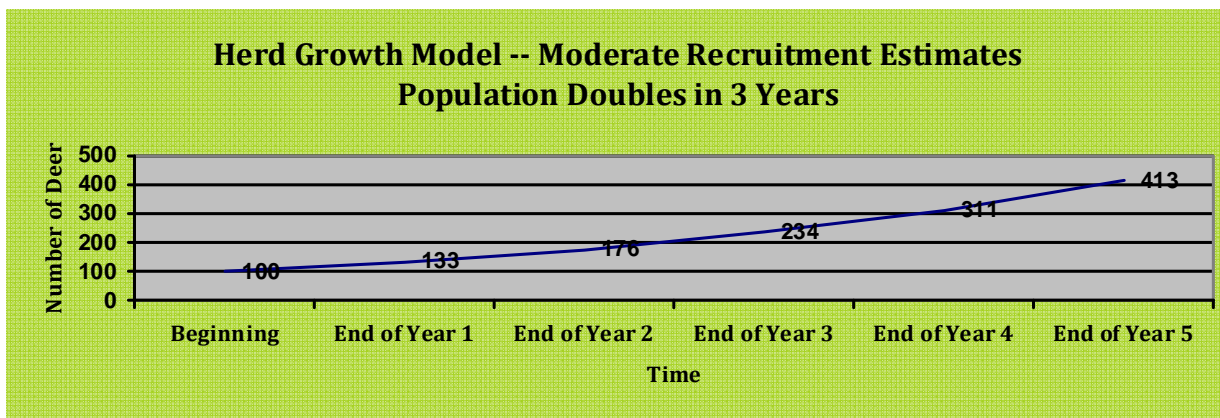
38 males
17 fawns born in Year 1 to female fawns (assume 8 are female and 9 are male)
15 fawns recruited to yearling status from female fawn status in Year 1
23 female yearlings/adults
40 fawns produced in Year 1 by female yearling/adults (assume 21 are female and 20 are male)

Reproduction in Year 2

67 males (38 males continuing to survive + 29 male fawns born in Year 1)
29 female fawns (21 born to yearlings and 8 born to fawns in Year 1)
 these fawns produce 33 young (reproductive rate of 1.3)
38 yearlings/adults (the 23 surviving from Year 1 + the 15 new yearlings)
 these yearlings produce 68.4 young (reproductive rate of 1.8)
235 deer total
-59 die

176 deer alive at the end of Year 2

Under these parameters, the deer herd is growing ~33% per year, and will have doubled at the end of the third year.



HYPOTHETICAL B – The Conservative Model

Again, assume there are 100 deer in a herd -- 50 are male, 20 are fawns and 30 are yearlings/adults. However, instead of a female fawn reproductive rate of 1.13, assume a rate of 0.6. Instead of an adult recruitment rate of 1.8, assume a rate of 1.6. Assume 25% mortality.

YEAR 1

50 males
20 female fawns
 these fawns produce 12 young (reproductive rate of 0.6)
30 adults/yearlings
 produce 48 young (reproductive rate of 1.6)
160 deer total
- 40 deer die

120 deer alive at the end of Year 1

YEAR 2

At the beginning of Year 2, the deer population starts out as follows:

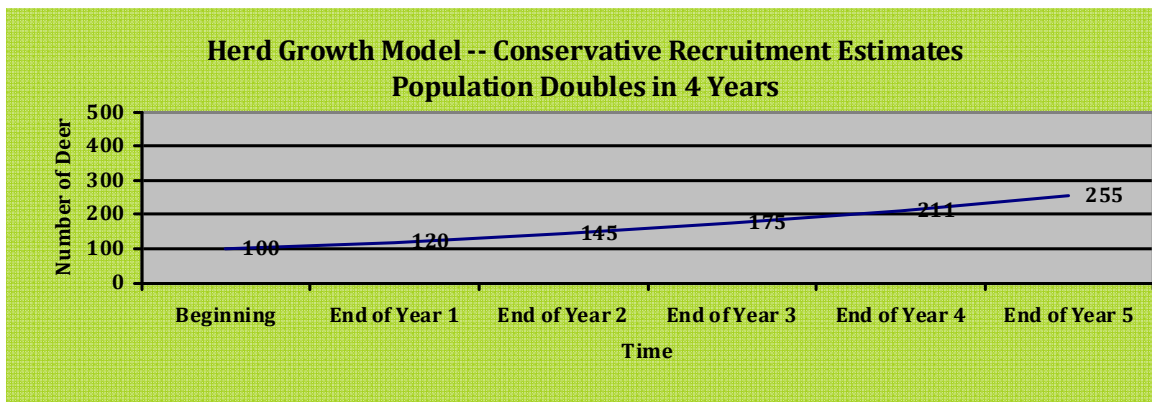
37 males
9 fawns born in Year 1 to female fawns (assume 4 are female and 5 are male)
15 fawns recruited to yearling status from female fawn status in Year 1
23 female yearlings/adults
36 fawns produced in Year 1 by female yearling/adults (18 are female and 18 are male)

Reproduction in Year 2

60 males (37 males continuing to survive + 18 male fawns born to yearlings and 5 born to fawns in Year 1)
22 female fawns (18 born to yearlings and 4 born to fawns in Year 1)
 these fawns produce 13 young (reproductive rate of 0.6)
38 yearlings/adults (the 23 surviving from Year 1 + the 15 new yearlings)
 these yearlings produce 61 young (reproductive rate of 1.6)
194 deer
-59 die

145 deer alive at the end of Year 2

Under these parameters, the deer herd is growing ~21% per year, and will have doubled at the end of the fourth year.



DEER DATA

When talking about deer, many people want numbers. How many deer live in the community? This is a tough question to answer. We don't know exactly how many deer there are in Bloomington and Monroe County. The IDNR does not engage in a deer census.

Instead of looking at the number of deer per square mile, modern deer management looks at trends and the *effects* of deer overabundance, such as deer health, ecosystem health and deer-human conflicts.



If the deer are healthy, the forest is healthy, deer-vehicle collisions are not increasing and people are not complaining about deer, it does not matter how many deer there are per square mile -- the management objectives have been met. While the Task Force considered quantification techniques such as aerial counts, thermal infrared photography, drive and pellet counts and spotlight techniques, these techniques are variously expensive, labor-intensive and, according to the IDNR, wholly unnecessary.

POPULATION TRENDS

To track population trends in the Indiana deer herd, the IDNR relies on harvest and deer-auto collision figures. These trends show that the deer population is growing throughout the State, but has been stable within Monroe County in recent years.

Deer Harvest – Monroe County

In Monroe County, the number of deer harvested over the last 12 years has oscillated but appears to be relatively stable (*See Appendix II*). In 2000, 1,368 deer were harvested; that number increased to 1,623 in 2004, dropped to 1,272 in 2005 and increased to 1,480 in 2009 – the year in which resident complaints increased. In 2011, the harvest figure was 1,361, very close to what it was 12 years ago.³ Insofar as the vast majority of hunting occurs in more rural areas of the county, not within city limits, these figures most accurately reflect trends in the deer herd outside the city.

³ According to the IDNR, a reduced harvest may or may not be a function of reduced herd size. Weather also informs deer movement and hunter participation. Cold weather is a signal to deer to move and is closely related to the deer rut. The Indiana State Climate Office reported above normal temperatures 21 days in November 2011, with eight of those days being 10 degrees or more above normal, making it the ninth warmest November since 1895. It was also the third wettest November in history and the wettest in the past 26 years. Warm weather may have kept deer at bay and the rain may have discouraged some hunters.

Deer-Vehicle Collisions

Similarly, deer-vehicle collisions have remained stable in both the city and county over the last handful of years. Importantly, this collision data is recorded only when an accident incurs \$1,000 in property damage. Not surprisingly, most of these *recorded* collisions occur on high-speed, high-volume roads, not on low-speed, low-volume residential neighborhood roads. Deer-vehicle collisions are a function of many factors, not only deer density. Other factors such as driver behavior, reporting practices, traffic speed and traffic volume inform the number of deer-vehicle collisions. s

Monroe County

In Monroe County, reported deer-vehicle collisions increased from 41 in 2000 to approximately 110 in 2011. This increase could be due to better reporting, more deer, more cars on the road, more roads or a host of many other factors.

From 2008-2011, total county crash figures have remained relatively stable:

- 2008 100
- 2009 115
- 2010 111
- 2011 110

City of Bloomington

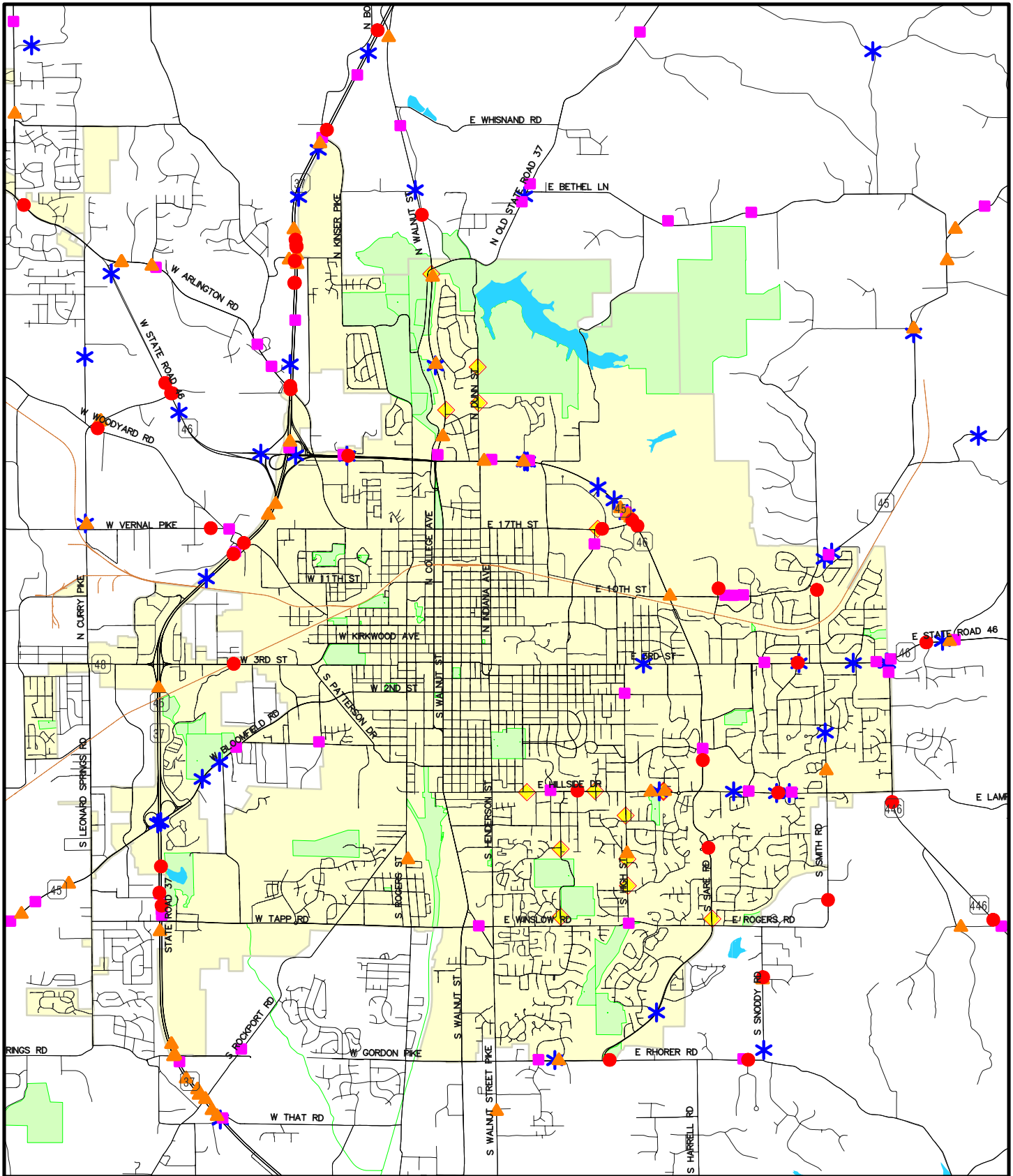
From 2008-2011, crashes within Bloomington's city limits and the immediate area around the city have also remained stable:

- 2008 45
- 2009 52
- 2010 53
- 2011 40

Most of the \$1,000+ recorded crashes in the city occur on high-volume roads such as State Road 46 Bypass near Lake Griffy, the State Road 46-State Road 446 intersection and near the Renwick development. Most deer-vehicle collisions occur during rut (mating) season, October-December; most did not result in injury to humans; none resulted in death to a human; and most of the property damage ranged from \$1,001 to \$2,000.

While helpful, this information does not account for traffic volume. A more descriptive analysis would control for volume – how many accidents occur per million miles travelled. In the absence of that information, it is difficult to know if accidents are happening because there are more deer in the area or just more cars on the road. (See “Measurement and Monitoring” for recommendations for more informational ways to track deer-vehicle collisions.)

The following maps document accident locations, season, injury and damage estimates for both the City of Bloomington and Monroe County.



Deer-Vehicle Accidents 2008-2011

Accidents by Year

Bloomington Area (190 Accident Reports)

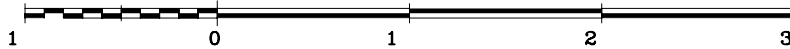
Legend

- ★ 2008
- 2009
- ▲ 2010
- 2011

◆ CoB Crossing Warning Sign

Totals: 2008 (45) 2009 (52) 2010 (53) 2011 (40)

Scale: 1 inch = 1 mile



February 16, 2012

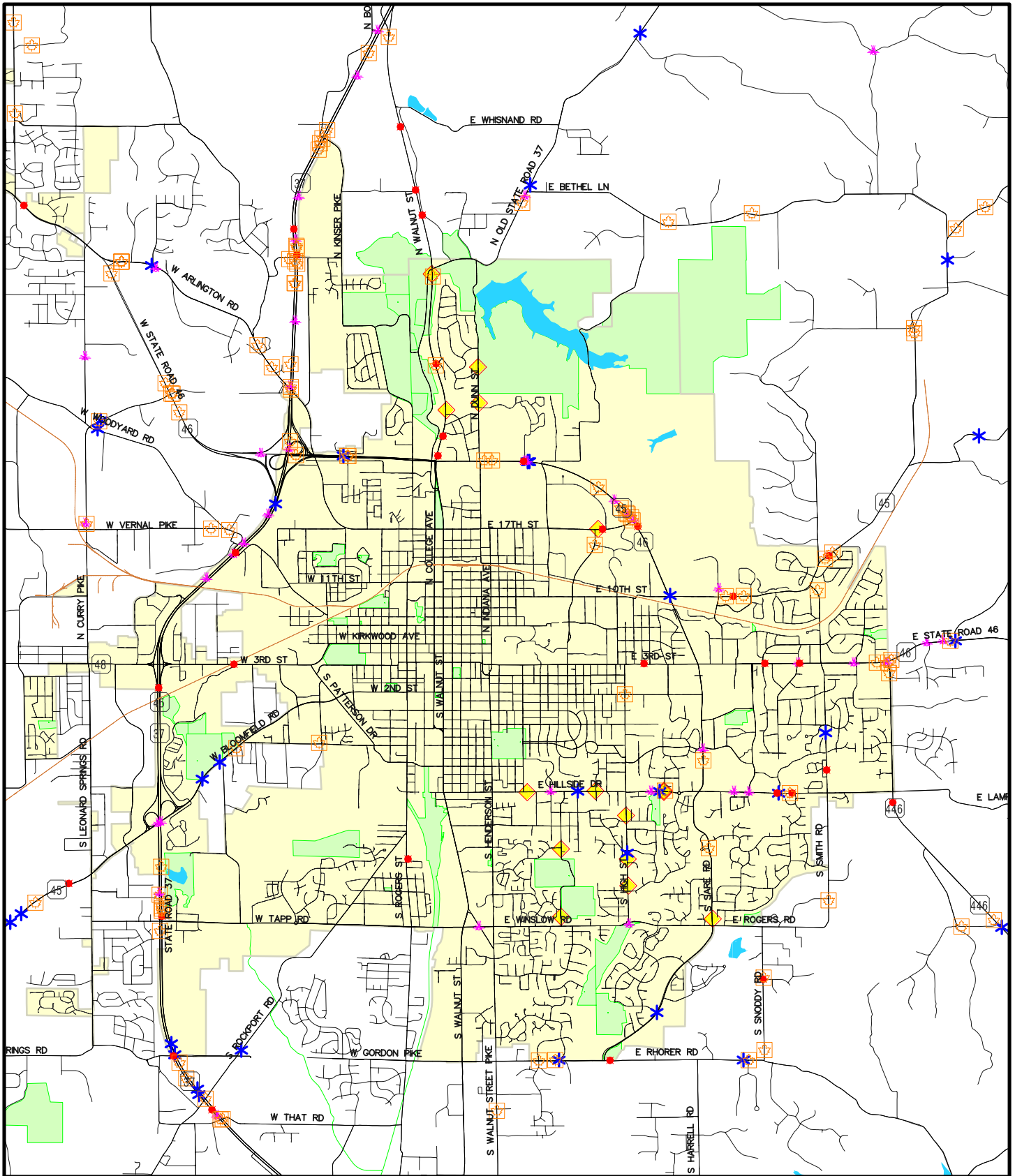
For use as map information only, information is NOT warranted.

TbdeeracLP (yr)

City of Bloomington
Deer Task Force



Geographic
Information System



Deer-Vehicle Accidents 2008-2011

Accidents by Season

Bloomington Area (190 Accident Reports)

Legend

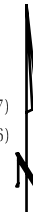
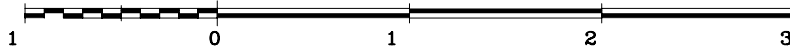
◆ CoB Crossing Warning Sign

★ Jan.-March ★ April-June ★ July-Sept. ★ Oct.-Dec.

Jan (15) Feb (11) Mar (4) Apr (6) May (13) Jun (19) Jul (19) Aug (7)

Sep (9) Oct (36) Nov (39) Dec (16)

Scale: 1 inch = 1 mile



City of Bloomington
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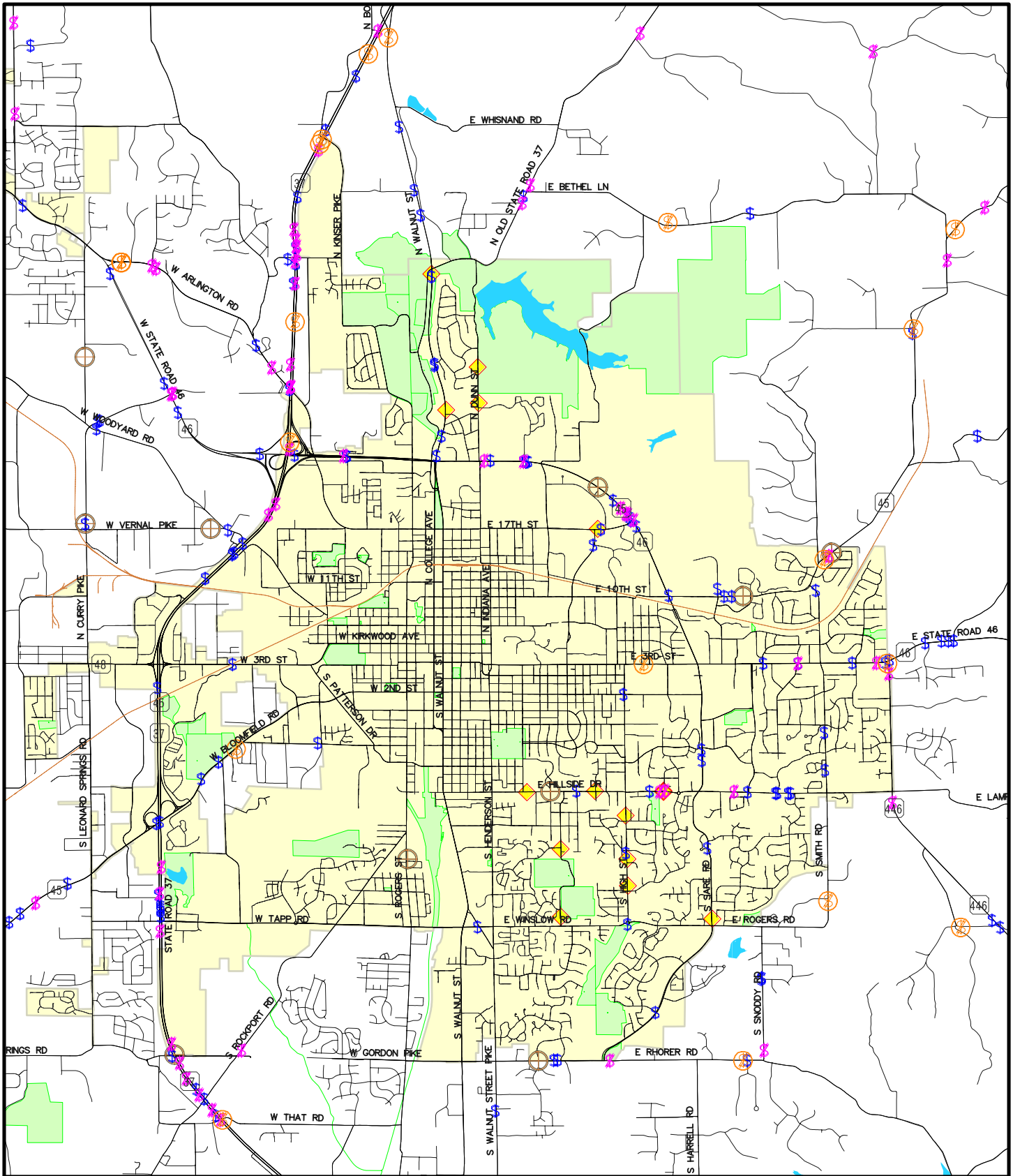


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February 16, 2012

For use as map information only, information is NOT warranted.

TbdeeraLP (seasn)



Deer-Vehicle Accidents 2008-2011

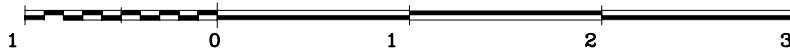
Accident Damage Estimates

Bloomington Area (190 Accident Reports)

Legend

- 0 - \$1,000
- \$ 1,100-\$2,500
- ⊕ \$2,501-\$5,000
- ⊙ \$5,001-\$10,000
- ⊠ \$10,001+ Damage Totals: 0-\$1,000 (10) 1,001-\$2,500 (109) 2,501-\$5,000(52) 5,001-\$10,000 (19) 10,001+ (0)
- ◆ CoB Crossing Warning Sign

Scale: 1 inch = 1 mile



February 16, 2012

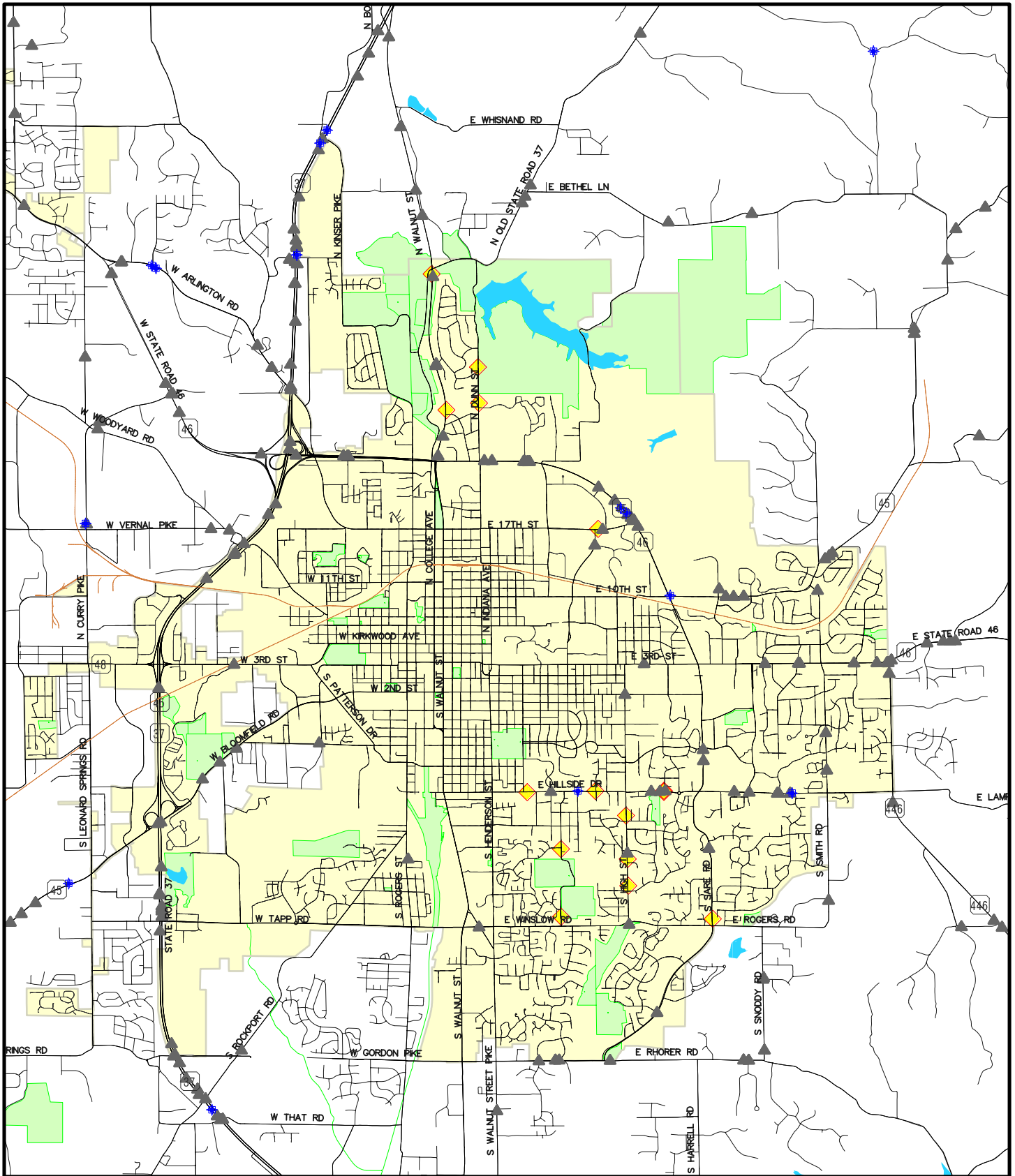
For use as map information only, information is NOT warranted.

TbdeeraLP (damg)

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Deer Task Force



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Information System



Deer-Vehicle Accidents 2008-2011

Driver Injuries

Bloomington Area (190 Accident Reports)

Legend

- CoB Crossing Warning Sign
- 0 Injuries
- 1 Injury
- 2-4 Injuries
- 5+ Injuries
- Deaths

No Injuries (176) 1 Injury (14) 2-4 Injuries (0) 5+ Injuries (0) Deaths (0)

Scale: 1 inch = 1 mile



February 16, 2012

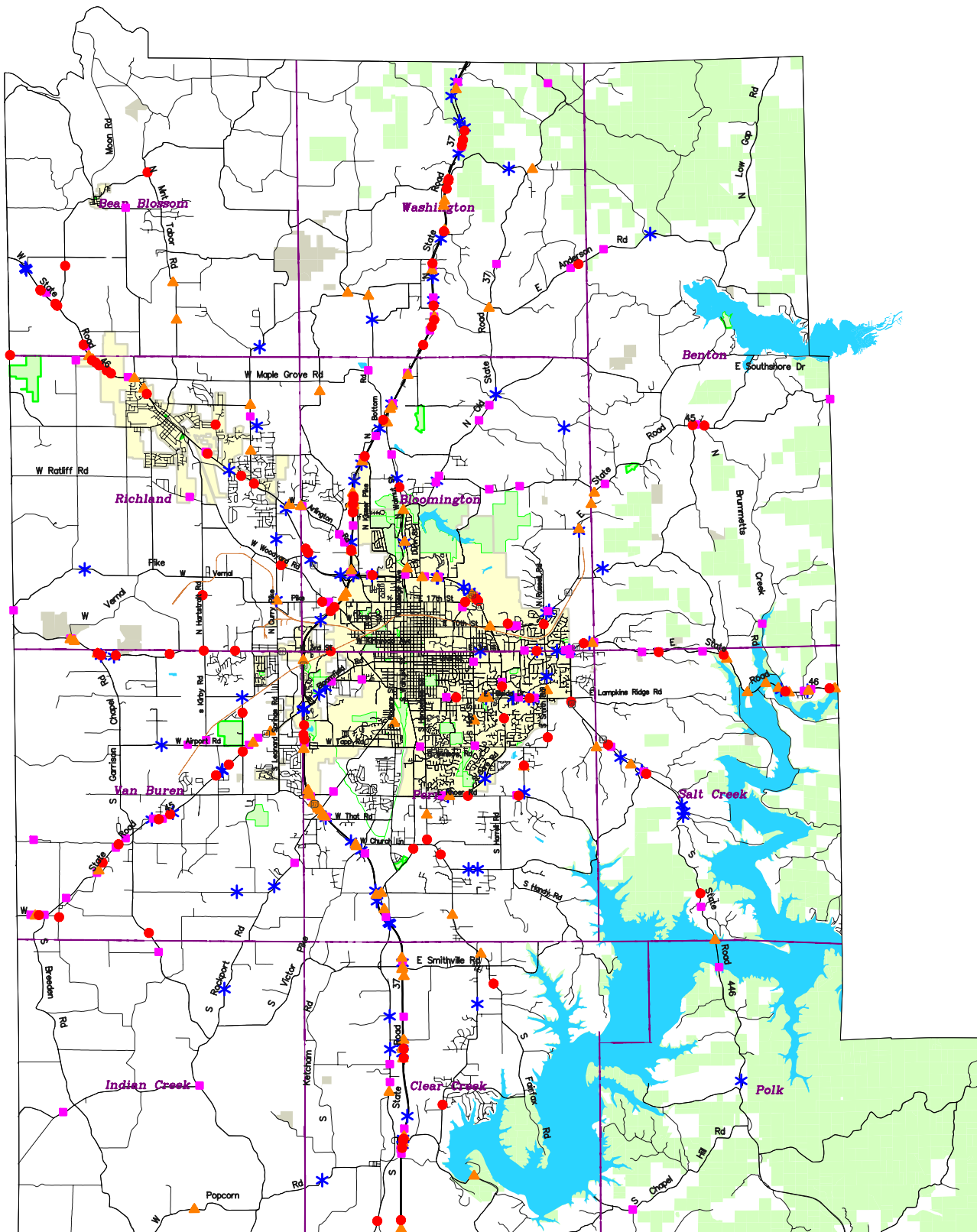
For use as map information only, information is NOT warranted.

TbdeeraLP (inj)

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Deer-Vehicle Accidents 2008-2011

Accidents by Year

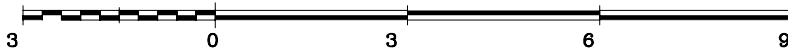
Monroe County Area (436 Accident Reports)

Legend

- ★ 2008
- 2009
- ▲ 2010
- 2011

Totals: 2008 (100) 2009 (115) 2010 (111) 2011 (110)

Scale: 1 inch = 3 miles



February 16, 2012

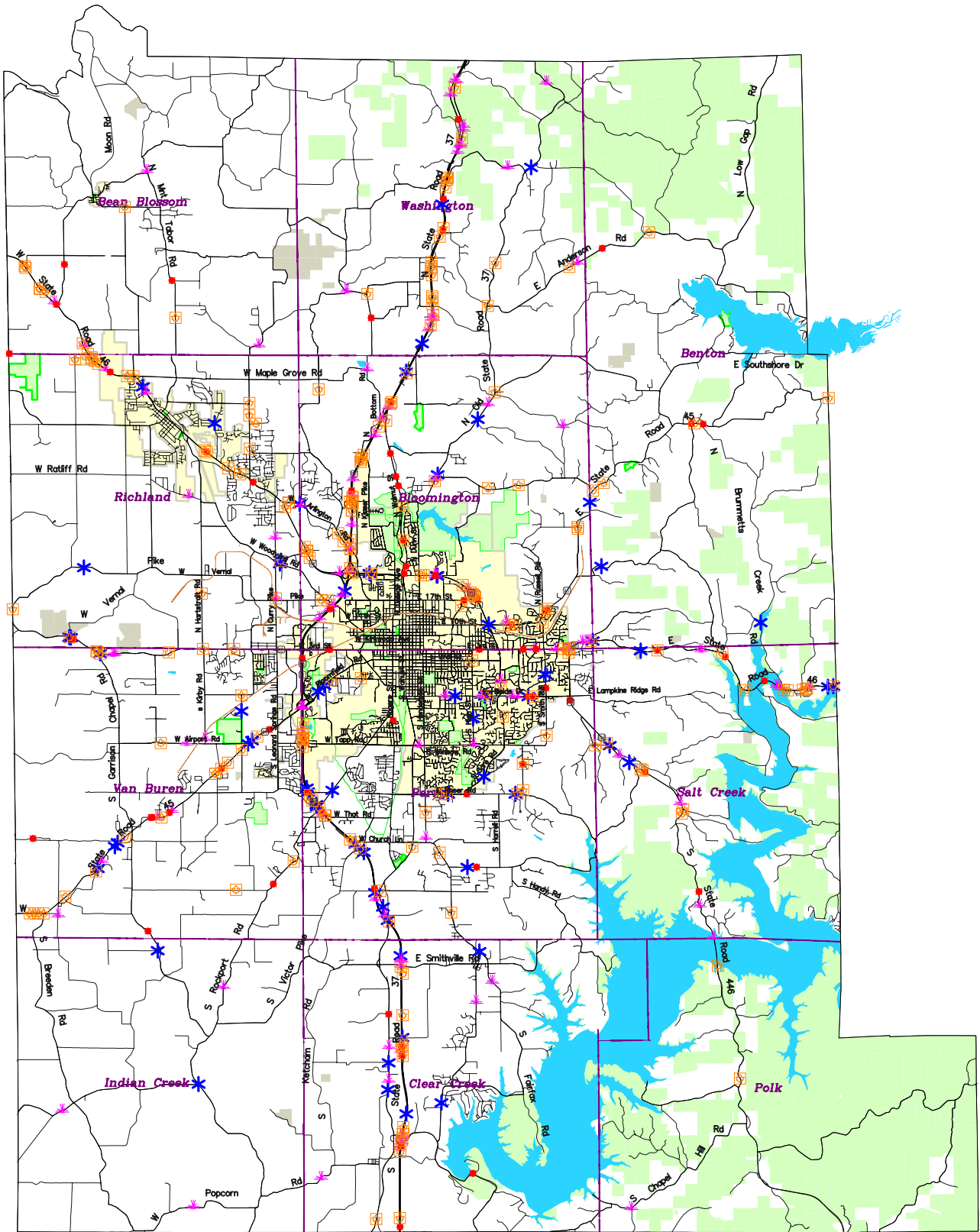
For use as map information only, information is NOT warranted.

TmdeeraCLP (yr)

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Geographic
Information System



Deer-Vehicle Accidents 2008-2011

Legend

Accidents by Season

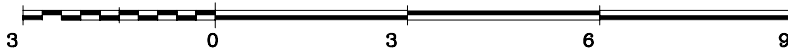
★ Jan.-March
 ★ April-June
 ★ July-Sept.
 □ Oct.-Dec.

Jan (26) Feb (24) Mar (15) Apr (23) May (37) Jun (40) Jul (19) Aug (20)

Monroe County Area (436 Accident Reports)

Sep (27) Oct (72) Nov (94) Dec (39)

Scale: 1 inch = 3 miles



City of Bloomington
Deer Task Force

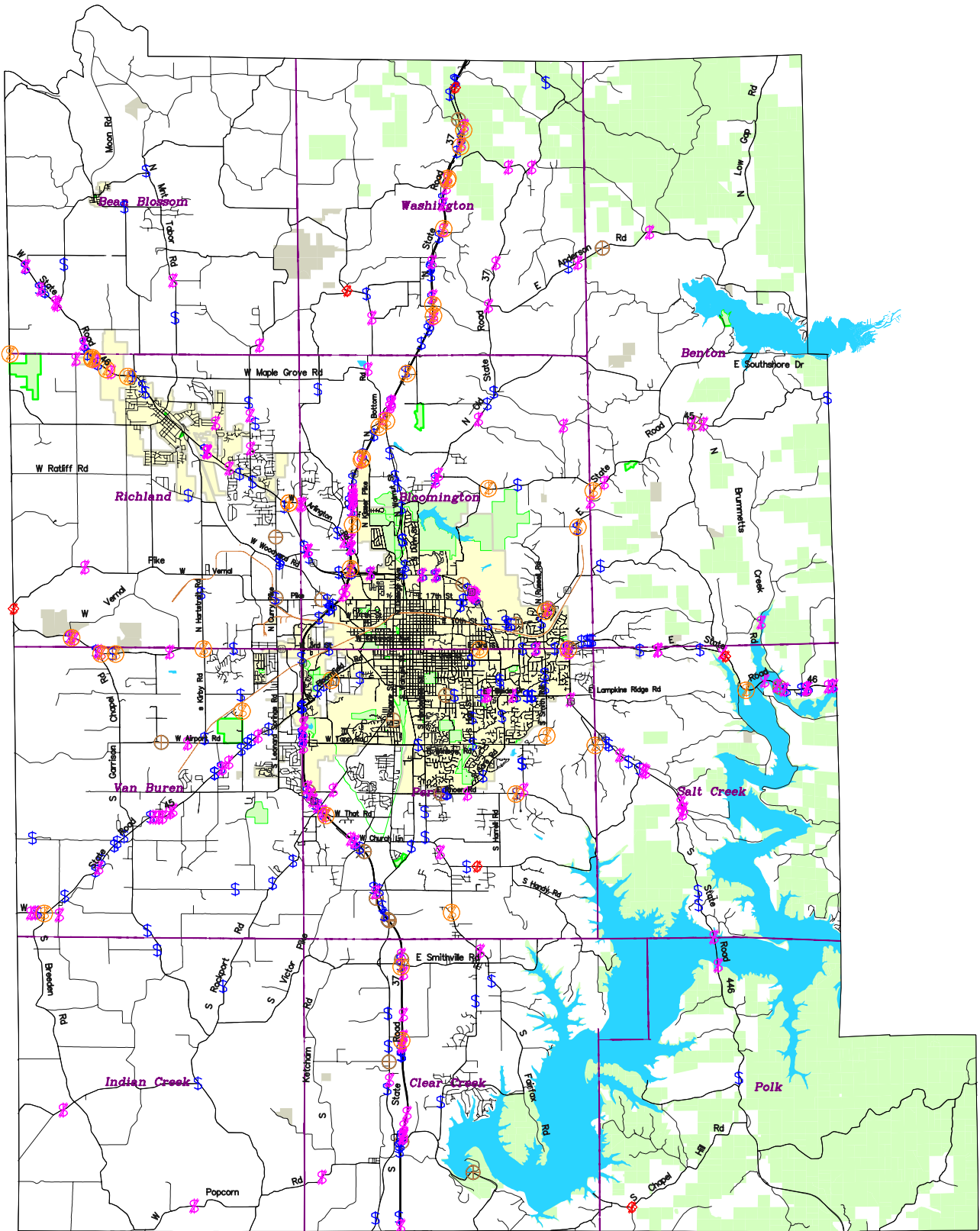


Geographic
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February 16, 2012

For use as map information only, information is NOT warranted.

TmdeeraLP (seasn)



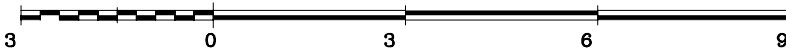
Deer-Vehicle Accidents 2008-2011

Legend

Accident Damage Estimates

- ⊕ 0 - \$1,000 \$ \$1,100-\$2,500 \$ \$2,501-\$5,000 \$ \$5,001-\$10,000 \$ \$10,001+
- Damage Totals: 0-\$1,000 (23) \$1,001-\$2,500 (215) \$2,501-\$5,000(150)
- Monroe County Area (436 Accident Reports) \$5,001-\$10,000 (42) \$10,001+ (6)

Scale: 1 inch = 3 miles



February 16, 2012

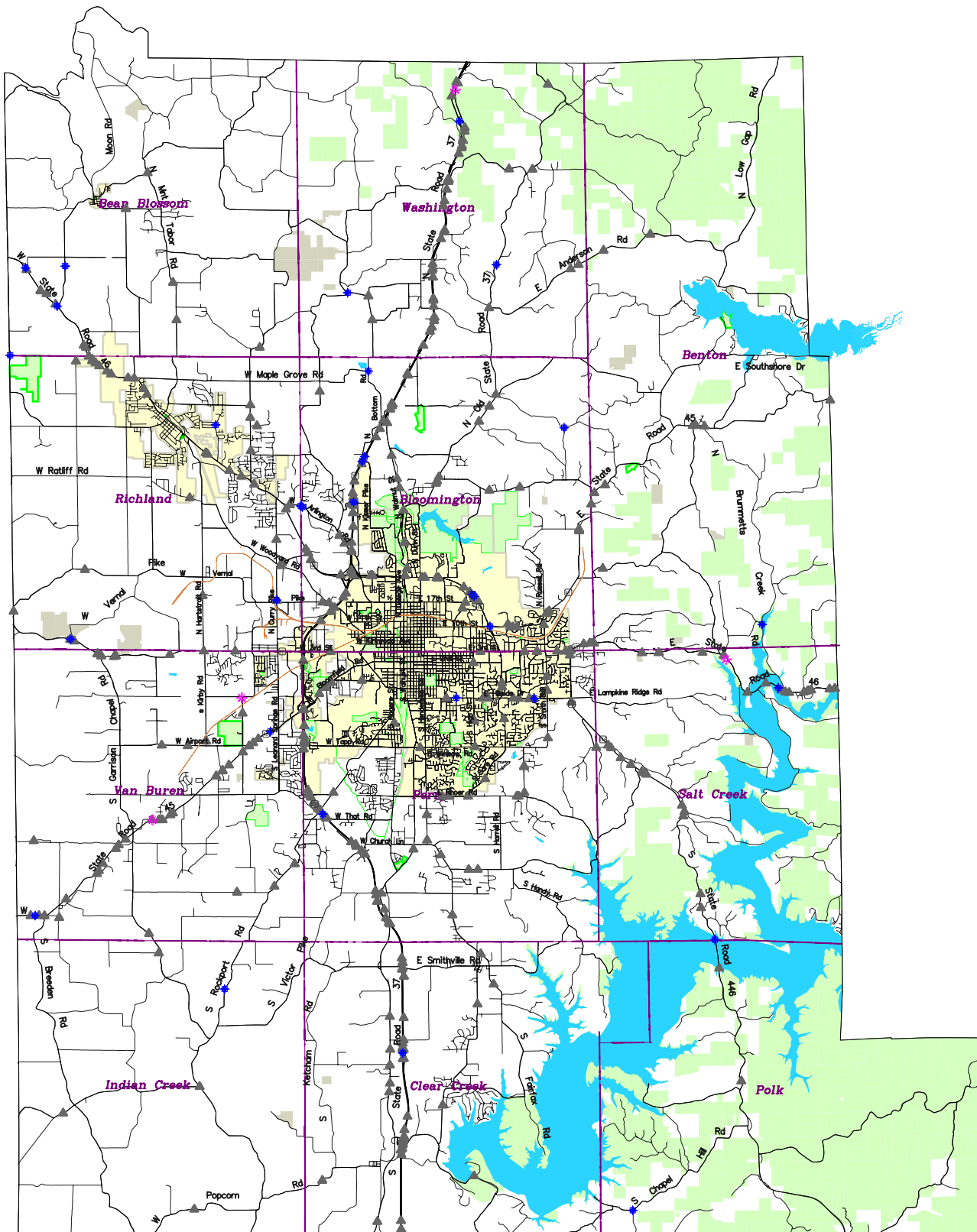
For use as map information only, information is NOT warranted.

TmdeeraLP (dang)

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Deer Task Force



Geographic
Information System



Deer-Vehicle Accidents 2008-2011

Legend

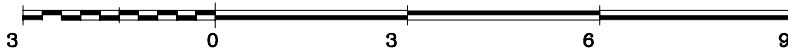
Driver Injuries

- ▲ 0 Injuries ◆ 1 Injury ◆ 2-4 Injuries ◆ 5+ Injuries ★ Deaths

No Injuries (401) 1 Injury (31) 2-4 Injuries (4) 5+ Injuries (0) Deaths (0)

Monroe County Area (436 Accident Reports)

Scale: 1 inch = 3 miles



City of Bloomington
Deer Task Force



Geographic
Information System

February 16, 2012

For use as map information only, information is NOT warranted.

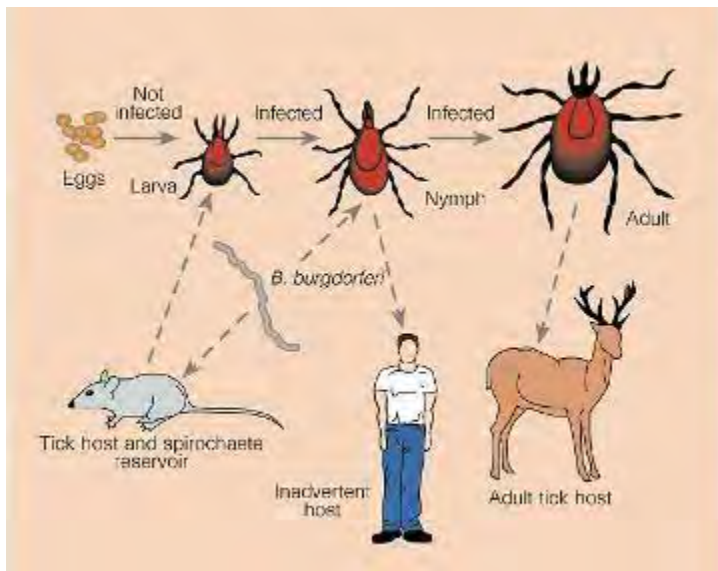
TmdeeracLP (inj)

LYME DISEASE

The specter of Lyme disease is one of the most common concerns cited by residents regarding the presence of urban and suburban deer. Residents worry that areas of deer concentration may increase the risk of transmission of the disease to humans. However, whether or not high deer densities increase the risk of Lyme disease is questionable.

Lyme disease is a systemic, tick-borne disease caused by a spiral bacterium, *Borrelia burgdorferi*. Following transmission by a bite of an infected tick, Lyme disease spirochetes initially multiply and disseminate in the skin surrounding the bite. If untreated, spirochetes can invade the blood stream where they multiply and cause flu-like symptoms.

Lyme disease is transmitted to humans by the black-legged deer tick, *Ixodes scapularis*. Black-legged deer ticks are the only vectors of Lyme disease in Indiana. The black-legged deer tick follows a generalized life cycle that is relevant to the transmission of the disease to humans: 1) After a female tick lays eggs on the ground, larva form; 2) Six-legged larva feeds on a white-footed mouse, small animal or bird and then drops to the ground and molts. The larva may have acquired the Lyme disease agent in the blood meal; 3) The eight-legged nymph feeds on a small mammal, pet or human and may transmit the disease. The nymph then drops to the ground and molts; 4) The eight-legged adult feeds and mates on a deer, dog, fox or other animal, then drops to the ground. Males die soon thereafter and females begin to develop eggs. Tick larvae are infected when they feed on infected white-footed mice. White-tailed deer are not reservoirs of Lyme disease because they do not support the disease in the blood at levels high enough to infect ticks. However, deer are the preferred host for adult black-legged deer ticks and are therefore critically important to tick reproduction.



Left: Small rodents, such as mice, are reservoirs for *B. burgdorferi*. The tick becomes infected from feeding on a mouse and remains infected as it changes to nymph and then adult. The spirochetes are transmitted by infected nymphs to other mice and to humans, which are inadvertent hosts. Deer are important hosts for adult ticks, but are not effective reservoirs for *B. burgdorferi*. (From: *Nature* 390, 553-554 (11 December 1997))

The problem is that reducing the deer herd doesn't translate into reduced exposure to Lyme disease. First, adult black-legged deer ticks feed on raccoons, skunks, opossums, and other medium-sized mammals. When deer are scarce, ticks don't necessarily become scarce, because they have alternative hosts. Indeed, several studies on mainland sites in New York and New Jersey found no correlation between deer and ticks. Second, ticks and Lyme disease are rare or absent in parts of the United States (the Southeast, most of the Midwest) where deer are abundant. Third, ticks are only dangerous if they are infected, and deer are hosts to the ticks, but play no role in infecting ticks - that's the role of the white-footed mouse (as well as chipmunks and shrews) (Jordan et al. 2005; Jordan et al. 2007 and Ostfeld 1997).

Model simulations of the relationship between deer and ticks show that a reduction in deer density results in a small reduction of the black-legged deer tick population. In order to drastically reduce the host tick numbers, deer would need to be almost entirely removed from the landscape, since one deer serves as a host for many ticks. Experiments on island deer populations indicate that with a drastic reduction of deer numbers, the host tick numbers will also decline. In a free-ranging population, where deer are not constrained to one geographic area, it is unlikely that reduction of deer numbers would decrease the presence of black-legged deer ticks, thereby decreasing the risk of Lyme disease (Ostfeld 1997).

Another important point to consider is that the population-level risk of Lyme disease in Monroe County is relatively low. Based on data from the Indiana State Department of Health, the number of confirmed cases in Monroe County has held steady at "less than five" per year over the last several years.⁴ Indeed, from 1990 to 2003, only four cases of Lyme disease were reported in Monroe County. From 2003 to 2004 (the last year for which data is available), one Monroe County resident was confirmed to have Lyme disease. To be fair, various factors confuse the diagnosis and reporting of the disease, and there are strong arguments that the disease is either highly under-reported or over-reported (misdiagnosed).

Biologists at IU have been trapping and testing black-legged deer ticks for 7 to 8 years. They found healthy populations in southwest Monroe County near Springville, but had never found the black-legged deer tick in the Bloomington area until spring 2010, at which time they found a small population at Griffy Lake Nature Preserve. None of these ticks have tested positive for Lyme disease.

⁴ The Department of Health accounts for cases in a "less than" fashion in the interest of privacy.

DEER AND PUBLIC OPINION

When it comes to deer, people tend to have strong feelings. Some residents view deer as highly valued wildlife, while others may view deer as a nuisance. Yet others may have mixed feelings about deer in urban spaces. In an effort to better understand how residents perceive deer, the Task Force issued a survey and hosted a series of community outreach meetings.



OUTREACH MEETINGS

The Task Force held a series of five meetings throughout the community from late June to late July 2011 to share information about its work and to solicit feedback from residents. Approximately 70 people in total attended the meetings. Meetings were held at Templeton Elementary, University Elementary, Bloomington North High School, Grandview Elementary and City Hall.

After presenting information on the role of the Task Force, deer behavior and biology and common management approaches, the Task Force asked members of the public two questions: 1) How do residents experience and perceive deer in their neighborhoods and in the community and 2) What are the most important criteria the Task Force should consider in making its recommendations? The following is a summary of responses. For itemized responses to each of the structured questions, please refer to Appendix III.

Resident Experience and Perception

In talking about their experiences with deer, many residents communicated that they noticed a marked increase in the number of deer within the last five years. Numerous residents linked the presence of deer in neighborhoods with the development of Renwick and other areas that replaced nature with the built environment. Many pointed out that the number of deer in their neighborhood impairs their ability to landscape, grow their own food and establish native plants. Participants spoke about seeing deer in areas of the city where they seem “out of place.” Participants spoke about resident deer herds that live most of their lives in neighborhoods. Residents also expressed concern about the close proximity of neighborhood deer to children playing outside. (See Appendix III).



Visual summary of responses to Question 1 “What are your experiences with deer (neighborhood and community)?”

PUBLIC OPINION SURVEY

To further assess public sentiment, the Task Force issued a survey. The survey was open from late July to mid-September 2011. It was available on-line and in hard copy form at the community outreach meetings, at the Farmers' Market and upon request. The survey was publicized through the newspaper, the Task Force website, public-service announcements and neighborhood newsletters. For survey questions and responses, *see* Appendix IV.

METHODOLOGY

This was not a scientific survey. It was not random and cannot be thought to be entirely representative of all city and county residents. The decision not to survey a random sample of the population was based on cost, time, pragmatism and an effort to "hear" as many voices as we could. As with any survey open to anyone, it is likely that residents who completed this survey are people who feel strongly about the issue. Respondents were asked to complete one survey per household, and responses were limited to one IP address per response.

While it might not be scientific, the survey does provide a useful window into the way members of the community think about and experience deer. In soliciting feedback, the Task Force made it clear that the questionnaire was not intended to be a referendum on preferred deer management techniques.

The survey received 742 responses. Fifteen responses were eliminated from consideration as the respondents indicated that they did not live in Monroe County. Respondents were primarily Bloomington residents (77%). Most were between the ages of 40-69 (66%) and most live on ½ acre or less (61%). Many of the respondents indicated that they have lived at their current residence for more than 10 years (47%).

To gauge public perception, the Task Force asked residents questions that included the following:

- perception of deer in their neighborhood and community overall;
- frequency of deer sightings in their yard and neighborhood;
- concerns about deer;
- deer damage to property;
- methods used to protect property from deer damage; and
- what residents would consider evidence of a successful deer management program.

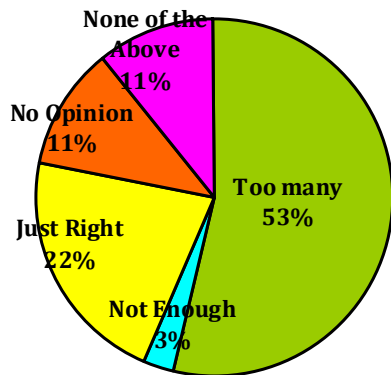
NUMBER OF DEER:

Residents living within the corporate boundaries of the City of Bloomington tend to perceive deer to be more numerous in their neighborhood and in the community than do Monroe County residents living outside the city limits.

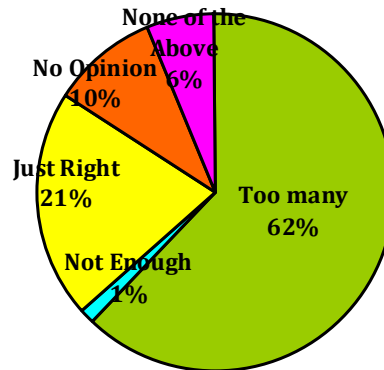
Which of the following best expresses your opinion about the number of deer in your neighborhood and in the community?

CITY RESIDENTS

Your neighborhood

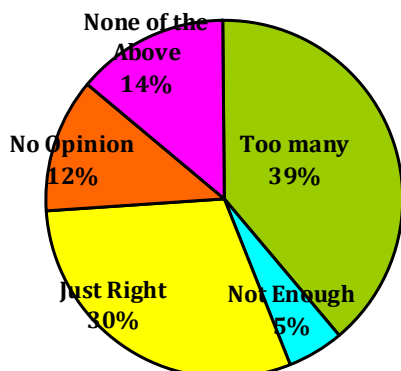


The community

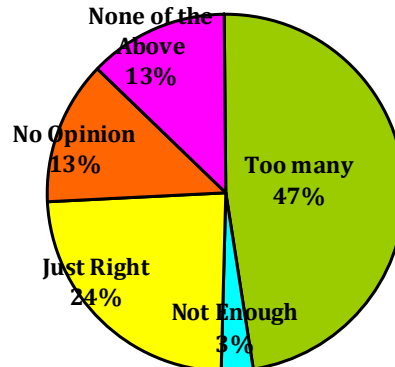


COUNTY RESIDENTS

Your neighborhood



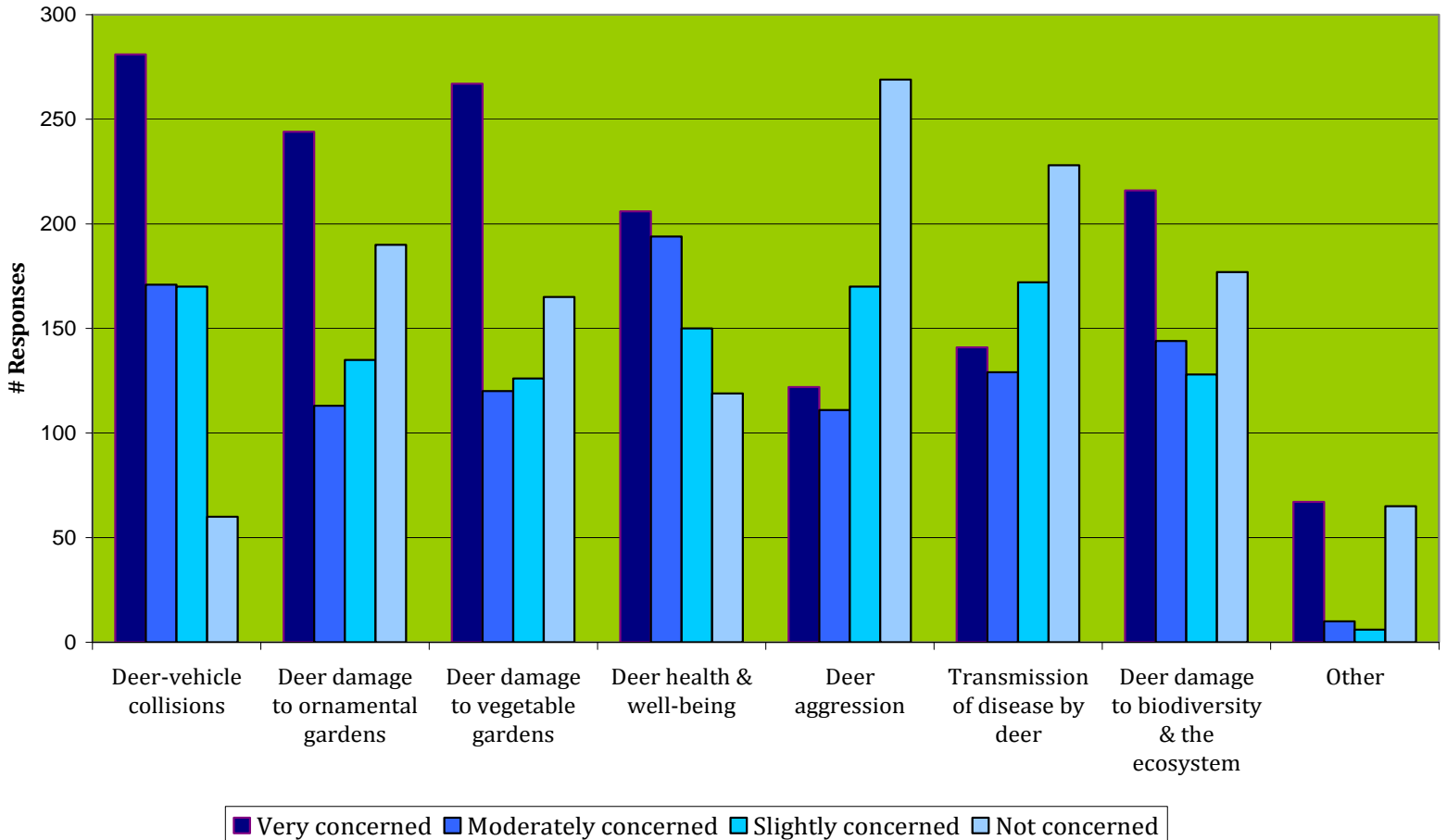
The community



CONCERNS ABOUT DEER

Deer-vehicle collisions, damage to vegetable gardens, ornamental plants, ecosystem damage and deer welfare were among city and county residents' greatest concerns.

Concerns About Deer



Deer-vehicle collisions:

City: 66% concerned or very concerned
 25% slightly concerned
 9% not concerned

County: 69% concerned or very concerned
 22% slightly concerned
 9% not concerned

Damage to ornamentals

City: 54% concerned or very concerned
21% slightly concerned
25% not concerned

County: 48% concerned or very concerned
17% slightly concerned
35% not concerned

Damage to vegetables

City: 59% concerned or very concerned
17% slightly concerned
24% not concerned

County: 53% concerned or very concerned
23% slightly concerned
24% not concerned

Deer health and well being

City: 60% concerned or very concerned
22% slightly concerned
18% not concerned

County: 60% concerned or very concerned
23% slightly concerned
17% not concerned

Deer aggression

City: 38% concerned or very concerned
27% slightly concerned
35% not concerned

County: 24% concerned or very concerned
20% slightly concerned
56% not concerned

Disease

City: 41% concerned or very concerned
27% slightly concerned
32% not concerned

County: 36% concerned or very concerned
24% slightly concerned
40% not concerned

Biodiversity

City: 56% concerned or very concerned
19% slightly concerned
25% not concerned

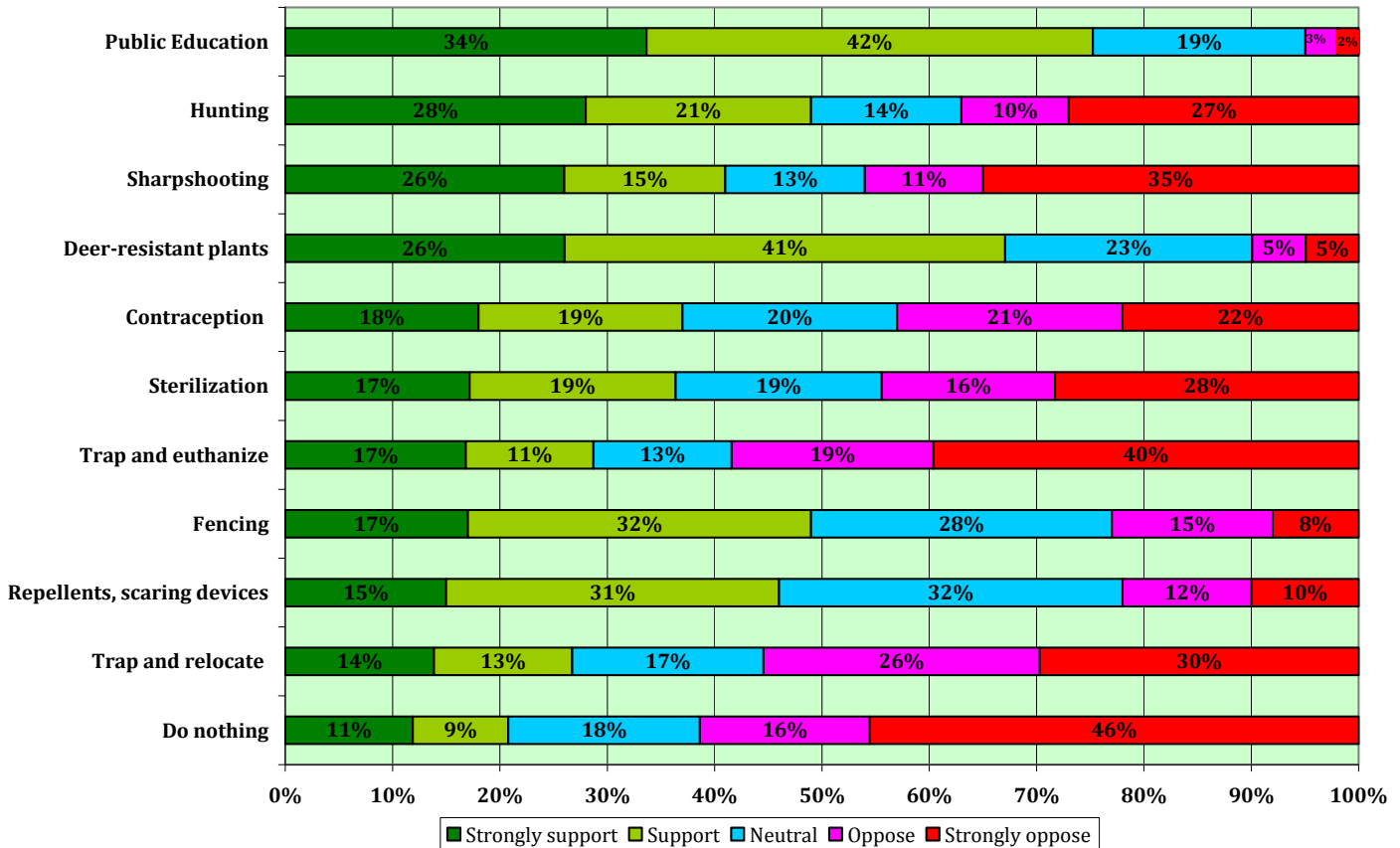
County: 49% concerned or very concerned
21% slightly concerned
30% not concerned

PREFERRED APPROACHES

In asking residents which approaches to deer management they prefer in their neighborhood, the Task Force encouraged respondents to familiarize themselves with management FAQs posted on the Task Force webpage. Again, the instructions accompanying the survey stated that questions were not intended to be a referendum on preferred management techniques. Instead, the Task Force made it clear that the group would consider public sentiment alongside other criteria such as efficacy, cost, safety and humaneness in making its recommendations.

Which approach(es) to deer do you prefer in your neighborhood?

City and County responses combined



Do Nothing

**City: 19% supported or strongly supported⁵
65% opposed or strongly opposed**

**County: 24% supported or strongly supported
55% opposed or strongly opposed**

Public Education

**City: 74% supported or strongly supported
6% opposed or strongly opposed**

**County: 79% supported or strongly supported
4% opposed or strongly opposed**

Deer-resistant Plants

**City: 68% supported or strongly supported
9% opposed or strongly opposed**

**County: 63% supported or strongly supported
13% opposed or strongly opposed**

Fencing

**City: 50% supported or strongly supported
23% opposed or strongly opposed**

**County: 44% supported or strongly supported
24% opposed or strongly opposed**

Repellents, Scare Devices

**City: 48% supported or strongly supported
22% opposed or strongly opposed**

**County: 43% supported or strongly supported
23% opposed or strongly opposed**

Contraception

**City: 38% supported or strongly supported
41% opposed or strongly opposed**

**County: 33% supported or strongly supported
47% opposed or strongly opposed**

⁵ In the following, those who did not indicate support or opposition, indicated neutrality.

Sterilization

**City: 38% supported or strongly supported
42% opposed or strongly opposed**

**County: 31% supported or strongly supported
51% opposed or strongly opposed**

Trap and Relocate

**City: 29% supported or strongly supported
53% opposed or strongly opposed**

**County: 18% supported or strongly supported
65% opposed or strongly opposed**

Hunting

**City: 45% supported or strongly supported
40% opposed or strongly opposed**

**County: 64% supported or strongly supported
23% opposed or strongly opposed**

Sharpshooting

**City: 41% supported or strongly supported
45% opposed or strongly opposed**

**County: 43% supported or strongly supported
43% opposed or strongly opposed**

Trap and Euthanize

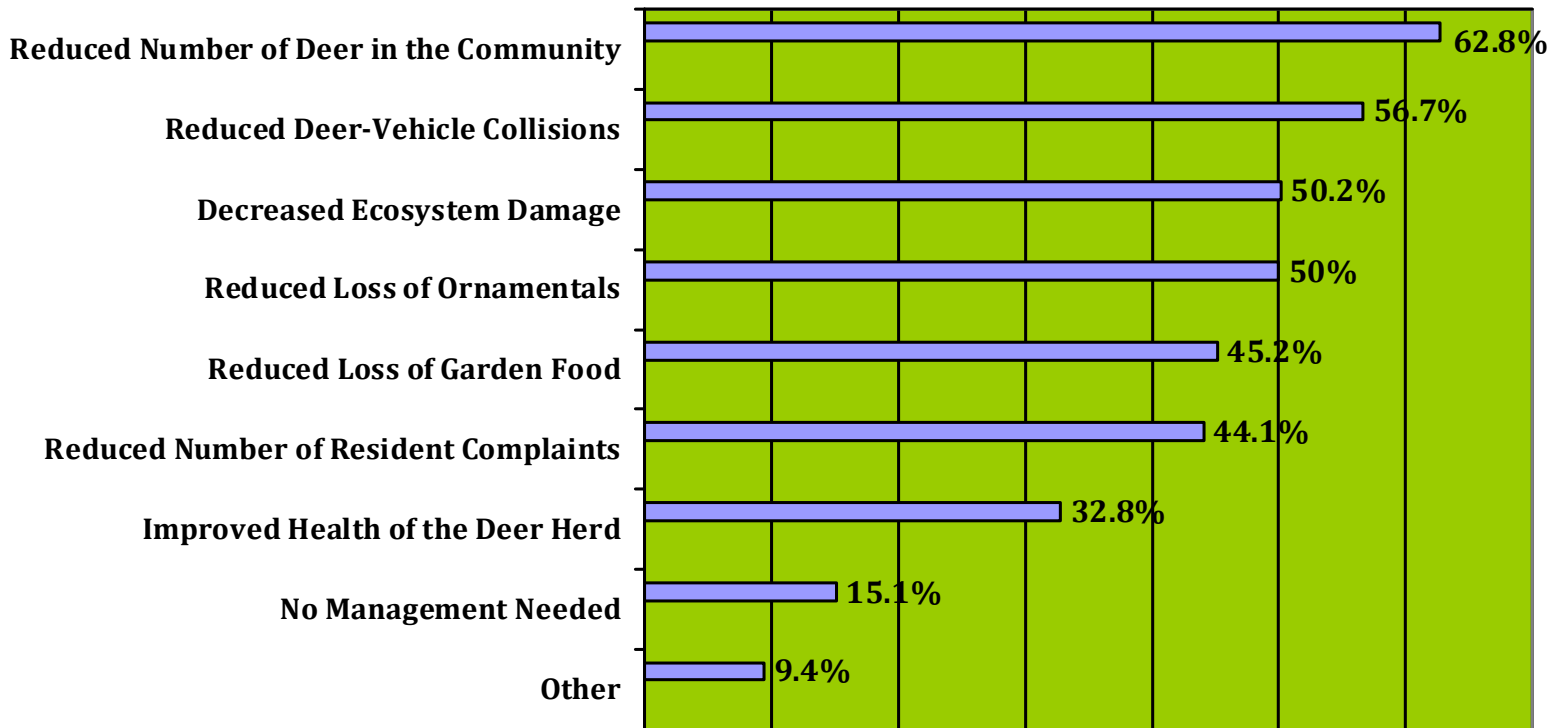
**City: 30% supported or strongly supported
56% opposed or strongly opposed**

**County: 22% supported or strongly supported
66% opposed or strongly opposed**

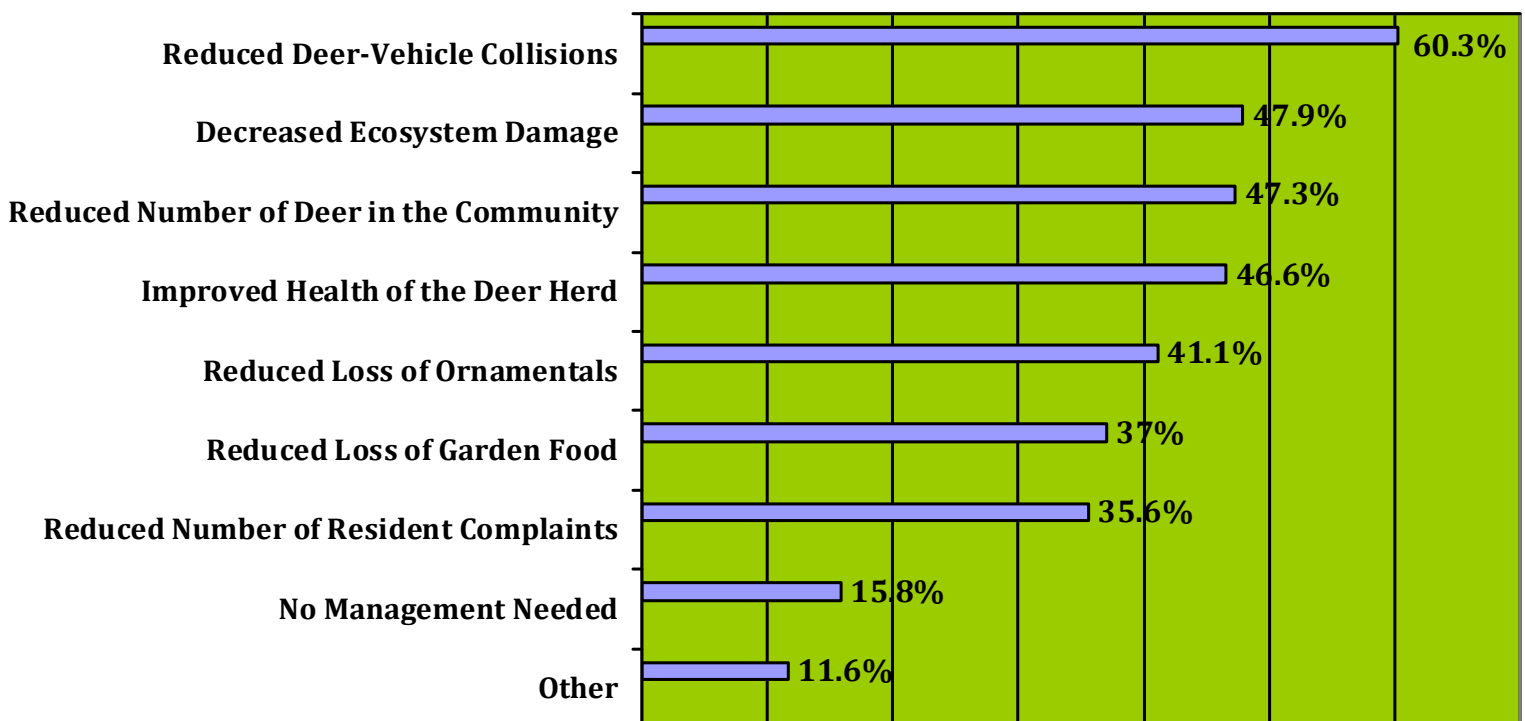
EVIDENCE OF SUCCESS

What would you consider to be evidence of a successful deer management program?

CITY RESIDENTS



COUNTY RESIDENTS



THE GEOGRAPHY OF CONCERN

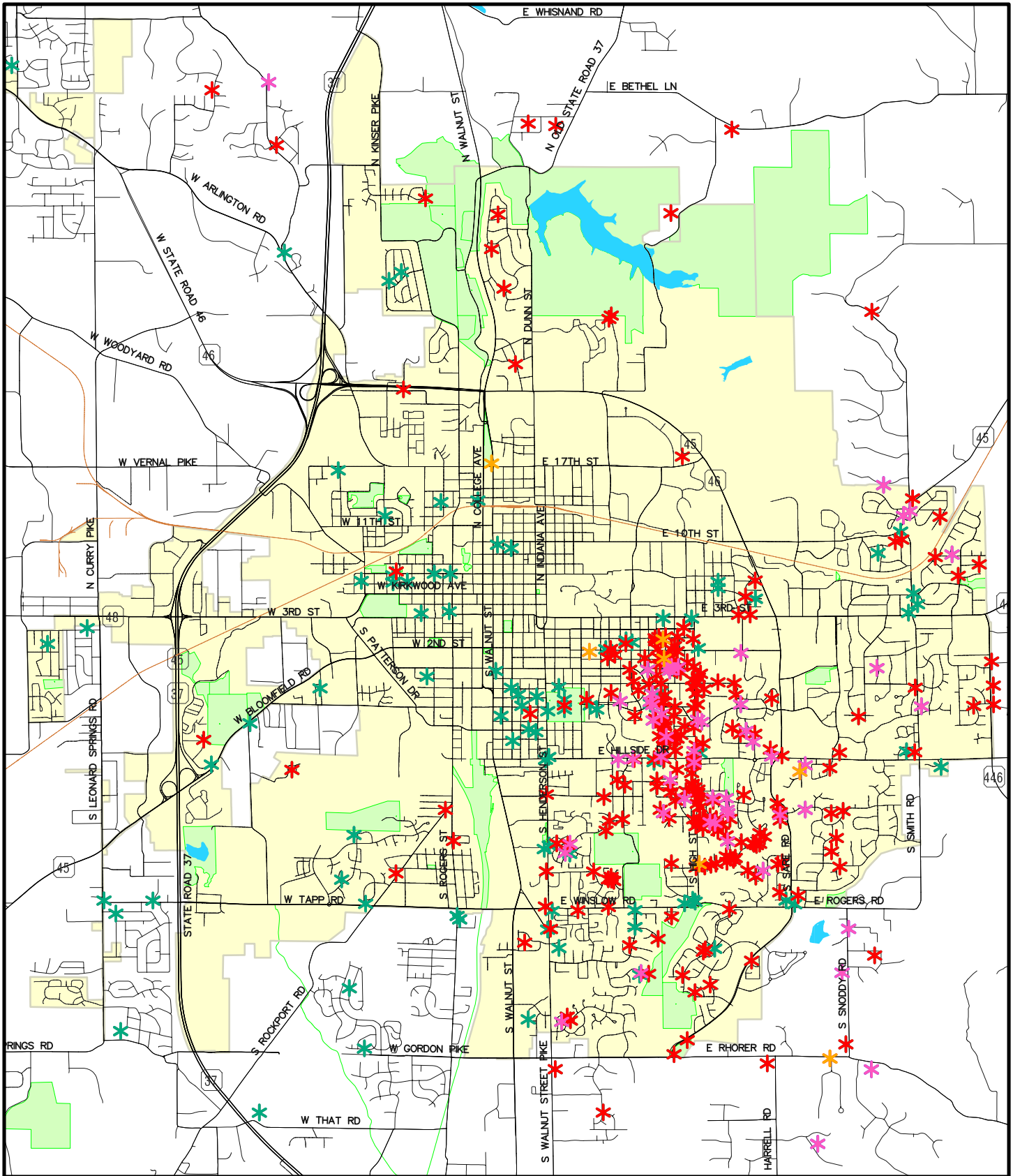
Deer are not a problem for everybody. Some residents report that they never see deer in their neighborhood; others routinely report herds. Some residents think the number of deer in their neighborhood is at an acceptable level; others think the number of deer has reached a crisis level. Indeed, when it comes to social tolerance for deer, the Task Force's survey revealed a distinct geographic pattern: deer are perceived to be too numerous and problematic in southeast quadrant of the city.

In response to a question asking if the number of deer in their neighborhood was “not enough,” “just right” or “too many,” the overwhelming majority of “too many” respondents were concentrated in the portion of the city bounded by East Third Street to the north, Woodlawn to the west, Winslow to the south and South Sare to the east.⁶ See opinion map on the following page.

Similarly, when asked how many residents see deer in their yard on a daily basis, the great majority of residents west of Woodlawn report seeing “0” deer in their yard daily, while most respondents living east of Woodlawn, in the southeast quadrant of the city defined by the boundaries described above, reported seeing 1-5 deer in their yard daily. See daily sighting maps for both individual yards and neighborhoods on following pages.

This localized concern mirrors the feedback the Task Force has received from residents. This is not surprising. The southeast portion of the city is an area that has experienced significant development and loss of greenspace in recent years. This development has fragmented the landscape and provides deer with the nutrient-rich lawn-forest edge they need to thrive.

⁶ To discern how resident complaints map onto different parts of the city, the Task Force asked survey respondents to indicate where they live by providing cross street or block information. To protect privacy, the survey did not ask for pinpoint addresses.



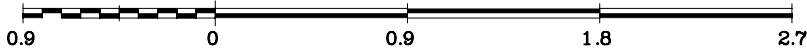
Daily Average of Deer Seen in Neighborhood

Daily Average Deer See in Neighborhood

★ 0 Deer (85) ★ 1-5 Deer (244) ★ 6-10 Deer (48) ★ 11+ Deer (7)

2011 Deer Task Force Community Opinion Survey

Scale: 1 inch = 0.9 miles



November 15, 2011

For use as map information only, information is NOT warranted.

TbdeersLP (seenbr)

City of Bloomington
Deer Task Force



Geographic
Information System



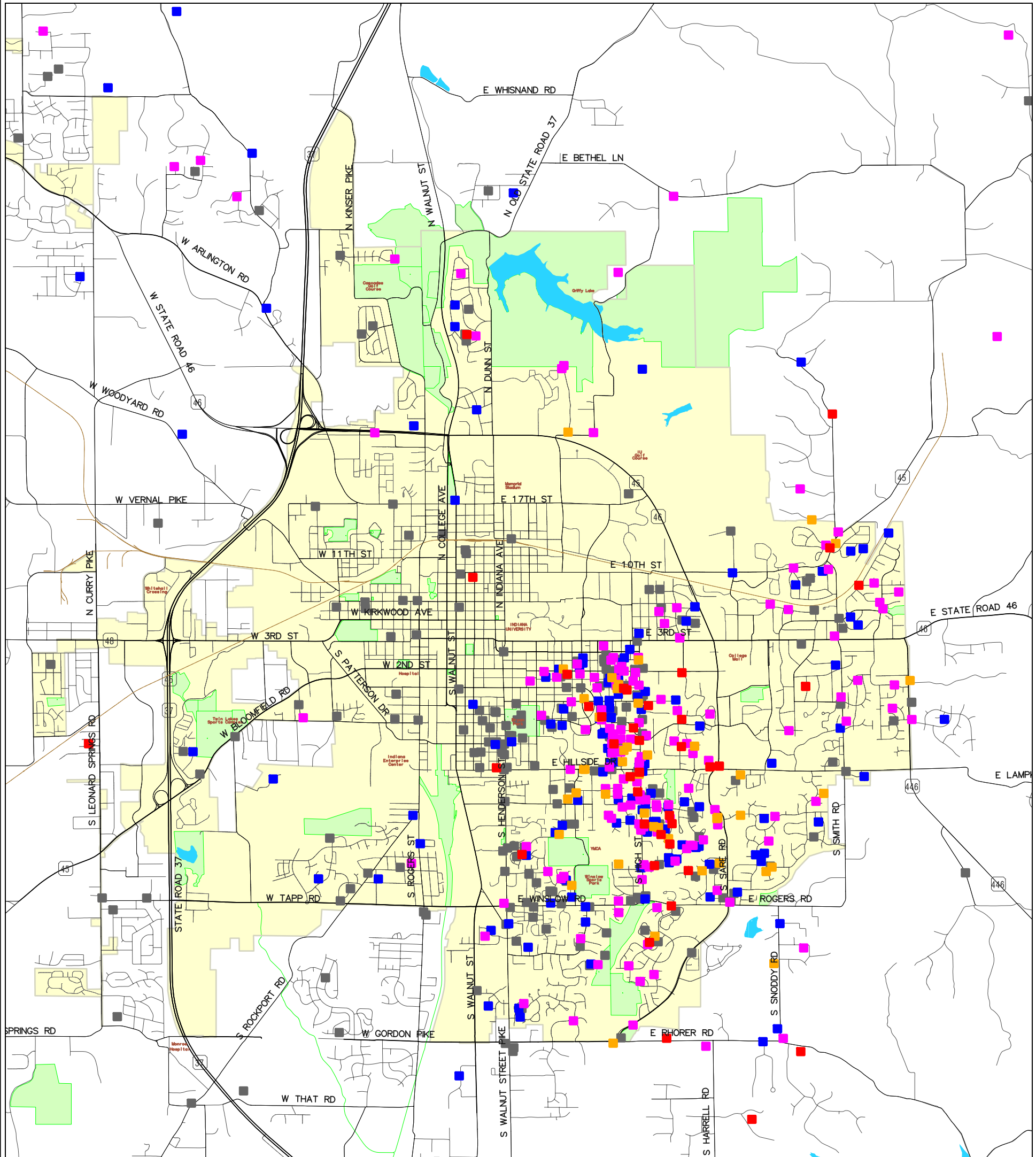
City of Bloomington, Indiana

Joint City of Bloomington-Monroe County Deer Task Force

Amount Spent to Address Deer Damage

Amount Spent to Address Deer Damage in Past 3 Years

0 (185) \$1 - 100 (131) \$101 - 500 (136) \$501 - 1,000 (38) \$1,000 or More (33)



City of Bloomington, Indiana
Geographic Information System

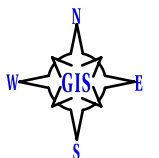
Bloomington Geographic Information System

October 28, 2011

This map was produced by the City of Bloomington GIS, for use by the City and general public as map information. The topographic and planimetric information is based on aerial photography flown in March 1991 and March 1992. Updates from aerial orthophotography took place in April 1998, April 2005, and March 2006. Information is updated by GIS technicians from development drawings, plats, and other sources. The accuracy of information contained in this document is based on National Mapping Standards, however it is NOT warranted.

No part of this work may be reproduced for any purpose without written permission from the City of Bloomington

1" = 3500'



The Corporation boundary reflects annexations effective January 1, 2011.
Information and Technology Services Department
1 January 2011



DEER MANAGEMENT ALTERNATIVES

The Task Force explored a number of different management alternatives for addressing both urban deer and deer at Griffy. Some of these techniques are traditional and are known to produce measurable effects; others are less-known but emerging techniques for handling suburban deer. Other options are simply not viable. The deer management alternatives considered by the Task Force include:

- Do Nothing
- Fencing
- Feeding Ban
- Scare Devices
- Landscape Alteration
- Repellents
- Trap and Translocate
- Contraception
- Sterilization
- Sharpshooting
- Trap and Kill (Various Methods)
- Hunting (Both Regulated and Managed forms)
- Predator Reintroduction

Each option was filtered through the lenses of efficacy, cost, safety, maintenance and humaneness. The management options explored by the Task Force are described below.

DO NOTHING – LET NATURE TAKE ITS COURSE

One option is to do nothing – to let nature take its course. As discussed previously, due to ample food, water, cover and the absence of predators, urban deer have high survival rates. They also have robust reproductive capacity. Non-intervention must be considered with an understanding that a "hands off" approach means that the local deer herd will likely grow.

EFFICACY: This depends on your perspective. If the herd increases, so too may deer damage, deer-vehicle collisions, disease and ecosystem degradation.

COST: No cost to implement. Additional deer damage costs may be incurred by residents.

SAFETY: Generally safe, but see above.

MAINTENANCE: None.

HUMANENESS: Generally humane; however increased deer-vehicle collisions and a deer herd that approaches biological carrying capacity would likely result in deer suffering.

TASK FORCE POSITION: Non-action will not address ecological and social concerns associated with deer.

FENCING

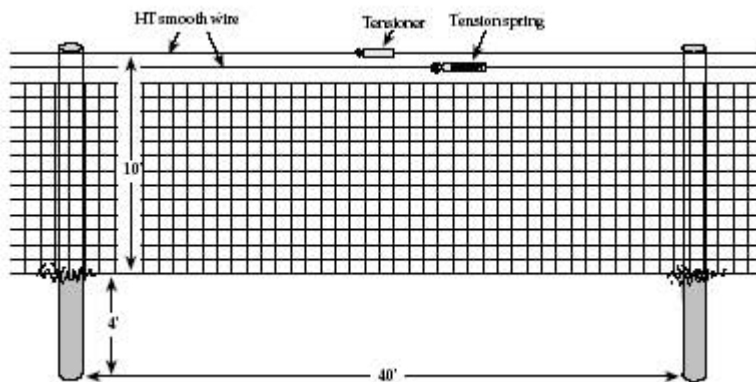
This method prevents the ingress of deer. Most effective fence designs include mesh or high-tensile wire at least 8' in height. Deer will rarely jump over an 8' fence or into a space that they perceive to be an enclosure. When motivated by a food source, a deer can clear an 8' fence. Biologists advise that a 10' fence will exclude almost all deer.

A fence may not need to be as high as 8', perhaps 6', but slanted outward. Deer will try walking under the fence and meet resistance. Such a slanted fence should be at a 45-degree angle, and may consist of fencing with a few strands of additional wire on top for extra height.

IDNR describes a common configuration:

This fence is constructed using two widths of woven wire fencing to provide a minimum height of eight feet. Deer can easily jump fences of lower heights. Posts should be placed 10-12 feet apart.

While this permanent type of fence is the most effective means of restricting deer, construction and labor costs may prove prohibitive when considered in a cost/benefit analysis. The use of this type of fence would best suit the need to restrict deer from a small, highly valued crop for an extended period of time.



Snow fencing

Lattice type snow fencing can be used successfully around small garden plots, but deer tend to jump the fence if too large an area is surrounded. Snow fencing is less expensive than woven wire and can be removed and reused as needed (IDNR, *Managing Deer Damage*).

EFFICACY: Fences are effective for exclusion from individual properties, but fences move the deer into neighboring yards.

COST: An 8' woven wire fence cost \$6 to \$8 per foot to install. A polypropylene mesh grid deer netting can be staked around most small gardens at a cost to the homeowner of \$2-\$3 per foot, plus labor.

SAFETY: Generally safe. The City of Bloomington prohibits electrified and barbed-wire fences.

MAINTENANCE: Fences generally require some form of maintenance.

HUMANENESS: Generally humane.

IDNR: Approves fencing (non-electrified and electrified) as a means of control.

CITY:

Fences may not exceed a height of 8' in a backyard and may not exceed 4' in height in front yards and corner lots (BMC §20.05.046(d)(1)). The following types of fences are prohibited: barbed wire, security wire, electrified wire, sharpened top spikes and other similar material (BMC §20.05.047(a)).

TASK FORCE POSITION: Fences can be an effective deterrent tool for *individual* property owners, but not as a general community deer management strategy.

FEEDING BAN

Supplemental feeding may encourage higher deer reproductive rates, encourage denser deer concentrations in certain areas, increase deer-vehicle collisions, spread disease and habituate deer to the presence of humans (DeNicola 2000). In response, some communities have banned the feeding of deer.

EFFICACY: If deer relied only on supplemental feeding, a feeding ban would be effective. However, deer commonly browse on plants not intended as “deer food.” Therefore, banning intentional feeding is of limited efficacy. Feeding bans are also difficult to enforce. Most enforcement occurs upon complaint. To make a ban work, there must be a sustained effort to publicize and enforce the rule. The educational/awareness-building value may be just as important as the actual prohibition.

COST: Costs are related to personnel needed to receive the complaints, enforce the ban and penalize violators.

SAFETY: Generally safe.

MAINTENANCE: A feeding ban requires maintenance via administration and enforcement.

HUMANENESS: Generally humane.

IDNR: Not recognized as an approved tool for deer damage mitigation.

TASK FORCE POSITION: A feeding ban may help mitigate nuisance concerns associated with deer in neighborhoods. The greatest value of a feeding ban is its educational value.

SCARE DEVICES

Scare devices include methods for scaring or hazing deer in the interest of encouraging deer to change their habitual pattern of movement. These devices include motion-sensitive lights and sprinklers and radios that go on and off during the night.

EFFICACY: Scare devices may be effective at the first sign of a problem. The problem with all scare devices is that deer eventually acclimate to them, even when the devices are moved occasionally. Varying the scare devices every week may extend the protection for a longer period. Scare devices are an effective short-term solution.

COST: Generally cost effective.

SAFETY: Generally safe.

MAINTENANCE: Devices must be maintained, adjusted and moved as necessary.

HUMANENESS: Generally humane.

TASK FORCE POSITION: Scare devices may help individual property owners reduce damage to their properties.

REPELLENTS

Repellents can be effective to deter deer over a limited time period in a localized area. (*See* “Tips for Living With Deer”)

EFFICACY

Chemical repellents are relatively effective at low deer densities, but become less effective as deer densities increase.

- Repellents do not eliminate browsing, they only reduce it;
- Rainfall will wash off many repellents and re-application may be required;
- The availability of other, more palatable deer food dictates the effectiveness of repellents. When food is scarce, deer may ignore both taste and odor repellents.

COST

Costs vary from \$25/gallon to \$45/gallon for commercial repellents to minimal cost for home remedies.

SAFETY: Chemical repellents are not suitable for application on plants intended for human consumption.

MAINTENANCE: Maintenance is required.

IDNR: Recognized as an approved method of control.

HUMANENESS: Generally considered humane.

TASK FORCE POSITION: Repellents may help individual property owners reduce damage to their properties.

LANDSCAPE ALTERATION

By choosing species that are undesirable to deer, residents can reduce the amount of damage to landscaping. Plants with a bitter or spicy taste, milky sap, or thorny, hairy, or tough leaves and stems are unpalatable to deer.

EFFICACY: Certain plants can effectively deter browsing. However, the presence of undesirable plants does not deter deer from feeding on other nearby plants that they do find palatable. If there is intensive feeding pressure caused by drought, snow or high deer density, deer will browse even the most undesirable plants. (For a custom list of deer-resistant plants, *see* “Tips for Living With Deer”)

COST: Variable

SAFETY: Generally considered safe.

MAINTENANCE: Maintenance is required.

IDNR: Recognized as an approved method of control.

HUMANENESS: Generally considered humane.

TASK FORCE POSITION: Planting deer-resistant flowers, bushes and trees may help individual property owners reduce damage to their yards.

TRAP AND TRANSLOCATE

(Not approved by IDNR in free-ranging contexts)

The trapping and translocation of deer involves trapping deer in problem areas and moving them somewhere else.

EFFICACY

- **High Mortality.**

Studies shows that approximately 4% of the deer die in transport, as many as 25% of translocated deer die within the first two months of trapping and translocation, and more than 85% of deer may not survive longer than one year. (Beringer et al. 1996). These deer tend to have high mortality rates resulting from capture-related injuries, unfamiliarity with the release site and encounters with new mortality agents.

Many deer suffer from a type of stress resulting from prolonged trapping and transport called “capture myopathy.” Capture myopathy is a degenerative disease of skeletal muscle associated with the increased muscular exertion and overstimulation of the nervous system as a result of the capture, restraint, and transportation of animals. Illness and death may result due to disruption of normal circulation, muscle tissue damage, and electrolyte imbalance. Affected animals may show muscle tremors or muscle rigidity, weakness, hyperthermia, respiratory difficulty, collapse, and death. Animals that do not die acutely may succumb later due to inadequate oxygen supply to the kidneys and from toxic products of muscle breakdown.

- **Low Availability of Release Sites**

Translocation efforts are further complicated by lack of suitable release sites. Most habitats within the species’ native range are already saturated with deer and cannot withstand supplemental stocking without risking damage to the habitats.

- **Disease Transmission**

This technique can spread diseases such as chronic wasting disease and tuberculosis from one population to another.

COST: \$400/deer, plus ongoing maintenance.

SAFETY: A properly managed trap poses little risk to human safety.

MAINTENANCE: Maintenance is required as new deer immigrate in.

HUMANENESS: The biological realities of capture and translocation are quite different from the public’s perception of “they lived happily every after, just somewhere else” (Conover 2002). Due to the capture myopathy associated with this technique, this method involves considerable suffering by deer.

IDNR:

FREE-RANGING ENVIRONMENTS

Live trap and translocation, and release of deer into a free-ranging situation is **not** endorsed by the IDNR for the following reasons:

- 1) The population of white-tailed deer in Indiana is at a high level. The high deer numbers statewide is exemplified by high hunter harvest and high numbers of deer-vehicle accidents.
- 2) Competition for resources with resident deer.
- 3) Low survival of translocated deer. A large percentage of the translocated animals could be expected to die due to traumatic causes, including capture myopathy and deer vehicle accidents.
- 4) Translocated deer tend to drift back into urban situations at their new locations. Policy C2(a) (IDNR, *Human Conflict with White-tailed Deer*, 2012, p.5)

ENCLOSED ENVIRONMENTS

The IDNR will approve trap and transfer to an enclosed environment only for a not-for-profit entity and only if all deer are sterilized. The cost of deer sterilization is approximately \$1,000 per deer. IDNR policy directs:

- D) Live-trapping and translocation of deer will be permitted only to not-for-profit, in-state institutions approved by the DFW, subject to the following conditions:
- a) The receiving facility must file a written plan for animal health care discussing nutrition, parasite and disease control and other routine management issues concerning confinement.
 - b) Individual animals must be certified free of TB and Brucellosis by a blood test.
 - c) The institution must have deer-proof enclosures to ensure against escape to the wild.
 - d) All animals, upon which drugs have been used, must be permanently marked in a highly visible manner.
 - e) Translocated animals must be accompanied by a copy of the deer removal permit and a numbered tag provided by the Department. Should mortality occur during translocation, the tag must be affixed to the carcass and the animal tested for chronic wasting disease (CWD) at the transporter's expense.
 - f) All animals, regardless of their final destination, shall be rendered incapable of reproduction (sterilized). During sterilization the deer must be checked for ticks and must be treated if any are found.
- Policy C2(b)(1)(D) (IDNR, *Human Conflict with White-tailed Deer*, 2012)

TASK FORCE POSITION: Because of the suffering involved in translocation, the low availability of release sites, and the practicality and cost involved in meeting IDNR requirements, the Task Force does not consider this a humane or cost-effective option for deer management.

CONTRACEPTION

(Not supported by IDNR in free-ranging contexts.)

Two primary forms of contraception have been utilized to stem the growth of deer herds: PZP and GnRH.

The first method of inducing infertility in deer is by immunocontraception using a vaccine extracted from the ovaries of pigs, called *porcine zona pellucida* (PZP), in which the deer is immunized against a protein or hormone needed for reproduction (Miller and Killian 2000). When this vaccine is injected into a doe, her immune system forms antibodies against the vaccine. After the doe ovulates, the vaccine antibodies attach to her ovum and block fertilization, which causes the female to experience multiple estrous cycles and extends the breeding season (Warren 2000). An extended breeding season will increase deer activity at a time of year when conservation of calories is important and may result in increased winter mortality. Lengthened breeding activity of bucks may also lead to an increase in the number of deer-vehicle collisions. At this time, the use of PZP for fertility control in deer is experimental.

Unlike PZP, GnRH prevents eggs from being released from the ovaries, thereby eliminating multiple estrus cycles. GonaCon™ is the only commercially-available approved GnRH vaccine. Long-term field efficacy data does not exist; however pen studies (wherein animals are confined and excluded from other deer) indicate that a single-shot GnRH vaccine can last for up to four years (Miller et al. 2004). The EPA has approved the use of GonaCon™ as a “pesticide.” However, the Office of the Indiana State Chemist has not approved this pesticide for use in Indiana. At this point, there are no known dangers to humans or wildlife from eating deer vaccinated with GonaCon™. However, the long-term bioaccumulative effects of the pesticide are still being studied.

EFFICACY: As a stand-alone management strategy, contraception does not reduce overabundant deer populations. A number of factors shape the efficacy of contraception.

- **Deer Population Must Be “Closed.”** Treated deer populations must be isolated, or closed, from adjacent populations. Deer immigration from adjoining properties would negate any fertility control efforts within the treated area, as new immigrants have not been exposed to the fertility agents.
- **A High Percentage of Does Must Be Treated.** A large proportion of the females (70-90 %) must be treated to curb or reduce population growth.
- **Population Must Be At Target Level.** Since mortality rates for suburban deer populations are usually low, eliminating reproduction within the deer herd will not reduce total deer numbers for several years after initiating the anti-fertility program. Therefore, a deer population should be at the desired level before initiating this technique.

- **Population Growth and Damage.** Again, this method is not intended to, nor does it effectively address, immediate population growth or damage concerns.
- **Deer Stress.** Federal regulations require that GonaCon be administered by hand. PZP is not commercially available and is not subject to specific limitations as it is experimental in nature. Use of PZP would require a research permit. IDNR advises that the conditions of any permit would require that the deer be tagged. Both tagging and administering the contraceptive agent by hand requires that deer be captured before the vaccine is administered. Deer are stressed in the capture/trapping phase.

COST: \$600-\$800/doe, plus ongoing maintenance.

SAFETY: Generally safe, but see above.

MAINTENANCE: Some forms of immunocontraception require boosters. Unless located in a closed system, does immigrating into an area would require dosage.

HUMANENESS: Because this method works by decreasing fertility rather than increasing mortality rates, this method is generally considered humane.

IDNR: IDNR does not support the use of contraception in free-ranging environments.⁷

TASK FORCE POSITION: Because this technique is not approved by the IDNR in free-ranging environments, and because it is costly, requires that the deer population be closed and the bioaccumulative effects are not known, this is not a viable option.

⁷ See, IDNR's response to Ogden Dunes, Indiana's request to use GonaCon™ in a free ranging environment (01 August 2012).

STERILIZATION

(The IDNR does not approve of this method in free-ranging contexts.)

Sterilization involves the permanent loss of fertility to a deer. There are two primary forms of sterilization: surgical sterilization and ligation. Surgical sterilization involves the removal of a doe's ovaries. Removal of a doe's ovaries re-shapes doe behavior: there is some indication that sterilized deer move more than fertile deer. Ligation of the oviduct does not alter female behavior but does increase the amount of time she cycles per season.

EFFICACY: Effective in small pockets (less than 2 square miles) and isolated areas with limited immigration opportunity. Some studies suggest that sterilization is more effective than culling because the sterilized deer are able to contribute to resource limitation and density-dependence in reproduction (Boone and Wiegert 1994). Other studies suggest the sterilization is an effective way to maintain a desired population level after culling has been implemented (Nielsen 1997). This method does not eliminate current damage, as population remains; however, it does stem population growth. Higher mortality rates have been observed in sterilized deer; home range size and movement tend to be similar between sterilized and non-sterilized animals (Skinner 2007).

Cornell is currently engaging in research to determine if surgical sterilization in combination with hunting can mitigate deer-related impacts on university lands and surrounding neighborhoods (Curtis 2011). For its study, Cornell divided their management areas into three zones: 1) suburban campus core; 2) adjacent outlying areas that contain agriculture fields and natural areas where deer hunting is permitted and 3) an adjacent control zone. Each zone uses a different technique. In the suburban zone, biologists are using sterilization as the primary management tool. In the agricultural/rural zone, hunting is allowed and the increased harvest of female deer is encouraged through an "Earn-a-Buck" program. The results of the on-going research could determine if fertility control combined with hunting is a viable, long-term approach to managing deer or other wildlife populations.

COST: \$800-\$1,000/doe plus ongoing maintenance.

SAFETY: No real threat to human safety.

MAINTENANCE: Requires annual maintenance.

HUMANENESS: Because this method works by decreasing fertility rather than increasing mortality rates, this method is generally considered humane.

IDNR: Does not support this method in free-ranging environments.

TASK FORCE POSITION: Because this technique is not approved by the IDNR in free-ranging environments and is costly, this is not a viable option.

SHARPSHOOTING

Sharpshooting requires trained personnel to use a variety of techniques to maximize safety, discretion and efficiency. The effort is conducted by trained personnel authorized by the IDNR. Shooting is usually performed from an elevated position to ensure the shot is aimed at the ground and not toward buildings or in the air. A backstop is needed to prevent a bullet from ricocheting into unintended areas. Shooting is usually done at night using artificial light, over bait and using a sound suppression device. Using silencers serves two purposes: it keeps the activity “quiet” and out of range to neighboring residents; it also prevents educating or frightening other deer. Use of sound suppression devices and spotlights to take wild animals is tightly controlled and allowed to be used only by IDNR employees, federal wildlife staff or persons specifically authorized by the IDNR. (I.C. 14-22-6-7 and 14-22-6-11). Deer are shot in the head or neck to ensure a quick death. The use of an accurately delivered gunshot has been determined to be humane euthanasia by the American Veterinary Medical Association.

EFFICACY:

Performed by trained marksmen, this method is effective to bring about a quick and substantial reduction of the deer herd. The practice requires a natural backstop and is not suitable in many residential areas. To be effective, a feeding ban should be in place and enforcement of the ban should be increased when trap and kill management is being implemented.

COST: \$200-\$350/deer, depending on method plus ongoing maintenance.

SAFETY: When performed by trained personnel using special equipment, wildlife managers generally consider this method safe. However, some members of the public may express concerns about the discharge of firearms.

MAINTENANCE: In a free-ranging context, this method requires continual upkeep.

HUMANENESS:

Because the technique is administered by trained sharpshooters using high-powered rifles to kill deer over bait, death is instantaneous. Because the technique uses sound suppression devices, deer and other animals in the area are not frightened or stressed. Some people may object to this method because it involves killing an animal.

IDNR:

Sharp shooting is a wildlife management technique used in and adjacent to human populated areas which can be employed to address societal issues, such as safety and humaneness, while providing for the efficient removal of deer. Sharp shooting is an intensive method of deer removal by competent marksmen and should not be considered or mistaken for a form of hunting.

- a) The landowner, homeowner’s association, or government entity must submit a detailed plan for sharp shooting to the District Biologist for approval, which

reasonably attempts to resolve the problem on a community wide scale (per IDNR's discretion) for an extended period of time. The plan must include:

1. Introduction - brief history of the conflict and a description of the area, including its location (political township, township, range, and section) or address and size. Describe in detail the extent of damage caused by the deer, attaching any supporting documentation as an appendix. Any additional problems/issues associated with the deer should be described as well.
2. Authority –specifically site your legal authority to act on behalf of those being affected and to conduct such activities on the lands where the sharp shooting will occur.
3. Goal – the long term objectives of the sharp shooting plan
4. Alternatives - a review of other alternatives to sharp shooting including the reasons that these are not viable.
5. Logistics – describe in detail the following:
 - A. Number of deer to be culled – discuss the number of deer to be removed by sharpshooting and supporting information for the recommendation. (Note: Deer density estimates or counts are not required. Discussion with potential contracted sharpshooters and community involvement will best aid estimated number of deer to remove. Any discussion of age and sex restrictions of the deer to be removed would occur in this section.)
 - B. Timing - when sharpshooting will be conducted
 - C. Personnel – who will be conducting the cull and how/why the individuals were selected.
 - D. Methods – what methods, equipment (ex. Type of firearm), and aids will be used to perform the sharp shooting.
 - E. Safety Issues – discuss all safety issues and how these issues will be specifically addressed during sharp shooting operations.
 - F. Utilization plan – describe how the culled deer will be utilized/disposed of.
6. Long Term Management Plan – proposed management techniques to be employed once sharp shooting has been completed to meet the long term objectives of the sharp shooting plan.
7. Public Information Plan – List all efforts that have been undertaken to discuss the problem with affected individuals. List all efforts that will be undertaken to inform affected individuals as the plan is implemented.
8. Lead Contact – list the contact information for the designated individual, including a phone number and email address who affected individuals can contact immediately about any concerns during the sharp shooting operation.

The District Wildlife Biologist will forward the plan to the Deer Biologist for review. They will discuss any further requirements or issues with the applicant before forwarding the plan, plus any accompanying documents, to the Regional Supervisor and District Lieutenant for review, comment and recommendations. Then, all materials will be forwarded to the appropriate Regional Commander and the Private Lands Program Manager, and then to the Chief of Wildlife. A Special Purpose Deer Control Permit will be issued upon final approval from the Fish and Wildlife Director.

b) Upon permit issuance, the permittee must maintain a current, accurate list of the names of approved designated sharp shooters. A copy of the permit must be in the possession of each sharp shooter. The permittee must keep record of all animals taken during the valid permit dates.

c) Within 30 days of the permit expiration, the permittee will submit a final report to the District Biologist which will be forwarded to the Wildlife Section Chief. The report will assist in future decisionmaking processes. The report should document all aspects of the deer removal process, including any public reaction to the deer removal or control.

d) Considerations for Sharp Shooting - Sharp shooting is an intensive method of deer removal by competent marksmen that maximizes safety, humaneness, and efficiency. To accomplish this, the methodology, aids, and equipment used in a sharp shooting plan must be selected with consideration for the specific situation.

The Division of Fish and Wildlife offers the following recommendations as general guidance for preparing a sharp shooting plan.

- The IDNR will not conduct or participate in any sharpshooting activities within any community.
- The definition of sharp shooting requires that the shooters must be competent marksmen so the sharp shooting plan should include a means of evaluating marksmanship proficiency.
- Sharp shooting may be costly and those costs are the responsibility of the permittee.
- There could be inherent risks and unforeseen liabilities when conducting sharp shooting efforts. The total liability and safety of all sharp shooting efforts and its associated activities is the responsibility of the permittee.
- Sharp shooting can be an extremely divisive technique within the community. The applicant should consider the potential ramifications that go along with implementing a sharp shooting program.
- To maximize community acceptance of the sharp shooting operation, human consumption should be the preferred method of disposal of removed deer during the sharp shooting operation.
- Baiting to attract deer to a specific location for removal has been proven to be efficient in sharp shooting situations and may be incorporated into a special permit.
- Conducting sharp shooting efforts in the winter using bait will likely increase the efficiency of the deer removal program.
- The use of elevated stands has proven to be efficient in deer removal and is often necessary in areas with higher human densities for safety issues (people and buildings). Policy C2(b)(2) (IDNR, Human Conflict with White-tailed Deer, 2012).

NOTE: The Bloomington Municipal Code §14.20.020 currently prohibits the discharge of firearms within the city limits, with exceptions for police and self-defense.

TASK FORCE POSITION: Of all the available lethal methods, this is one of the most humane.

TRAP and KILL

In trap and kill management, deer are lured into a trap or net via bait and killed via captive bolt, firearm or chemical. If dispatched via gunshot, meat is suitable for human consumption. If killed via chemical, meat not suitable for consumption. Deer may be trapped by using drop nets, remote immobilization drugs administered by way of darts or by using Clover traps – collapsible netted cage traps. The use of an accurately delivered gunshot has been determined to be humane euthanasia by the American Veterinary Medical Association.

Many techniques involve pre-baiting to attract and condition the animal to the capture site. Traps can be remotely monitored with cameras or checked frequently to ensure quick death after capture. Netting will capture multiple deer at a time, while Clover traps will usually capture one deer at a time. After capture, the deer are dispatched. If dispatched via captive bolt, it is necessary to restrain the deer. When done via gunshot, no restraint is required, although it is sometimes used. Death via tranquilizer is administered by way of remote delivery. It takes 4-6 minutes for the tranquilizer to take effect, during which time the animal may continue to feed and move around. Wildlife professionals have no control over where an animal might move and may need permission of private property owners to retrieve the animal.

EFFICACY: This technique may be suitable in areas where other lethal methods are not safe or suitable. When the animal is trapped, this technique removes concerns about wounded deer traveling about areas of dense human habitation. To be effective, a feeding ban should be in place and enforcement of the ban should be increased when trap and kill management is being implemented.

COST: \$100-300/deer plus ongoing maintenance. Capture cost will be lower when: animal densities are high; animals have not been previously trapped; and any deer is the target – not a specific deer, gender or age class.

SAFETY: This technique must be performed by trained specialists and is generally considered safe if properly managed. Pets and other animals may inadvertently be trapped. The use of trap cameras help ensure the quick release of any non-target animal. If the deer is killed via gunshot, the trap must be located near an adequate natural backstop. Not all properties will be suitable for this technique. Owner permission will be required for trap placement on private land. The traps may be subject to vandalism.

MAINTENANCE: Must be on-going.

HUMANENESS:

- The effects of capture stress are key in assessing the humaneness of this option. The longer a deer is trapped, the greater its stress level and the less humane the management option.

- The Task Force does not consider the use of captive bolt as humane – it results in undue suffering to the deer and is dangerous to those administering the technique.
- The use of drop nets to capture animals is less humane than a Clover trap.
- Use of chemical immobilization to bring about death is less humane than death via firearm. When deer are chemically immobilized in a confined area from which they desire to escape, such as a trap, they will continuously experience stress as the chemical can take up to six minutes to take effect. The more a deer is stressed, the longer it takes for the drugs to work, and the more stress the deer will experience. This long-term stress is what causes muscle tissue damage leading to capture myopathy.

One study measured blood cortisol (stress) levels in deer killed instantly by rifle shot to the head and compared them to deer that were chemically immobilized and subsequently euthanized with a captive bolt gun. Those deer that were killed after having been chemically immobilized had blood cortisol levels that were about 10 times greater than deer killed by rifle shot, indicating that the immobilized deer had been stressed more prior to being dispatched (Schwartz et al. 1997).

- Some people may object to this method because it involves killing an animal.

IDNR:

C) Live-trapping and euthanasia will be permitted. Mechanical euthanasia can be substituted for pharmacological agents. The use of captive bolt system or accurately delivered gunshot has been determined to be humane euthanasia by the American Veterinary Medical Association and are approved methods for use on deer under the DFW “Euthanasia for Captive Nuisance Wild Animals” policy. (IDNR, Human Conflict with White-tailed Deer, 2012)

TASK FORCE POSITION

The most humane of the trap and kill option is one wherein deer are acclimated to the site via a period of pre-baiting, where the time between trapping and death is very short and when death is caused by a precise gunshot to the head. Any trap and kill method should minimize stress to deer. If a trap and kill method reveals that deer stress levels are too high, the management program should be abated.

HUNTING

Public hunting is the pursuit and killing of wildlife for food or recreation by licensed individuals who are using sanctioned hunting equipment and who are abiding by all applicable State and local laws. There are two primary classifications of public hunting: 1) regulated public hunting and 2) managed public hunting.

Regulated Public Hunting

In regulated public hunting, property is opened to public access during all or part of the deer-hunting season. Participating hunters are subject to Indiana law and regulations. This method of management has the lowest overall operating costs and requires the least amount of oversight and preparation.

Managed Hunting

Managed hunting is a term used to describe the application of regulated hunting in combination with more stringent controls (DeNicola et al. 2000). Managed hunting may limit hunters to specific regions and dates, may require that hunters demonstrate a certain level of proficiency, may require additional permitting and may require shooting from elevated stands, among other requirements. Because managed hunting provides more control and oversight over the activity, most communities that do allow hunting in urban environments do so by developing managed hunting rules. In Indiana, communities may work with the IDNR to develop such rules to further control hunting. Both the City of Warsaw and the Hidden Valley Homeowners Association in Dearborn County have developed such rules.

EFFICACY: Public hunting is the tool most commonly used by State wildlife agencies to manage deer populations. Compared to other lethal management tools, hunting is the most cost effective.

Studies indicate that an *actual* reduction in the deer herd usually translates into a *perceived* reduction in the deer herd by the public. Another study suggests that hunting tends to de-acclimate deer to humans, thereby potentially decreasing some forms of deer-human conflict (Kilpatrick and Lima 1999).

One commonly expressed concern is that hunting actually *increases* the reproductive rates of deer. That is, when deer are culled, there are fewer deer and those who are left will increase their reproduction to compensate for fewer deer. This happens when a deer population moves from exceeding their biological carrying capacity to a situation in which they are below biological carrying capacity -- in other words, if deer go from a denuded landscape to one with abundant forage. Reducing a deer herd that has not reached biological carrying capacity will not enable the remaining deer to go into a "super reproductive" state.

IDNR points out that the real problem with the "rebound effect" occurs when the population comes close to 100% or 110% of biological carrying capacity and reproduction

drops to 0.3. The IDNR Deer Research Biologist estimates that deer in Bloomington now are probably reproducing at a 1.5-2.0 rate, and removing deer will not accelerate that rate.⁸

COST: Two costs are at issue: cost to the hunter and cost to administer the program. For hunters, the cost includes cost of a hunting license, any additional fees that may be imposed with a managed hunt, cost for equipment, tools, etc. With general hunting, the administrative costs are borne by the State. With managed hunting, the administrative costs are borne by the community administering the program. While cost may vary considerably from community to community depending on how and what they regulate, a figure of approximately \$120-\$150/deer is not unreasonable (*See*, for example, Hygnstrom et al. 2011). A white-tailed deer study in Minnesota that compared four lethal removal methods found that the cost of a managed hunt averaged \$117 per deer removed, based on the average net cost per deer after including revenues generated by selling permits to participating hunters (Doerr et al. 2001).

SAFETY: Generally considered safe. No accidents have been reported in Indiana's urban deer zones. According to the IDNR, the majority of archery hunting accidents result from hunter falls from tree stands. This risk can be mitigated by use of safety belts or ropes.

In response to concerns raised by the Task Force concerning safety perception and lowered visibility, the IDNR recommended that the Task Force consider using five contiguous acres in Bloomington's urban situations. In general, the IDNR does not recommend acreage requirements for hunting efforts.

MAINTENANCE: Maintenance is required. Deer spend their life in a defined home range. In urban and suburban environments, the home range is relatively small. Some research on urban deer has shown that when deer are removed from an area, other deer will not abandon their home range to fill that niche (Kilpatrick et al. 2001; McNulty et al. 1997). Yet, over time, young deer searching for their own home range will disperse in random directions, slowly repopulating the area.

⁸ Furthermore, an increase in individual reproduction does not compensate for fewer deer in the herd. For example, if a population is at 50 percent biological carrying capacity, a population of female deer may produce 1.6 fawns annually; if the herd is at 30 percent biological carrying capacity, a female deer may produce 1.8 fawns a year. As a population is reduced in relation to carrying capacity, individual deer may produce more fawns, but this increase in individual reproductive rate does not compensate for fewer deer – a smaller deer population will still produce fewer fawns. If a population is at 50 percent biological carrying capacity with 50 adult females, the population can produce 88 fawns. If is reduced to 30 percent carrying capacity with 30 adult female does, the herd grows by 70 fawns (Downing and Guynn 1985; Rosenberry et al. 2009).

HUMANENESS: Many people object to hunting because it involves killing an animal. Even the best-placed shot resulting in instantaneous death may be considered inhumane by someone who believes deer should not be killed. Humaneness may be increased by requiring that hunters demonstrate a certain level of proficiency before being allowed to hunt.

IDNR:

Public hunting, either with selected or unrestricted hunters is the most preferred, economical and practicable method of removing deer, even in urban areas. Even if firearms cannot be used, or are not feasible, archery hunting can be efficiently and safely used to remove deer in urban areas. (IDNR, *Human Conflict with White-tailed Deer*, 2012)

CITY: The Bloomington Municipal Code §14.20.020 currently prohibits the discharge of firearms within the city limits, with exceptions for police and self-defense. City code does not currently prohibit the discharge of a bow and arrow.

TASK FORCE POSITION: May be a viable option in certain circumstances.

PREDATOR REINTRODUCTION

(Not Supported by the IDNR)



This option is intended to restore predators to an area of deer overabundance in the interest of restoring a better predator-prey relationship and minimizes human involvement in management. This approach is not realistic.

EFFICACY: Our fragmented landscape does not provide the large, isolated undeveloped areas predators require. To be effective, predator numbers would have to be relatively high.

COST: unknown

SAFETY: While wolves and mountain lions are effective deer predators, they present the potential to injure or kill non-target species such as pets and humans. As fed up as some residents are with deer, predator reintroduction would pose an even greater community wildlife concern.

MAINTENANCE: unknown

HUMANENESS: Some may perceive this as a more “natural,” non-human way to manage deer.

TASK FORCE POSITION: While the elimination of most predators by humans is the cause of both real and perceived overabundance, IDNR does not support the reintroduction of predators. Therefore, the Task Force eliminated this option from consideration.



Gray wolves once ranged across the entire North American continent. The spread of European settlers depleted populations of large ungulates, reducing the number of prey available to wolves. Eventually, wolves began to prey on livestock. In response to demands from ranchers, government agencies instituted a bounty program to eradicate gray wolves. By the early 1900s the historic range of the gray wolf was reduced to Alaska, Canada and northeastern Minnesota.

RECOMMENDATIONS

NEIGHBORHOOD DEER: THE TRAGEDY OF BECOMING COMMON

Not that long ago, the presence of deer in residential neighborhoods was rare. If a resident observed one it was a real “event” – noteworthy enough to make it into the local newspaper in some communities. Today, the presence of deer in many Bloomington neighborhoods has become a feature of everyday life. Fawns are born in backyards and a deer occasionally crashes through a patio glass door.



As both deer and human populations expand, nature and culture are mixing in new ways. Some residents value the increased presence of deer in neighborhoods; others bemoan it. Some view deer abundance as an unsustainable threat to urban agriculture; others are concerned primarily about ornamental landscaping. Yet others people have more context-sensitive notions of where deer fit in and where they do not: an occasional deer in Bryan Park may be nice, but a herd on College Mall Road may not be as welcome.

When it comes to deer in Bloomington neighborhoods, the underlying question of whether deer are “overabundant” is almost entirely a social one. Bloomington neighborhood deer are not close to reaching biological carrying capacity – the point at which the habitat can no longer support deer. Instead, managing deer in neighborhoods is about managing social carrying capacity. The “urban deer issue” is squarely a “human issue.” It is about managing the herd to a level that is acceptable to residents. This level is subjective. It differs from neighborhood to neighborhood and from resident to resident and it changes over time.

However, managing social carrying capacity doesn’t just mean that we reduce the herd to satisfy our own needs and maximize our own happiness. Managing social carrying capacity also means that we must learn to adapt to some deer presence in neighborhoods. We should not expect deer to avoid our hostas. Nor should we develop land without regard to a development’s influence on wildlife. Deer are an important part of our landscape. When it comes to urban deer, IDNR advises that deer should not be eliminated, nor should landowners experience excessive property loss. Instead, there must be a careful balance between people and deer (IDNR, Managing Deer Damage 2012).

RECOMMENDATIONS

Based on the Task Force's survey, we know that some areas of the community have reached social carrying capacity while others have not. The goal of the Task Force was to come up with an integrated, multi-pronged approach that addresses the social and geographic differences. Because resident concern is localized, because the urban deer herd is likely to grow in the absence any limiting factors, and because resident concerns are unlikely to be resolved using only non-lethal means, the Task Force recommends both non-lethal and site-specific lethal strategies for neighborhoods.

1. FEEDING BAN (CITY)

Many residents feed deer with the best of intentions. Some may be concerned that deer do not have enough to eat, especially in the winter. Others might enjoy seeing deer up close. However, supplemental feeding is actually *not* in the best interest of the deer.

Supplemental feeding may:

- Increase the reproductive capacity of a herd;
- Increase deer-vehicle collisions. Most deer feeding is conducted near homes, which places deer in close proximity to well-travelled roads;
- Concentrate deer and increase nose-to-nose contact, thereby possibly spreading disease;
- Cause increased landscape damage. Deer are browsers and will heavily graze areas surrounding feeding stations;
- Cause deer to lose their fear of humans. Deer using a feeding site can become acclimated to, and no longer fearful of, humans. A fear of humans is in the best interest of deer. Increased acclimation will create more conflict between humans and deer and between humans and other humans;
- When placing feed on the ground for deer, residents will likely attract other critters, such as raccoons and mice. White-footed mice are reservoirs of Lyme disease;
- In the winter, deer typically eat and move less to conserve energy. Feeding sites may cause deer to travel further to reach the site than they would for natural forage. Feeding sites situated in residential areas mean that deer are more likely to be chased by neighborhood dogs. Even if they are not injured, provoking deer to run through deep snow and frigid temperatures causes them to waste a lot of energy they cannot afford to lose.

The IDNR makes it clear that deer in Monroe County are not starving and that local winters are not severe enough to warrant supplemental feeding. If a resident sees a deer with its ribs showing, it is most likely a doe nursing her young in the spring and summer. Such weight loss is normal and temporary.

Because intentional feeding of the deer just exacerbates concerns with deer as “nuisance” animals and because it is not good for deer, the practice should be prohibited within the city limits. It is commonly acknowledged that anti-feeding ordinances are difficult to

enforce; enforcement occurs most usually upon complaint. However, such a ban does have deterrent and educational value. The ban should be accompanied by public awareness efforts (See “Education and Outreach” Chapter). Language for a City of Bloomington ban might look something like the following:

7.29 DEER FEEDING

7.29.010 Deer Feeding Prohibited

- (a) Except as provided in 7.29.020 below, a person commits an offense if the person intentionally feeds deer or makes food available for consumption by deer on private or public property within the corporate boundaries of the City of Bloomington
- (b) A person shall be presumed to have intentionally fed deer, or made food available for consumption by deer, if the person places food, or causes food to be placed, on the ground outdoors or on any outdoor platform that stands fewer than five feet above the ground.
- (c) For the purpose of this section, the following shall constitute food: corn, fruit, oats, hay, nuts, wheat, alfalfa, salt blocks, grain, vegetables, and commercially sold wildlife feed and livestock feed.

7.29.020 Exceptions

- (a) This chapter does not apply to an animal control officer, veterinarian, peace officer, City employee, federal or State wildlife official, or property owner who is authorized by the Indiana Department of Natural Resources to treat, manage, capture, trap, hunt, or remove deer and who is acting within the scope of the person’s authority.
- (b) The following material are excluded from the prohibitions of this chapter:
 - (1) Planted material growing in gardens, or standing crops;
 - (2) Naturally-growing matter, including but not limited to fruit and vegetables;
 - (3) Fruit or nuts that have fallen on the ground from trees;
 - (4) Stored crops, provided the stored crop is not intentionally made available to deer;
 - (5) The normal feeding of livestock and/or the practice of raising crops and crop aftermath, including hay, alfalfa and grains, produced, harvested, stored or fed to domestic livestock in accordance with normal agricultural practices;
 - (6) The cultivation of a lawn or garden; and
 - (7) The feeding of birds.

7.29.030 Violations

- (a) Any animal control officer may issue to any person in violation of this chapter a notice of ordinance violation.
- (b) Upon notice, it shall be the duty of each property owner to remove any and all food placed on the property in violation of this ordinance. Failure to remove such food within 24 hours after written notice from the City, or otherwise continuing to feed deer after receiving notice from the City, shall constitute a violation of this ordinance.
- (c) Persons who violate any provision of this chapter shall be subject to a fine of fifty dollars for the first offense, with the fine of each subsequent offense of this chapter increasing by an increment of fifty dollars.

Measurement

Measuring the efficacy of a feeding ban will be difficult. However, complaints about deer feeding, reduced damage to vegetation and neighborhood complaints about deer in general might be indicators.

2. RAISE FENCE HEIGHT LIMITS AND EXPLORE FEASIBILITY OF ELECTRIC FENCES (CITY)

Deer who live their lives among humans do not perceive features of the built environment to be artificial human constructs. Instead, houses, roads, cars and fences are all part of an urban deer's daily reality. Therefore, it gives an urban deer no pause to jump over a fence to access food, be that food vegetables or hostas. On average, deer can jump almost 8'; however, when pressed, or motivated by a food source, deer can jump even higher. While an 8' fence excludes many deer, IDNR advises that a 10' fence will exclude virtually all deer.

Height

At present, the Bloomington Unified Development Ordinance allows a maximum fence height of 8' feet in yard areas behind the front wall of houses. This standard drops to a maximum height of 4' in front yards, which includes street yards of corner lots. As the City strives to encourage more urban agriculture (including front-yard gardens), the current fence height limitations become increasingly problematic. The Task Force has heard from urban farmers that current fence height limits frustrate their ability to grow vegetable crops, flowering plants and fruit and nut trees. Additionally, the City's Board of Zoning Appeals has received a request from a resident to raise fence height limitations in the interest of keeping deer out of gardens. Even if deer numbers were reduced in Bloomington neighborhoods, deer will not (and should not) be entirely eliminated from urban environments. Therefore, the need for fences tall enough to prevent deer encroachment will endure. For these reasons, the Task Force recommends that the City raise fence height limitations to 10' in sideyards and backyards and 8' feet in front yards.

The recommendation for taller fences in front yards is not a new idea. From 1995 to 2007, residents were permitted to build 8' fences in their front yards. During this time, planners observed that taller, solid fences placed in front yards and adjacent to public sidewalks created an uncomfortable, potentially unsafe, pedestrian environment. Additionally, there are aesthetic concerns with placing taller, opaque fences in close proximity to street views. In response, the City lowered fence height limits to 4'. Today, given the concerns expressed by residents about deer, City planners advise that taller, 8' fences might very well be suitable if the fences followed an "open fencing" configuration that allows visibility into the property, through the use of lattice, wrought iron, picket or other material.

Electric Fences

While a conventional fence provides a barrier to keep deer out, electric fences are intended to modify deer behavior. According to the IDNR, one of the most effective deer fences is the “peanut butter fence.” Delivering a low amperage jolt that does not set fire to plants or injure animals, a peanut butter fence is characterized by strips of foil smeared with peanut butter affixed to an electrified fence. The deer lick the peanut butter, receive a shock, and are conditioned not to return.

At present, electric fences are prohibited throughout the City’s planning jurisdiction. A brief review of other communities indicates that most communities allow electric fences only in rural/agricultural or industrial zones. The handful of urban communities that allow electrified fences frequently require a non-electrified perimeter fence that acts as a deterrent and provides protection from having innocent people touching the electrified section. A distinct advantage of an electric fence over a conventional fence is cost. A conventional fence typically costs \$5-\$7 per linear foot, while an electric fence is about \$0.15 per linear foot. A conventional fence is a permanent structure while electric fences can easily be removed.

In discussing fence options, the Task Force initially considered an evolutionary approach to fencing: try raising fence height limits first; if that does not work, open the possibility of electric fencing. However, given the cost associated with conventional fences, the Task Force instead recommends that the City simultaneously raise fence height limits while exploring the possibility of allowing some electrified fencing. Because of the possible safety concerns, this is a matter best left to the City’s planning experts.

Ordinance Change

Raising fence height limitations to extend up to 10’ in sideyards and backyards and up to 8’ in front yards and corner lots requires amendment of the Bloomington Municipal Code.

Measurement

The efficacy of raising fence height limits should be measured by citizen feedback via the deer comment form and/or resident survey.

3. DEER AND DEVELOPMENT – CONSIDER WILDLIFE

Human activity has fragmented much of our community's wildlife habitat. Fragmentation reduces the average size of remaining wooded patches and increases the distance between patches and the ratio of edge to interior (Andren 1994; Murcia 1995). Some plants and mammals are severely compromised by fragmentation, others thrive on it. Deer fall into the latter category.

Deer love edge. As humans encroach into previously forested areas, we not only displace deer, but we proliferate a crazy quilt of edge, the existence of which is a good predictor of deer presence (Schiller and Horn, 1997). Fragmenting the landscape encourages deer to disperse and take up residence in neighborhoods.

The increased presence of deer in neighborhoods, especially on the southeast side of town, tracks with a decrease in the community's loss of greenspace. According to the Bloomington Environmental Commission's *Greenspace Report*, from 1993 to 2007, the amount of greenspace in the City's planning jurisdiction area shrank by a quarter -- from 51% to 38% (City of Bloomington Environmental Commission 2007). Much of the loss has been concentrated in the southeastern side of town, which has seen 42% of its greenspace disappear within 14 years. Accounting for most of this loss is development. Given the simultaneous loss of greenspace and the increase of edge in this area, it is not surprising that many residents point out that they did not perceive a "deer problem" until the Deer Park and Renwick projects were built out.

The creation of more edge poses other environmental concerns. Edge reduces native biodiversity, increasing the chances of establishment of invasive species, changing vegetative structure and altering microclimate. Edge also increases the abundance of the white-footed mouse, the principal natural reservoir of the Lyme bacterium (Allan et al. 2002). Field studies in Indiana and Illinois indicate that population densities of white-footed mice are markedly higher in forest patches than in continuous forest (Nupp and Swihart 1996, 1998; *See also* Ostefeld et al. 2002).



The Renwick Refrain. Residents frequently comment that they did not notice a “deer problem” until the Renwick Planned Unit Development was built. The photos above depict the Renwick area at three moments in time, left-right: 1993, 2005 and 2010.

Edge can be better managed, and future deer-human conflicts reduced, through community design. Both City and County guiding land-use documents discourage sprawl and prioritize nurturing environmental integrity. When a developer proposes a project, that project is subject to a rigorous environmental review to assess the development’s impact on environmental features such as siltation, stormwater, tree cover, open space, native plantings and karst. However, a development’s influence on wildlife is not usually part of the development review process. It should be.

The City’s Environmental Commission is charged with advising “the City of Bloomington on how its actions and policies may preserve and enhance the quality of Bloomington’s environment, including the life-supporting processes that natural ecological systems provide to humans and other organisms.” The Task Force encourages the Environmental Commission to include wildlife displacement and habitat fragmentation in its review of development proposals. Similarly, while the County’s draft Comprehensive Plan points to the need to protect endangered species, the analysis of development’s impact should extend to other wildlife, such as deer.

Wildlife Corridors

The arrangement of trees in a community is a good way to predict how deer populations will respond to a design or development proposal (Gorham and Porter 2011). As tree cover increases, deer are presented with an interconnected network for movement, cover and access to food. Through continuous tree cover, experts advise that communities may be able to better direct movement of deer around or through a community rather than dispersing deer throughout (Cornicelli et al. 1996, Grund et al. 2002). We encourage the City’s Environmental Commission to start a community conversation about ways in which wildlife corridors might be preserved or established.

4. URBAN DEER ZONE: CITY OF BLOOMINGTON AND MONROE COUNTY LAND IMMEDIATELY SURROUNDING THE CITY

The State of Indiana created Urban Deer Zones (UDZs) in response to growing concerns of Indiana residents living in urban and suburban areas. The intent of a UDZ is to reduce the size of urban deer herds to better mirror the social carrying capacity of the community. UDZ designation is sought by the local community, approved by the State Natural Resources Commission and incorporated into the Indiana Administrative Code (312 IAC 9). UDZs extend the hunting season, increase bag limits and require that hunters in a UDZ take an antlerless deer before taking an antlered deer. In addition to State-wide bag limits, hunters in UDZs are allowed to take four antlerless deer or three antlerless deer plus one buck. By focusing primarily on female deer, this “Earn-a-Buck” requirement is an effective management tool to control and reduce deer numbers.

It is important to understand what a UDZ is and what it is not. A UDZ is intended only for hunting through archery. A UDZ does not allow hunting where hunting is otherwise prohibited through regulations governing the discharge of a bow and arrow. UDZ designation does not prevent a local community from adopting more rigorous hunting regulations.

A number of urban communities in Indiana have been designated UDZs, including: Marion County (entire county, including Indianapolis), Vanderburgh County (entire county, including Evansville), Lake County (entire county, including Gary), Porter County (entire county). Areas of Hendricks, Boone, Hamilton, Allen, Tippecanoe, LaPorte and Kosciusko counties have also been designated UDZs.

UDZs are effective insofar as residents open up their property to hunting. If people do not provide hunter access to their land, UDZs are of limited efficacy. To encourage more residents to participate in the UDZ effort, the Indiana legislature enacted legislation in 2011 to shield landowners from liability.⁹

⁹ The law provides that landowners who provide access to their land free of charge for hunting, are not liable for the injury or death of a participant resulting from risks of the activity. Nor can a participant or the participant’s representative make a claim, maintain an action against, or recover from the landowner any loss, damage, or death resulting from an inherent risk associated with hunting. Inherent risks include those conditions, dangers, or hazards that are an integral part of the activity; including surface and subsurface conditions and natural conditions of the land, vegetation and waters; the behavior of wild or domestic animals on the land; the ordinary dangers of structures or equipment on the land; and, negligent acts of a participant that may contribute to the injury of that participant or others.

However, the law does not prevent or limit the liability of a landowner who has knowledge of a dangerous condition that exists on the land and does not make the danger known to the participant, who commits an act or omission that constitutes a willful or wanton disregard for the safety of the participant, or who intentionally injures the participant. IC §34-31-9.

IDNR has advised that the area appropriate for a local UDZ may include the City of Bloomington plus Monroe County land immediately surrounding Bloomington. IDNR will not approve UDZ designation for the county only, absent inclusion of the city. IDNR further advises that a significant portion of land in Monroe County is either State or national forested land, and is not suitable for UDZ designation. IDNR does not support designating the whole of Monroe County a UDZ.

The Task Force recommends that local officials seek UDZ designation for the city and applicable areas of the county, but that any hunting within city limits be strictly regulated and limited to a minimum of five contiguous acres of greenspace. The boundaries of the UDZ would be defined by roads, geographic indicators and other easily identified markers. The following describes how a UDZ would work in the county and how it would work in the city:

URBAN DEER ZONE IN MONROE COUNTY

Both bow-and-arrow and firearm hunting are allowed in Monroe County, outside the City of Bloomington's corporate boundaries. Most county land is decidedly more rural than land within the city and hunting has been practiced for many years. To strengthen bow hunting efforts in the county, the Task Force recommends that local officials seek UDZ status for appropriate areas of Monroe County. Again, IDNR may approve a request for UDZ status for the concentric area of Monroe County land surrounding the corporate boundaries of Bloomington. Such designation of county land could lower deer densities and potentially prevent immigration of deer into more urban areas.

URBAN DEER ZONE IN CITY OF BLOOMINGTON

At present, it is illegal to discharge a firearm within city limits, but there is no prohibition on the discharge of a bow-and-arrow on private property. Therefore, city residents may currently bow hunt on private property without further city regulation, provided these residents obtain a hunting license and follow all State requirements. Some residents are already hunting, or allowing hunting, on their properties. We anticipate that even more may do so as they become frustrated with deer.

While a number of communities successfully implement urban deer hunts in areas of human habitation, in some areas of Bloomington, it's just not suitable. First, many of the neighborhoods experiencing the greatest concern with deer abundance are densely-settled and keeping hunting at an adequate distance from occupied structures, from roadways, sidewalks, trails and other public ways, makes hunting in neighborhoods problematic. Secondly, in dense, core neighborhoods, lots are small and yards back up to yards. Hunting in this sort of environment would almost guarantee that the practice would be very visible and that a deer shot in one yard may expire in another, causing tension among neighbors. Instead, as discussed in the following section, the Task Force recommends that that bow and arrow discharge be limited to five contiguous acres of greenspace and that rigorous hunter proficiency and accountability rules should apply.

5. ESTABLISH “GREENSPACE HUNTING DISTRICTS” WITHIN THE CITY

While an Urban Deer Zone designation is a good step toward better managing the local herd, by itself, a UDZ does not address the safety and visibility concerns that come with hunting in more urban environments. To address those concerns, the Task Force recommends creating more rigorous requirements for hunting within City limits. Specifically, we recommend that bow and arrow discharge be limited to a minimum of five contiguous acres of specifically designated “Greenspace Hunting Districts” and that strict safety rules and hunter accountability provisions be implemented in these areas.

The recommendation for “Greenspace Hunting Districts” is stricter than current rules. At present, no local laws prohibit or limit the discharge of a bow and arrow within the City limits. This is likely a historical artifact, rather than an intentional silence. As more and more residents express growing frustrated with the presence of urban deer, more residents are likely to seek relief through legally hunting deer on their property during deer season. Provided the property owner follows State laws, currently, a Bloomington resident may hunt on his/her property (or any other property to which s/he has been granted permission) without further restriction. Because “urban hunting” is different, we recommend that any UDZ status be complemented with City regulations implementing strict hunting regulations, beyond those required by State law.

WHY FIVE?

We recommend that hunting be restricted to a minimum of five contiguous acres of greenspace. Five acres is not a magic number, and many communities allow hunting on parcels much smaller. However, in response to concerns brought forth by the Task Force concerning safety perception and lowered visibility, the IDNR recommended that the Task Force consider using five contiguous acres in Bloomington's urban situations. (In general, IDNR does not provide these restrictions and maintains that no acreage limit is required for safely discharging archery equipment.)

WHY GREENSPACE?

The Task Force considered the option of allowing residential property owners to aggregate properties to meet the five-acre test. However, upon touring areas of Bloomington most affected by deer, IDNR biologists advised against hunting in many of these neighborhoods – housing is just too dense. Instead, the Task Force turned its focus to hunting on green expanses, distanced from human settlement. As much of the city's greenspace is in private ownership, limiting hunting only to public greenspace would be ineffective; therefore, the Task Force recommends that managed hunting be allowed on both public and private property.

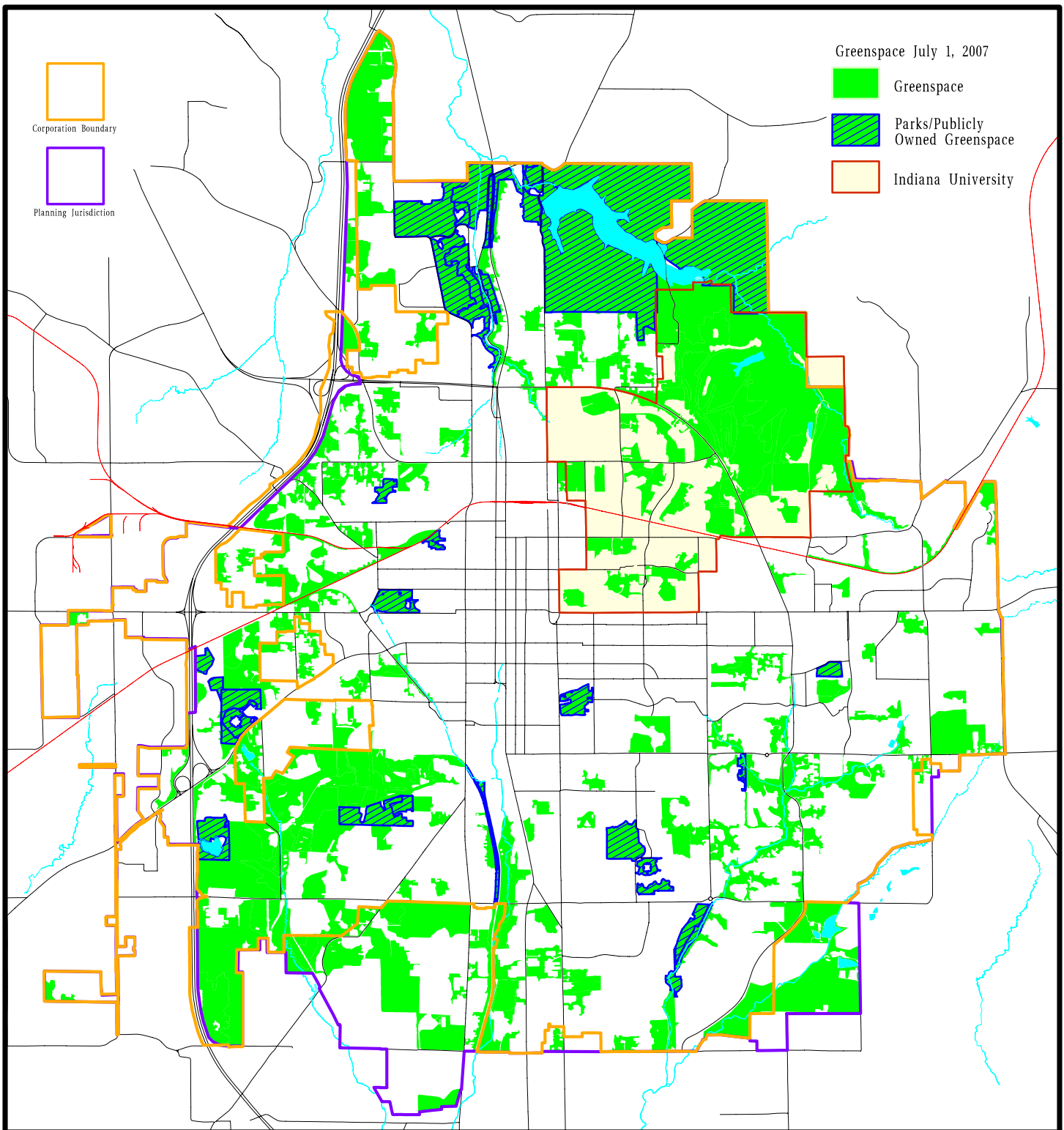
We have relied on the City of Bloomington Environmental Commission's definition of greenspace. Greenspace is defined as possessing a permeable surface (forested,

shrub/grass covered areas, parks, golf courses, cemeteries and agricultural land) and more than ten feet from any human-made development such as roads, parking lots and buildings. IDNR has advised that ten feet is a sufficient setback to guarantee safety.

This “greenspace” approach to urban deer management is similar to many other urban deer management programs, including that being successfully implemented by the Hidden Valley Homeowners’ Association in Lawrenceburg, Indiana. Hidden Valley allows hunting on linear “greenbelts” that run throughout the densely populated association area. Some of the greenbelts are very close to houses and playgrounds. As these “greenbelts” also serve as deer habitat, a deer that has been shot tends to run along the green corridor before it expires, instead of running into someone’s yard.¹⁰

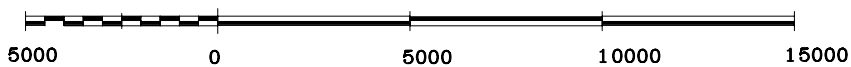
A map documenting both private and public greenspace of at least five contiguous acres follows.

¹⁰ In early 2012, a resident of the homeowners’ association challenged the practice. After review, an Indiana administrative law judge found that Hidden Valley had taken reasonable precautions to ensure resident safety including requirements such as a hunter education course, proficiency test and hunting from an elevated tree stand. Given these precautions, the court found that the perceived threat to public safety was not greater than the continued harm of deer overabundance. The safety requirements we propose here are very similar to those of Hidden Valley.



Greenspace Greater Than 5 Acres
 2007 Greenspace Data
 Sep 18, 2012

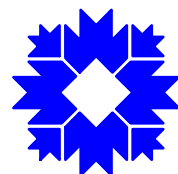
Scale: 1 inch = 5000 feet



For use as map information only, information is NOT warranted.



City of Bloomington
 Deer Task Force



Geographic Information System

GREENSPACE HUNTING DISTRICTS – RULES

Any hunting on greenspace within the City limits should be closely regulated by City government and strict hunter proficiency, safety and accountability rules should apply.

RULES FOR PROPERTY OWNERS WISHING TO PARTICIPATE

1. FIVE CONTIGUOUS ACRES OF GREENSPACE

- Persons owning a tract or tracts of five or more contiguous acres of greenspace and who wish to have their property designated as a Greenspace Hunting District shall make an application to the City;
- Property owners may aggregate their properties to meet the acreage requirement provided that properties are not separated by a road and all owners agree in writing that hunting may occur on their property;
- When it comes to public land, clearly not all greenspace of five contiguous acres would be suitable for hunting. For example, Bryan Park is very visible, close to houses and open, without much tree cover. Instead of trying to map out criteria governing which public areas would be suitable, IDNR advises that it would be better to simply include/exclude certain parks by name. The Task Force leaves it to the best judgment of City officials to decide which, if any, parks are best suited to hunting. Parks suitable *may* include: Winslow Woods, Wapehani Mountain Bike Park, Thompson Park, the Goat Farm and Southeast Park.

2. APPLICATION TO THE CITY AND HOLD HARMLESS AGREEMENTS REQUIRED

An application for designation of property as a Greenspace Hunting Districts should be on a form supplied by the City and accompanied by the following:

- A plat, map, or other instrument identifying with sufficient particularity the boundary of the property to be designated;
- Documentation sufficient to verify all ownership interests in the property;
- Documentation sufficient to verify the authority of the applicant or applicants to submit the property for designation as a Greenspace Hunting District and to grant permission, on behalf of those who have ownership interests in the property, to hunters applying to participate in a reduction effort;
- At the City's discretion, and subject to applicant verification, documentation from a prior year's application may be incorporated by reference for purpose of meeting the requirements outlined herein, provided there has been no material change in ownership interests or property boundaries since the initial submittal;
- No one shall be authorized to hunt on a designated Greenspace Hunting District without a City permit. No City permits should be granted without written permission of an authorized property owner of a designated Greenspace Hunting Districts or his/her authorized designee on a form to be supplied by the City;
- Property owners must agree to hold the City harmless for actions of persons permitted to participate in a reduction effort;
- Written permission should be maintained by the City and updated annually.

RULES FOR HUNTERS

1. Greenspace Hunting Districts Permit Required.

Any person wishing to hunt in a Greenspace Hunting District must obtain a permit from the City of Bloomington. Requirements include:

- Applicant must be 21 years or older, unless hunting with a mentor;
- Applicant must not have a previous record of State game violations or felony charges;
- Applicant must agree to any background checks;
- Each hunter shall be issued a unique permit identification number;
- Permits shall be non-transferable and shall authorize only the named person;
- Permittee may hunt only in the Greenspace Hunting District to which the hunter has been assigned;
- Permittees must meet all State requirements for hunting;
- Application fee may be assessed to help offset the cost of administration.

2. Hold Harmless Agreement Required

- All hunters wishing to hunt within a Greenspace Hunting Districts must sign a hold harmless agreement with the City.

3. Permission to Hunt Agreement Required

- Hunters and participating landowner must sign a permission to hunt or similar liability form (examples are available by the IDNR);
- Hunters are responsible for obtaining permission to hunt within a Greenspace Hunting District. Permission must be obtained prior to application for a permit or attendance in any orientation meeting or proficiency test.

4. Proficiency Test Required

- Hunters must pass an authorized archery proficiency test each year with the equipment they will use to hunt within a Greenspace Hunting District. Test is to be administered by a City-appointed entity;
- Candidates will be allowed two opportunities to qualify;
- Test will consist of five (5) consecutive shots in an eight (8) inch circle from a distance of 20 yards. The candidate must place four (4) out of five (5) arrows.

5. Hunting Equipment

- Hunting equipment shall be limited to long bow, recurve, compound bow or crossbow, as defined by State law.

6. Tree Stands

- All hunters must hunt from an elevated stand. Still hunting, defined as the continuous movement of a hunter through an animal's environment, shall not be allowed;
- All hunters must use safety harness or belt while hunting;
- There can be no screw-in steps, and no nails or lag screws driven into trees;

- Tree stands shall be removed after the hunting season;
- Stands shall be placed in areas of low public visibility;
- The City should provide hunters with guidance on placement of tree stands;¹¹
- The City should reserve the right to approve location of tree stands.

7. Hunter Accountability

- Hunters must carry a copy of his/her Greenspace Hunting District permit at all times while hunting within a Greenspace Hunting District;
- Hunters must mark all arrows/bolt with a number corresponding to permit number.

8. Mandatory Orientation

Each qualified hunter shall attend a mandatory meeting conducted prior to the commencement of hunting in a Greenspace Hunting District. An IDNR Conservation Officer can provide guidance on developing an orientation. Topics to cover at an orientation may include:

- A review of Greenspace Hunting Districts hunting rules, trespassing rules, etc.;
- Emphasis on low-visibility parking, removal of deer, wounded deer protocol, etc.;
- Possible reactions of non-hunters who are accidentally encountered while hunting, while trailing a deer, while loading or driving with deer;
- The importance of tree stand placement and that high visibility stands or careless hunting will result in revocation of permit;
- Donation of meat should be encouraged and guidance on donation should be provided;
- Permitting, reporting, and identification requirements;
- An explanation that City restrictions are additional to requirements outlined in State law;
- A review of all causes for revocation of permits.

¹¹ Suggestions for tree stand placement provided by Task Force member Susannah Smith-Burchell:

- A tree should be selected in an area that allows you to travel to, and leave the stand, without ruining your chances of success. Do not cross deer trails entering or exiting your stand location. Ideally, your stand should be downwind of the deer activity or of where you expect to see the deer.

- Bowhunters should try to be between 15 and 25 yards away from the expected shot location (beds, trails, feeding area). Placing a stand too close to the shot location diminishes the size of the kill zone on the deer, allowing a greater chance of crippling a deer or placing a poor or missed shot.

- Choose larger trees, at least three feet in circumference at the base. Small trees make it more difficult to place a stand securely and to blend in with surrounding woods. Trees that are in groups provide better cover and break up the hunter's silhouette. It helps with concealment of potentially reflective surfaces of the tree stand or bow to choose trees in shadows looking out into more brightly-lit areas.

- There is not a prescribed height for a tree stand, though many hunters prefer to be in the 15-25 foot range. The higher a hunter travels up the tree, the more difficult the shooting angles and the greater the distance between the hunter and the deer -- this presents more obstructions and a greater risk of injury. The best determinant is the height at which the cover behind the tree offers the most protection from being spotted.

9. Time and Place

- Hunters are permitted to hunt only in the Greenspace Hunting Districts to which s/he is assigned;
- Hunting dates and times shall be determined by the City each year, as needed. The dates shall fall within the IDNR's hunting season;
- City reserves right to suspend hunting on when special events or other concerns may increase the visibility potential of the program.

10. Shooting Requirements

- Hunters shall not shoot outside of the perimeter of the approved Greenspace Hunting District or deliver a shot that is likely to leave the Greenspace Hunting District.

11. "Earn-a-Buck" Incentive

Under UDZ rules, a hunter must take at least one antlerless deer before taking a antlered deer. After taking the first antlered deer, a hunter should be incentivized to take at least two more antlerless deer before taking another antlered deer.¹²

12. Field Dressing and Deer Removal

- Hunters are encouraged to field dress deer off-site, not on the property within the Greenspace Hunting Districts;
- Hunters must strive to cover or otherwise conceal deer so they are not visible being transported in and from the Greenspace Hunting Districts;
- If a deer expires in highly visible location, then the entire deer, including offal, should be removed from area as soon as practicable to reduce prolonged negative exposure to the program.

13. Wounded Deer

- A hunter shall make every effort to track a wounded deer for the purpose of completing the harvest and recovering the carcass;
- A hunter shall remain in the Greenspace Hunting District until the deer has expired;
- In the event the wounded deer is not recovered or leaves the permitted Greenspace Hunting District, the hunter shall immediately notify law enforcement and provide sufficient information to enable law enforcement to track and retrieve the deer;
- Hunters shall follow all applicable State laws regarding trespass and hunting without consent. Hunters are encouraged to complete retrieval agreements with

¹² This is a more rigorous Earn-a-Buck incentive, stricter than the one-antlerless requirement of an Urban Deer Zone. Warsaw is an Urban Deer Zone and has been encouraging the harvest of antlerless deer since 2006. Since that time, over 90% of the 200 total deer harvested have been antlerless. IDNR has expressed its support for this more rigorous approach, focusing on antlerless harvest. However, IDNR advises that an "Earn-a-Buck" *requirement* (not just an incentive) would conflict with State law, and such requirement would be impermissible. The Indiana Administrative Code defines "antlered deer" as a deer with an antler at least three (3) inches long (312 IAC 9-1-2) and "antlerless deer" as "a deer other than an antlered deer (312 IAC 9-1-3).

property owners adjacent to the Greenspace Hunting Districts to permit hunters to retrieve deer from non-hunted surrounding property.

14. Harvested Animal Procedures

- Hunters must check in all harvested animals in accordance with State law;
- Hunters shall submit a cull report to the City of Bloomington on a form provided by the City.

15. Revocation

- Any violation of the aforementioned rules will result in immediate suspension of hunting privileges within the City.

Ordinance Changes and Other Approval

The recommendation for establishing “Greenspace Hunting Districts” require a number of changes to the Bloomington Municipal Code. Those changes include, but may not be limited to:

- Restricting the discharge of a bow and arrow to five contiguous acres of the “Greenspace Hunting Districts” with the exception of archery practice.¹³
- Permitting requirements, rules for hunters, rules for property owners, penalties and revocation conditions.
- Any allowance for hunting on City-owned parks greenspace requires the approval of the City’s Board of Park Commissioners.

Measurement

1) **Hunter Success:** Hunter success is a reference point used by biologists to determine if a hunting effort is successful. In many State Parks, hunter success is set at 0.1 for archery hunting. That means that if 1 in 10 hunters kill a deer, then the State Park can skip hunting the following years. However, if hunter success is greater than 10%, this success points to the need for additional hunting efforts the following year. This rate is based upon property widely-accessible by the general hunting public. It is unknown how these numbers translate into an urban situation, where hunting opportunities are more restricted. If the Task Force recommendation for managed hunting on greenspace is implemented, those overseeing the hunt will have to determine an appropriate metric. At some point, if the City determines that the deer herd is being successfully managed, it could decide to suspend hunting.

2) **Resident Feedback:** Studies indicate that an *actual* reduction in the deer herd usually translates into a *perceived* reduction in the deer herd. One study reported that where deer densities were reduced by 25%, residents experienced a 24% reduction in damage; where deer densities were reduced by 92%, residents experienced a 47% decrease in damage (Kilpatrick and Labonte 2003). After a managed hunting program, the perception of residents living near hunting greenspaces should be assessed through a survey or some other public feedback mechanism.

¹³ Notably, this limitation on the discharge of bows and arrows would limit the ability of residents to take nuisance animals such as coyotes, raccoons, foxes and skunks with archery equipment as allowed by Indiana law (312 IAC 9-3-15; 312 IAC 9-3-12; IC 14-8-2-278 and IC 14-22-6-12).

6. TRAP AND KILL MANAGEMENT FOR POCKET DEER

Deer tucked away in neighborhoods have ample nutrient-rich food, water, shelter and very small home ranges. They have no reason to leave. This is true of the most “deer dense” portion of the City – the southeast quadrant. Hunting on greenspace would not address concerns with these neighborhood deer.

By far, the most challenging aspect of the Task Force’s work was addressing concerns with neighborhood deer. Because neighborhood deer populations are open (deer are free to move in and out), IDNR will not approve the use of contraception or sterilization. While the Task Force explored ways to open up neighborhoods to hunting, neighborhoods experiencing the greatest problems with deer abundance are densely built. Once the Task Force factored in hunter setbacks from property lines, occupied structures, roads, sidewalk and other public ways, these neighborhoods became “unhuntingable.” Even absent these setbacks, the IDNR has advised that given the density of problem neighborhoods, many areas are just not suitable for hunting. Similarly, the Task Force consulted with a biologist from the USDA who judged many of these neighborhoods unsuitable for a sharpshooting effort.

Instead, upon touring many of these “problem neighborhoods,” biologists from the IDNR and the USDA advise that the safest way to remove deer from these neighborhoods is through a trap and kill program. Unlike traditional trap and kill methods where deer are trapped for some duration of time before they are dispatched, the Task Force recommends a trap and kill method in which deer are trapped for a very short period of time before they are killed. Cages are equipped with cameras and a system that automatically notifies a wildlife specialist when a deer is trapped. Once trapped, deer are dispatched by trained personnel within 15 to 20 minutes via gunshot. Because deer are acclimated to the site for a sustained period of pre-baiting and are accustomed to features of the built environment such as fences, it is likely that a deer will not be stressed when initially trapped. Instead, it will likely go about eating the bait. For these reasons, the Task Force considers this the safest and most humane way to reduce the number of deer in neighborhoods.

The project proposed project will serve both deer management and research purposes. Dr. Joe Caudell of the USDA Animal and Plant Health Inspection Service Wildlife Services (APHIS) and Purdue University will be measuring the stress levels of deer during the project. If stress is determined to be excessive, the project will stop. If the stress levels are determined not to be high, the project will continue and may have long-term value not just to Bloomington neighborhoods, but other communities.

This form of trap and kill is not suitable for all properties. Instead, because deer are dispatched using a firearm, this method requires an adequate natural backstop. While the method can be implemented with a captive bolt where there is not an adequate backstop,

the Task Force voted against use of captive bolt.¹⁴ The project would be implemented in the winter, when deer could be effectively baited.

Dr. Caudell describes the project as follows:

Background: Though hunting is the preferred technique to manage deer populations, increasing conflicts within urban areas where hunting is prohibited or undesirable necessitate the need for additional removal techniques. Clover traps have proven effective at capturing deer, but the act of euthanasia via physical restraint is often viewed as inhumane, unnecessarily stressful, or generally unfavorable to a large contingent of Indiana residents. Developing a technique that can monitor traps and promote rapid response time by biologists, as well as methods to measure stress levels of trapped deer, may aid in understanding an urban deer's response to being trapped. This method can be incorporated with a removal plan that also involves sharpshooting, and efficiency can be compared and contrasted in terms of hours/deer removed.

Deer have been routinely captured using clover traps for past relocation efforts, research, disease management, and other projects. However, it has been shown in other studies that comparative stress levels are higher in captured and euthanized or immobilized deer than in deer that have been euthanized through gunshot. But several of these comparisons [that] have compared stress levels of white-tailed deer, the deer have been chemically immobilized. When deer are chemically immobilized in a confined area where they desire to get away, such as a trap, they will continuously experience stress. The more a deer is stressed, the longer it takes for the drugs to work, and the more stress the deer will experience. This long-term stress is what causes muscle tissue damage leading to capture myopathy (a disease that an animal develops due to long-term stress, often in a situation where the animal is capture[d] or is in captivity and experiences chronic stress. This disease can eventually lead to death in the animal.)

Our hypothesis is that if the deer can be captured and euthanized within a short time frame, the deer would only experience what is a normal level of stress for a prey species and, therefore, would be considered [a] humane method for euthanizing the deer.

¹⁴ Use of captive bolt requires that the biologist administering the technique jump on the deer to administer the shot. Not only is this dangerous to those administering the shot, but it causes stress to the deer and death is not as immediate as death by gunshot.

Stress in Deer: Stressors would be anything that threatens or disturbs the homeostatic equilibrium (basically the health) of an animal. Individual animals will perceive stressors differently. A deer in a “wild” setting that has no experience with netting, metal poles, or other man-made objects would probably consider just the presence of the trap a stressor. Urban deer are much more accustomed to human-made materials (i.e., deer fences, houses, swing sets, etc.). So just the presence of the traps should not be a stressor. This is also why we would prebait with the traps locked in the open position (so that the deer can enter and exit them, get a meal, and do not perceive them as a stressor). The stress response can be divided into three components. The primary stress response involves the release of catecholamines [with]in the first few seconds and glucocorticosteroids within a few minutes. This is what gets animals moving in a fight or flight response. The secondary response involves increased cardiac output and mobilization of blood sugars because of the catecholamines. The third stage involves whole body changes in organ functions, catabolism of muscle, and reduction of other bodily functions. If deer are in a prolonged state of stress, where muscles are catabolized, this can lead to long term injury or capture myopathy (which would probably be painful to the animal and therefore cause suffering). Our goal is to get to the deer before they get to this stage. If our plan works, then the deer would only be stress[ed] for a few minutes and only just start to release glucocorticosteroids (which is what we are measuring). The higher the glucocorticosteroids levels, the longer the animal has experienced stress. Once we can film the deer’s behavior in the trap and correlate that time with the glucocorticosteroids levels, we will have a better idea of the length of time that someone would have to euthanize the deer before it begins to move from the short-term, normal stress to chronic stress and suffering.

The idea behind what we are proposing is to first acclimate the deer to the presence of the trap through prebaiting. The deer would [visit] the trap for several days to a couple of weeks and feed inside the trap (without the door closing). Then, on the day that the door closes, the deer might be startled as the trap closes, but then, ideally, go back to eating. The deer should not experience stress until it wants to get away from a predator or other disturbance. Excluding some unexpected disturbance (such as a unleashed dog roaming the neighborhood), the remote trap indicator would let the biologist know that [a] deer is trapped and the presence of the biologist would be the start of the stressful period. This should only last for less than a minute (the time it takes to euthanize the deer). We would also use the trap cameras to monitor the behavior of the deer to assess what it does once the door closes. Newer cameras will take video, and that video can be used, in conjunction with the measurement of the stress hormones, to assess the stress experienced by the deer. Our goal would be to see if we can develop a low-stress procedure that can be used in these urban conditions. If the data indicates that this method is not working, we can scrap this idea and go back to the drawing board. It would be easy enough to review the camera footage and get the blood chemistry sent off to the lab on a daily basis in the initial phase to assess the effectiveness as quickly as possible.

Methods: We would use a collapsible clover trap to capture deer. The deer would be pre-baited without the trap. Once the deer are accustomed to feeding in a specific area, the trap would be introduced and the pre-baiting continued. Once the deer are accustomed to entering the trap, feeding, and leaving, the trap would be set (to capture the deer) and a remote camera with cellular technology would be added to record the behavior of the trapped deer and to notify the biologist that a deer is in the trap. The biologist would then respond to the “call” and within 15-20 minutes, arrive at the trap and euthanize the deer via gunshot.

To determine the stress levels experienced during the procedures, we would use a combination of evidence from the remote camera photos and/or videos and the measurements of (glucocorticosteroids) levels.

It is the Task Force’s judgment that this research project is the safest and most humane way to reduce the number of pocket deer living in neighborhoods where residents perceive deer to be overabundant. Because concerns with pocket deer are primarily social and largely localized, the Task Force recommends that affected residents assume the cost of this management technique. The USDA APHIS estimates that the cost of this project could be as low as \$100/deer if residents helped with baiting prior to implementation of the effort. The USDA APHIS has stated that it would be willing to train local law enforcement to conduct this effort in future years, should the City so request.

7. SHARPSHOOTING BY THE USDA IN SUITABLE OPEN GREENSPACES

To complement the trap and kill method and to prevent deer from immigrating into neighborhoods from surrounding areas, the Task Force recommends that landowners, homeowner associations and other appropriate entities be allowed to hire sharpshooters to conduct reduction efforts in suitable greenspace areas near neighborhoods where deer nuisance is a concern or where ecological damage can be demonstrated.

Many neighborhoods in the southeastern portion of the community expressing the greatest concern with deer abundance are largely unsuitable for a sharpshooting effort. However, public and private greenspace areas nearby would be appropriate. The Task Force recommends that both private and public suitable greenspace should be made eligible for a sharpshooting deer reduction effort. Because IDNR is unlikely to grant a special purpose permit to an individual landowner who does not control sufficient property, the City may consider allowing private landowners to include City-owned property in their request for a special purpose sharpshooting permit.

As discussed in the “Management Alternatives” section of this report, the best practice sharpshooting efforts are conducted at night, over bait and using a silencer. At present, State law allows only IDNR, federal wildlife agents or an individual permitted by IDNR, to use silencers and jacklighting (IC §14-22-6-11 and IC §14-22-6-7). IDNR does not provide sharpshooting services; however, the USDA APHIS does provide these services and has a long history of conducting sharpshooting efforts in urban environments, including management at the Monroe County Airport.¹⁵ Here is how a sharpshooting effort would work:

- Winter – The effort would be conducted in the winter, when deer are motivated to travel to a food source and after which time young have been weaned;
- Baiting – Deer would be baited continuously before the effort commenced. Costs of the effort could be reduced if residents or other volunteers provided baiting services;
- Safety and clusters – Deer are shot only when circumstances are safe (i.e., no non-target animals are in the removal zone) and fewer than approximately nine deer are present to prevent alerting the deer to the practice;
- Female deer prioritized – Most shots are taken on a first-opportunity basis. When possible, antlerless deer should be prioritized;
- Lead Fragmentation – To limit lead fragmentation, deer should culled by placement of shot to the cranium or upper neck (Stewart and Veverka 2011). At present, lead-free bullets tend to be less precise and stand a greater chance of passing through targets and striking a non-target animal or object (Caudell 2012);
- Notice is given to adjacent property owners before the practice begins;
- If there are too many properties participating in a sharpshooting effort too close together, the deer will be spread out over all of those properties. It is best to pick one property (usually based on safety, size and deer sightings) and bait that property to draw in all the deer. As each social group comes in, the shooter removes

¹⁵ APHIS agents receive extensive firearms training and usually perform this service at a cost less than that of private wildlife management firms.

all of the individuals in that group. A certain distance away, another bait site is set up and attempts to draw in groups that are not associated with the previous bait site. Sites may be sat once, multiple times, or not at all, depending on deer activity. Usually, many sites are set up and monitored prior to sharpshooting.

The Task Force recommends that sharpshooting is a useful supplement to the trap and kill method proposed for neighborhoods. Together, these methods could result in a significant reduction in deer and potentially alleviate the need for intensive measures in the future. Because concerns with neighborhood deer are largely social and localized, the Task Force recommends that residents perceiving overabundance of deer assume the cost of this management technique. The USDA has stated that it would be willing to train local law enforcement in future years to conduct sharpshooting in greenspaces, should the City so request.

ELIGIBILITY TO PARTICIPATE IN EITHER TRAP AND KILL OR SHARPSHOOTING PROGRAMS

Any entity wishing to manage deer through either a trap and kill or sharpshooting effort must obtain a special purpose deer control permit from the IDNR. Additionally, the Task Force recommends that the City exact close control over the process. Specifically, we recommend that the City identify particular zones of the city experiencing deer problems and declare those as nuisance areas. Once an area is so declared, then entities within this area would be eligible to apply to the City for permission to implement trap and kill or sharpshooting in appropriate areas. Both State requirements and suggested City oversight are described below.

1. IDNR – PERMIT REQUIRED

Both “trap and kill” and sharpshooting management require a special purpose deer control permit from the IDNR and both methods are subject to IDNR’s sharpshooting policy (See “Management Alternatives” for details). The IDNR will not accept requests or issue permits to individual landowners who do not control enough land to adequately address community-wide conflicts. IDNR requires that persons wishing to engage in either trap and kill or sharpshooting demonstrate that these activities will make a meaningful contribution to solving deer abundance on a larger scale, for an extended period of time. For these reasons, IDNR may issue a permit to entities controlling sufficient land, such as cities, neighborhoods, homeowners associations, business parks or a landowner who owns sufficient property.

IDNR advises that one way to ensure the overall wildlife management efficacy of trap and kill and sharpshooting methods is to identify regions in which deer are reported to be a nuisance or in which ecological damage is being sustained. The area should be sufficiently large. Rather than locating the trap and kill and sharpshooting efforts in one or two neighborhoods, IDNR suggests creating management districts and then making management recommendations based on the level of deer damage and concern in certain districts. IDNR suggests that these areas might be created by dividing the city up into quadrants.

2. CITY – LOCATION WITHIN A DEER NUISANCE DISTRICT

Identification of management zones fits well with the need for City oversight. We know that most effective urban deer management is concentrated in zones and that concern with deer tends to be regionalized. To best match management to need while exercising City oversight, the Task Force recommends that the City annually identify regions as “Deer Nuisance Districts.” This designation might be made based on survey data, citizen complaints, deer-vehicle collisions, browse evidence or some other indicator of overabundance.

Once a region of the city has been declared a Deer Nuisance District, property owners within the District may apply to the City for deer reduction using either trap and kill or sharpshooting. Should officials wish to proceed with recommendations to allow either of these methods, the results of the Task Force survey indicate that the southeastern quadrant of Bloomington is one where residents have reached their social tolerance for deer; this quadrant might be identified a Nuisance District.

This Nuisance District approach is modeled, in part, on the deer management program in Warsaw, Indiana. Kosciusko County is declared an Urban Deer Zone. Within the City of Warsaw, areas experiencing the greatest concern with deer are deemed “Deer Nuisance Zones” based on resident complaints, property damage and deer-vehicle collisions. Within those zones, property owners can apply to city government for hunting on their land. Since the Task Force is not recommending hunting in neighborhoods, and as we know that hunting on greenspace in Bloomington will likely not address concerns with neighborhood deer, we are taking the Warsaw model of identifying nuisance areas, and recommending urban-specific management practices within those areas.¹⁶

Ordinance and Policy Changes

1. The Bloomington Municipal Code §14.20.020 currently prohibits the discharge of firearms within the city limits, with exceptions for police and self-defense. USDA APHIS is authorized by federal law to discharge firearms; however APHIS defers to the wishes of the local community. Some communities have required a change to local code before APHIS is allowed to engage in sharpshooting. Any management performed by an entity other than the federal government or local law enforcement (for example, White Buffalo) would require a change to the Bloomington Municipal Code.
2. Also requiring codification are criteria for Deer Nuisance District designation whereby suitable entities would be deemed eligible by the City to contract with IDNR-endorsed individuals to conduct trap and kill and sharpshooting efforts as appropriate.

¹⁶ The Warsaw zones are proposed by a deer management team and established each year by Council resolution.

Funding the Effort

The costs of trap and kill and/or sharpshooting should be borne by the residents in the area perceiving deer overabundance. There are a number of reasons for this:

- Concerns with deer are social and geographically specific. All residents of the City should not be expected to assume the cost of paying for a localized concern;
- Those morally opposed do not want to subsidize a lethal effort;
- Some residents experiencing deer overabundance have indicated that they are willing to help pay for a deer-reduction effort; and
- At a moment of economic austerity, it is unlikely that City is positioned to devote scarce resources to a deer reduction effort to address social carrying capacity. While the Task Force does not recommend devoting City money to address this social concern, the Task Force does feel that residents experiencing concerns with deer should be afforded some relief by being able to implement appropriate methods to reduce the size of the deer herd in their neighborhoods.

Measurement: The efficacy of trap and kill and sharpshooting programs could be measured by resident feedback, deer-vehicle collision data and whether the number of deer culled through either a sharpshooting or trap-and-kill effort exceeded or fell short of the number of deer for which the IDNR permit was written.

GRIFFY WOODS



Griffy Woods, July 2012. What is wrong with this picture? Answer: A depauperate forest understory marked by the absence of native wildflowers, tree seedlings and habitat for other animals and the presence of invasive species and native plants deer don't eat.

Griffy Woods is an approximately 2,700-acre woodland located about a mile from Assembly Hall. Bigger than many Indiana State Parks, Griffy Woods is characterized by extraordinary ecological diversity: it includes a 109-acre lake and at least ten distinct ecological communities, ranging from marsh and floodplain forest to dry mesic upland, conifer plantations and old fields. Griffy is home to more than 565 terrestrial plant species, including 15 flora species identified as endangered, threatened or rare; nearly 160 bird species; almost 50 reptile and amphibian species; and over 100 small mammal species.

Griffy also provides valuable outdoor space for humans. Hikers, birders, wildflower enthusiasts, and other nature lovers frequent these woods. Griffy provides critical field research opportunities for scientists from all over the State and is an outdoor classroom for graduate and grade-school students alike. The quality of Griffy's natural space combined with its proximity to the city marks Griffy as unique – few cities the size of Bloomington have such a vast, biologically rich resource in their municipal backyards.

Responsibility for stewardship of Griffy is a joint effort. “Griffy Woods” is a collective referent used to describe land under the ownership of the City of Bloomington, Indiana University and private ownership. The City of Bloomington owns the largest portion – approximately 1,200 acres called the “Griffy Lake Nature Preserve.” The City-owned land includes 240-acre state-designated preserve southwest of the lake called Griffy Woods Nature Preserve. The City-owned portion of Griffy is under the control of the City of Bloomington Utilities Services Board. An agreement between the Utilities Board and the City’s Board of Parks and Recreation allows for the Board of Parks and Recreation to manage Griffy.

Indiana University owns land at Griffy Woods south of City-owned property called the “Indiana University Research and Teaching Preserve” (IURTP). Established in 2001, the 185-acre IURTP provides a field station for scientists and students to study and observe fundamental environmental processes as they occur in the natural world. Research at IURTP is wide-ranging and multi-disciplinary, including topics such as periodical cicadas, community dynamics of microbes, soil-borne pathogens and tree recruitment and effects of exotic grasses on native communities. Teaching at the preserve ranges from grade school classes to university courses such as “The City as an Ecosystem,” “The Biology of Birds” and “Silviculture.”



Situated next to residential neighborhoods and the Indiana University golf course, Griffy provides deer with ideal edge habitat. Ideal habitat, paired with protection from predators, translates into many deer. Research by IU scientists suggests that deer may be 13 times more numerous at Griffy than they are at other nearby forests. The density of deer in Griffy Woods is having widespread, potentially irreversible, ecosystem effects.

ECOSYSTEM EFFECTS OF DEER OVERBROWSING

When it comes to forest ecosystems, deer tend to function as “keystone species” (McShea and Rappole 1992; Waller and Alverson 1997; Rooney 2001; Rooney and Waller 2003) or “ecosystem engineers,” able to affect cascades of changes throughout a forest that re-shape forest structure and composition. High levels of deer browsing can kill or reduce the size of plants, inhibit forest regeneration, redirect forest succession, facilitate invasive plant species, alter nutrient and carbon cycling and reduce food resources and habitat for other wildlife. But, that’s not all. Deer herbivory can also:

- Reduce species richness, evenness and diversity;
- Reduce the presence of seedlings and saplings of trees and other woody species;
- Reduce ground cover of spring ephemerals and other herbaceous species;
- Increase soil compaction, erosion and sediment runoff;
- Reduce leaf litter depth;
- Increase the presence of plants deer don’t like. Once browse-resistant species are established, they can minimize the reestablishment of less-browse resistant species through physical competition and/or chemical interference;
- Reconfigure the forest understory in an “alternate stable state” that is resistant to the re-establishment of originally dominant species (Stromayer and Warren 1997); and
- Shrink habitat, reduce food resources and lower survival rates for ground and shrub-nesting birds. Especially vulnerable are birds such as the ovenbird, wood thrush and Acadian flycatcher --all species that appear to be declining in the Midwest. In a study of mature deciduous woodlands in Indiana, Purdue scientists observed that average daily survival rates for wood thrush and Acadian flycatcher nests were significantly lower on sites experiencing heavy deer browsing (MacGowan and Weeks 1997).¹⁷



Wood thrushes suffer significantly from deer overbrowsing.

¹⁷ Additionally, in studies of forests heavily browsed by deer, scientists have observed that species richness declined significantly for intermediate-canopy nesting birds (deCalesta 1994). Similarly, understory and mid-story nesters are lower in heavily browsed sites, with some species completely absent. For birds that are successful in fledging young in areas experiencing heavy herbivory, those birds face a higher risk of predation as they travel further from the nest site to seek adequate food and cover (Casey and Hein 1983).

DEER HERBIVORY AT GRIFFY

The damaging effects of deer browsing are apparent at Griffy. Years of observation suggest that there have been long-term declines of many plant species at Griffy and an increase in unpalatable native species (such as pawpaw and spicebush) and non-native invasives (such as bush honeysuckle, multiflora rose and privet). It is also apparent that deer browsing is significantly compromising the regeneration of native tree seedlings and saplings, which represent the next generation of canopy trees.

The 2008 *Griffy Lake Nature Preserve Master Plan* observed that deer herbivory and trampling was having a particularly deleterious effect in the Mesic Upland Forest and Floodplain Forest (pp. 57-58). Griffy's Mesic Upland Forest is over 700 acres and is known as the climax community in the process of ecological succession. The Mesic upland is considered of high natural quality, marked by low levels of disturbance, few exotic species and many large trees, such as oaks, maples and beech (*Plan*, pp. 44-45). In contrast, the 135 acres of Floodplain Forest is characterized by the presence of trees along a stream and a dense herbaceous understory. Periodic flooding tends to select for early successional plants. The Floodplain Forest contains extensive pockets of degraded areas due to the presence of exotic species such as garlic mustard, privet, multiflora rose and Japanese stiltgrass (*Plan*, pp. 43-44). In fact, over the last five years, Japanese stiltgrass has gone from a significant, but relatively minor, invader in the floodplain to the most dominant species -- forming nearly 100% cover in many areas (Shelton, unpublished data). Other studies have shown that an interaction between deer and Japanese stiltgrass leads to a shift toward an alternate stable state of near complete dominance by stiltgrass (Baiser et al. 2008).

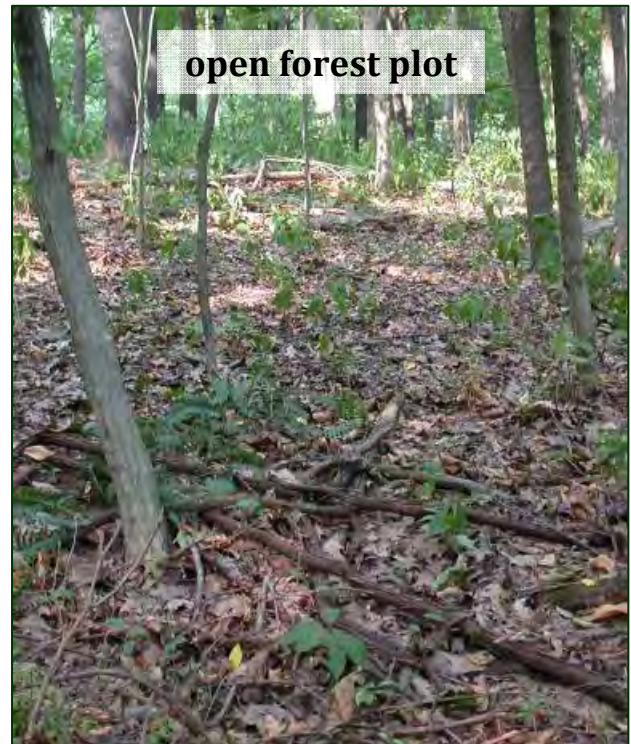
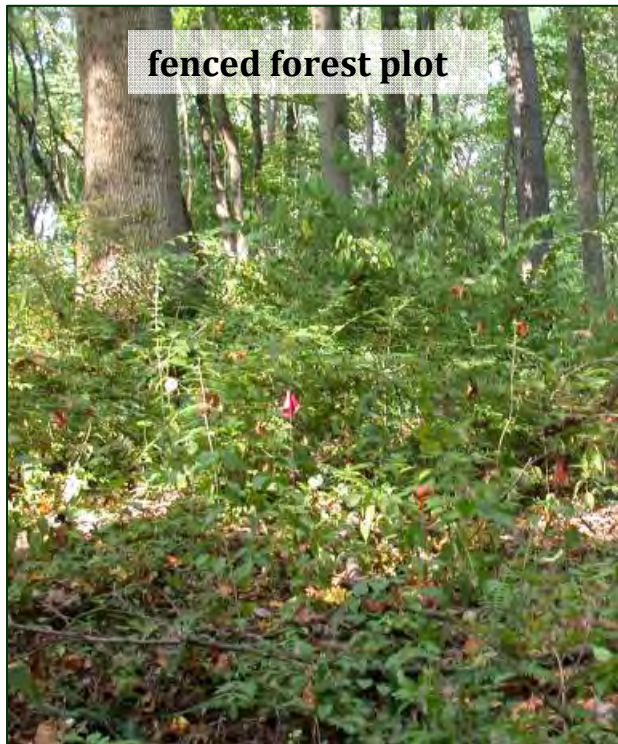
The *Griffy Master Plan* called for a study to determine the effects of deer browse. The *Plan* specifically called for research using "exclosure plots to determine whether there is an overabundance of deer at the site, and how the plant communities respond when the pressure of presumed overabundance of deer is removed." The *Plan* further advised that, "[i]t may be necessary to introduce population controls in the future to reduce the number of deer and their effects on the site." (pp. 57-58).

Since 2005, scientists at the IU Research and Teaching Preserve (IURTP) have been studying the effects of deer on the Griffy ecosystem. Led by Dr. Angie Shelton, the IURTP team constructed exclosures designed to keep deer out, but allow other plant-eaters in. The IURTP team used 15 exclosures (15m x 15m) and 15 control plots to measure both herbaceous and woody vegetation inside and outside the fenced areas. The results of the exclosure studies indicate that deer herbivory is: 1) decreasing native vegetative diversity; 2) encouraging the growth of invasive species and native plants unpalatable to deer; 3) severely compromising the regeneration of native trees and spring ephemerals; and 4) causing soil compaction and potential changes to soil microorganisms.

A. Trees and Other Woody Plants

One of the most apparent effects of herbivory is the way it shapes the regeneration of tree and other woody species. Native trees at Griffy include: oaks (white, red, black, chinkapin and chestnut), maples (sugar and red), hickories (shagbark, pignut and bitternut), red cedar, black gum, beech, dogwood, elms (American and slippery), cherry, sassafras, ash (white and black), walnut, Ohio buckeye, cottonwood, black willow, musclewood and pawpaw. Non-tree prominent native woody species include spicebush, virburnum and grape. Non-native woody species include multiflora rose, privet, honeysuckle and barberry.

In five years of deer exclosure, the results are stark: inside the exclosure – the area inaccessible to deer – there were 705 trees or shrubs of 44 species. Outside the exclosures, there were 470 individuals of 30 species. In the oldest exclosure, where deer have been excluded for seven years, the results are even more dramatic: 190 woody plants and 15 species were counted inside the fence, and 31 woody plants and 7 species were counted outside the fence.



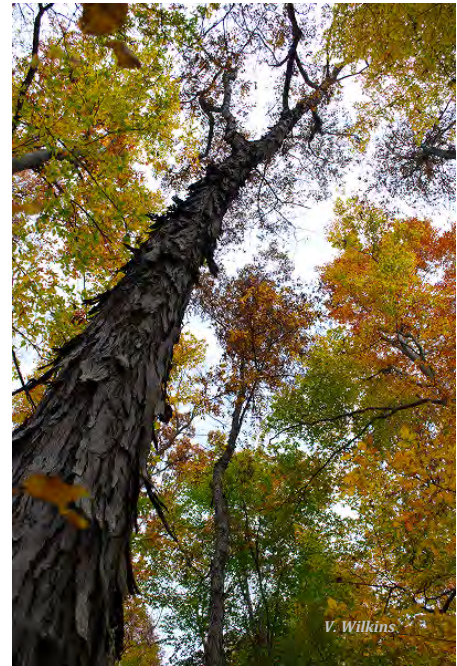
Photographs inside (left) and outside (right) a deer exclosure constructed in 2005 in Griffy Woods, showing a marked difference in the community of trees and shrubs. Photos by Angie Shelton.

Woody Plant Density and Diversity

In four years of deer exclusion, the density and diversity of woody plant species has increased inside the exclosures and severely declined in the deer-accessible control plots. Of 292 tree seedlings/saplings measured by IURTP scientists, over 80% occurred within the exclosures. Tree seedlings palatable to deer such as ash, hickory, sassafras, beech, dogwood, sugar maple and musclewood have been observed only inside the deer exclosures. None of these native tree species have been observed by the IURTP team outside the exclosures.¹⁸ These tree seedlings and saplings represent the next generation of canopy trees.

Woody Plant Height

Tree seedlings less than 12" in height are typically first year seedlings, which have extremely high mortality due to fungal pathogens in the soil and other factors like browsing. Plants over 12" in height are considered viable new recruits. Since the exclosures were constructed, 90 new tree recruits at least 12" in height have been observed inside the exclosures and only eight recruits were observed outside the exclosures. All eight recruits in the control plots were clonal pawpaw seedlings.



Shagbark hickory – a species not regenerating at Griffy.

B. Herbaceous Species

Herbaceous plants are plants with non-woody stems, whose above-ground growth usually dies back in winter. Included in this class are spring ephemerals such as wild ginger, squirrel corn, round-leaved ragwort, celandine poppy, trillium, jack-in-the-pulpit, delphinium and mayapple. The IURTP team has observed that ephemerals such as trillium, jack-in-the-pulpit, delphinium and mayapple are smaller, flower less and are less numerous outside of the exclosures, suggesting that deer browsing is compromising the survival of these species.



Purple trillium

¹⁸ The IURTP team did not observe regeneration of oaks, cherries or walnuts either inside or outside the deer exclosures. All of these trees have high wildlife value. IU scientists surmise that the lack of generation of these trees could be due to fruit and nut predators and recruitment limitation from other sources such as fungal pathogens or poor mast years. This lack of regeneration might also mean that it takes these species longer to recover.

C. Indicator Species



White baneberry



Jack-in-the-pulpit



Sweet cicely

Another way to assess the effect of deer on forest ecosystems is to monitor “indicator species,” common plant species that tend to provide early signals of deer overabundance. Scientists studying deer impacts on Indiana State parks identified three indicator species, whose size is related to deer density: sweet cicely, white baneberry and jack-in-the-pulpit (Parker and Webster 1997). The minimum mean height of these species indicates the point at which a plant community is in balance with the population of white-tailed deer. Drops below these levels signal that the deer population is beginning to negatively affect the plant community. The average height of the indicators in a mesic closed canopy forest community in Indiana in the absence of excessive deer browsing is as follows: white baneberry – 25 cm sweet cicely – 42 cm jack-in-the-pulpit – 37.

Dr. Shelton’s recent research at Griffy Woods indicates the heights of these three species are substantially smaller than these levels, even inside the deer exclosures. In addition, these species were rare to absent in the deer exclosures in plant surveys from 2009 to 2012. However, these three species are significantly taller and more numerous inside the fences, indicating that they are beginning to recover from the effects of deer browsing. The slow recovery of these species suggests that the effect of deer browsing at Griffy Woods is extreme and plant populations are threatened.

The following chart tracks average indicator heights in 2011. Notably, neither sweet cicely nor white baneberry was observed outside the exclosures in 2012.

2011 INDICATOR PLANT OBSERVATIONS

Indicator Plant Species	Average height in cm (± SE)		Number of individuals	
	Control	fenced	control	fenced
jack-in-the-pulpit	11.0 ± 1.1	15.9 ± 1.0	22	29
sweet cicely	12.5 ± 2.2	13.9 ± 1.6	7	16
white baneberry	7.6 ± 2.4	12.3 ± 1.1	4	6

Courtesy of A. Shelton

D. Soil and Mycorrhizae

An overabundance of deer can adversely affect soils. A reduction of plants may change soil nutrients, organic matter and the number of roots; deer droppings can trigger nutrient pulses; trampling can cause soil compaction and both vegetative cover shifts and trampling can affect soil microorganisms such as mycorrhizal fungi and bacteria, which aid in nutrient uptake by plants and decomposition of organic matter.

Griffy is showing signs of soil compaction. After only two years of fencing, soil inside exclosures is significantly less compacted than soil in control plots. It is unclear whether this is due to direct effects of deer such as trampling or indirect effects such as increased growth of plant roots that loosen soil.



E. Invasives

An overabundance of deer can also encourage the spread of invasive plants (Baiser et al. 2008; Duguay et al. 2011). Where deer are overabundant, the forest floor tends to be dominated by exotic invasives that deer avoid eating, such as garlic mustard and Japanese stilt grass. Invasives can outcompete some natives and may come to dominate forest environments. We can see this happening at Griffy. Outside the research exclosures, the floor is dominated by the invasive exotic Japanese stiltgrass. Inside the exclosure, the stiltgrass is present, but the area is dominated by tall native plants such as winged *Verbesina*, goldenrods and jewelweed.



Outside Exclosure: Domination by Invasives



Inside Exclosure: Domination by Tall Natives

PELLET COUNTS

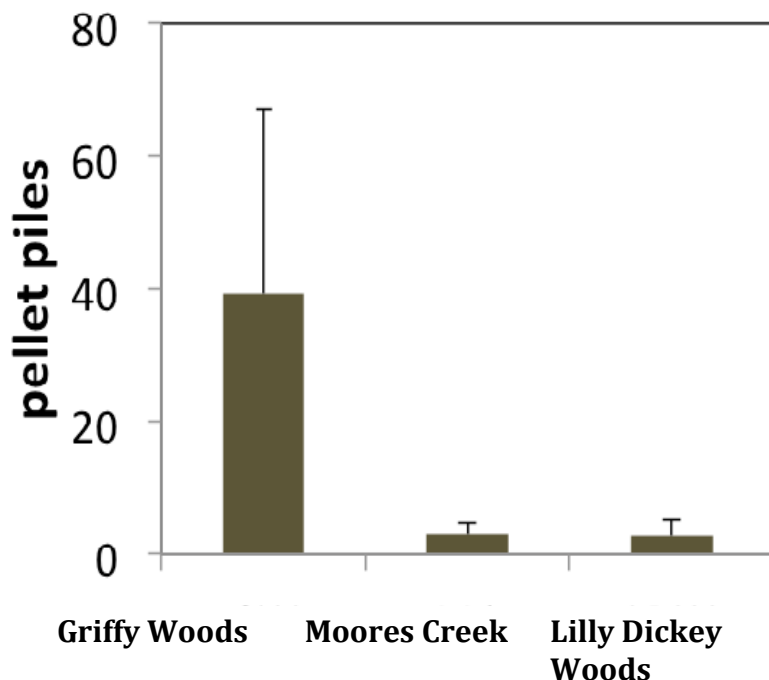
While deer are difficult to count, the abundance of deer feces gives an indication of relative densities and deer usage of an area (Neff 1968). In the spring of 2011, Dr. Shelton counted deer pellet piles in the areas surrounding each of the exclosures at Griffy and at two other forested areas owned by IURTP—Moore's Creek, a secondary growth forest on the northwestern edge of Lake Monroe, and Lilly Dickey Woods, a secondary growth and old growth forest located north of Nashville in Brown County. Hunting is not permitted on either property, but the properties are located adjacent to areas where hunting is permitted.



A. Shelton

Using a line transect method to avoid biases due to topography that can affect deer behavior and movement patterns, Shelton counted all pellet piles within a 4 m belt centered on multiple transect lines, resulting in 1,664m² surveyed within a total area of 3600m².

Compared to the other properties surveyed, very high densities of deer pellets were found at Griffy. In fact, the density of deer pellets at Griffy was 13 times higher than the other sites. On average, there were 29 pellet piles per plot at Griffy compared to an average of three or fewer pellet piles per plot at the other sites. Significantly, the maximum number of pellet piles found in a Griffy plot was 95, while the maximum number of piles found in a plot at one of the other sites was six (Shelton 2011).



Courtesy of A. Shelton

THE UNDERSTORY STORY: *INVASIVES AND PLANTS DEER DON'T LIKE*

To the casual observer, Griffy woods looks green; however, it is much altered. In a healthy forest with low deer impact, the understory will have a wide variety of plants that deer like (such as trillium and oak) and don't like (such as spicebush). At Griffy, the forest floor is largely depleted of the native plants and trees deer like to eat and the understory is overwhelmingly marked by the present of exotic invasive species and by native plants that are unpalatable to deer.



Above: Predominance of Japanese stiltgrass at Griffy.



Above: Virtually the only non-invasive native plants found in the Griffy understory are the plants that deer don't like, such as spicebush and pawpaw. Touring Griffy, an IDNR biologist characterized Griffy as a "Spicebush-pawpaw forest." The above image depicts pawpaw predominance at Griffy.

PROTECT GRIFFY – REDUX

In 2000, thousands of community members, students and IU faculty joined together to save Griffy from the encroachment of a planned golf course. Called, the “Protect Griffy Alliance,” the movement was successful: the golf course plan was scrapped and the IU Research and Teaching Preserve was established soon thereafter. Today, the community is at another “Protect Griffy” juncture.

The research by Dr. Shelton and the IURTP team indicates that the deer population at Griffy Woods is far higher than other comparable forests and that this density is severely degrading forest biodiversity. Left unchecked, deer browsing poses the possibility of producing an "alternate stable state" - a condition in which a forest would never return to its natural state, even if browsing pressure were diminished by a permanent reduction of deer densities. While the 2008 Griffy *Master Plan* pointed out many negative environmental effects of herbivory and that it “may be necessary to introduce population controls in the future to reduce the number of deer and their effects on the site,” the Task Force advises that the time to implement population controls is now.

Thinning the deer herd in the interest of ecosystem restoration is not a new practice. Indiana State Parks have been engaging in deer reduction efforts since the 1990s, after biologists, naturalists and others observed that an overabundance of deer was stripping the forest understory and inhibiting the regeneration of native and many herbaceous species. So extensive was the damage at State Parks, that in 1995, the Indiana State Legislature passed a law *requiring* the IDNR to reduce deer herd sizes in parks sustaining ecological damage (§14-22-6-13).

To measure the effect of deer reduction on plant communities, Purdue biologists established permanent vegetative plots throughout the parks in 1996. These plots revealed that State parks without any form of deer management showed evidence of fewer tree seedlings and shrubs, lower percent cover of herbaceous species and higher percent cover of unpalatable species (Webster and Parker 1997).

More than a decade later, these plots were re-sampled to determine if vegetative communities in State parks have recovered following years of hunting. Evidence suggests that they have. From 1996 to 2010, herbaceous percent cover, woody stem density and species richness, evenness and diversity increased in hunted State parks. In this period, mean percent cover of tree seedlings increased from 2% to 14%; cover of lilaceous species increased by 73% and cover of exotic species decreased by 8% (Jenkins 2011, p. 18).

A closer look at neighboring State parks reveals even more dramatic recovery. Griffy is part of the Brown County Hills Section of the Highland Rim Natural Region, as are the Brown County, McCormick’s Creek and Spring Mill State parks. These State parks commenced closely-controlled hunting in the 1990s, with Brown County being the first to do so in 1993. When these three parks were re-sampled in 2010, scientists found that vegetative cover had increased significantly. In Brown County, the percent cover increased from 6% to 34%; at McCormick’s Creek, the percent cover increased from 26% to 50%; at Spring Mill, cover increased from 43% to 68% (Jenkins 2011, p. 19).

RECOMMENDATIONS

The comparative experience of State parks indicates that reducing the deer herd leads to the recovery of forests. The question for our community is to how best accomplish this goal? Because deer damage at Griffy is widespread, biologists advise that a substantial number of deer should be culled in an effort to restore forest health. If a significant number of deer are not culled, those that remain will browse new shoots and the effort will be ineffective for plant restoration. Because a sizable number of deer should be culled, the Task Force recommends sharpshooting as an initial deer reduction strategy.¹⁹

Sharpshooting is more efficient than hunting and can reduce the deer herd quickly with minimal suffering to the deer. Use of sharpshooting has proven effective at lowering deer densities and increasing plant height, vegetative cover and biodiversity in Chicago-area forest preserves (Etter et al. 2001). While other communities do use regulated hunting to reach deer density and ecosystem restoration goals, hunting is less efficient than sharpshooting and it would take longer for Griffy to reach restoration goals. Indeed, after years of hunting, one forest preserve in Nebraska took 10 years to reach its ecosystem restoration goals (Hygnstrom et al. 2011). Because evidence of “reverse succession” is already occurring at the Griffy Lake Nature Preserve, sharpshooting is the most effective and humane way to accomplish ecosystem restoration. All deer culled through sharpshooting should be donated to the local food bank and its partners. If sharpshooting is not feasible due to cost or other considerations, the Task Force recommends that the deer herd at Griffy be reduced through managed hunting.

I. SHARPSHOOTING – INITIAL REDUCTION

Sharpshooting is conducted by trained personnel authorized by the IDNR. Shooting is usually performed from an elevated position to ensure the shot is aimed at the ground and not toward buildings or in the air. Deer are shot in the head or neck to ensure a quick death.

The least visible sharpshooting efforts are conducted at night, over bait and using a silencer. Baiting causes deer to become acclimated to a site, and conducting the effort at night reduces the visibility of the practice. The use of silencers keeps the effort quiet and serves to lessen the trauma to nearby deer as it does not alert them to what is going on around them. When deer are not aware of sharpshooting, they are not frightened and therefore less likely to flee the management site, making the whole effort more effective.

At present, State law allows only IDNR, federal wildlife agents or an individual permitted by IDNR, to use silencers and jacklighting (IC §14-22-6-11 and IC §14-22-6-7). IDNR does not provide sharpshooting services; however, the U.S. Department of Agriculture, Animal and Plant Health Inspection Service (APHIS) does provide these services. The USDA APHIS has a long history of conducting sharpshooting efforts in forests and in urban environments, including management at the Monroe County Airport. APHIS agents receive extensive

¹⁹ The number of deer that might be taken if sharpshooting is approved is a matter of on-going discussion between Parks and Recreation staff and the USDA.

firearms training and usually perform this service at a cost less than that of private wildlife management firms.

To review the feasibility of sharpshooting at Griffy, in early 2012, the Task Force chair, Dr. Shelton and staff from Bloomington Parks and Recreation met with IDNR biologists and Dr. Joe Caudell, a Wildlife Disease Biologist from USDA APHIS and a wildlife professor at Purdue. Caudell advised that Griffy is suitable for a sharpshooting effort and that the effort should be restricted to government-owned property so that local government maintains maximal control over the effort. Here is how it would work:

- Winter – The effort would be conducted in the winter, when deer are motivated to travel to a food source and after which time young have been weaned.
- Baiting – Deer would be baited continuously on Griffy land before the effort commenced. Costs of the effort could be reduced if City staff provided baiting services.
- Night and sound suppression – To minimize visibility, the effort should be conducted at night and with sound-suppression devices.
- Safety and clusters – Deer are shot only when circumstances are safe (i.e., no non-target animals in the removal zone) and fewer than approximately nine deer are present to prevent educating the deer.
- Two-pronged approach – Most of the shooting would occur from a tree stand over bait; however, USDA staff would also shoot from motor vehicles, where appropriate using thermal imaging and night-vision goggles to determine if an animal is a non-target species.
- Female deer prioritized – Most shots are taken on a first-opportunity basis; however, when possible, antlerless deer should be prioritized to reduce the reproductive potential of the population.
- Diminishing Returns – The first few days of a sharpshooting effort are always more effective in drawing the greatest number of deer; over time, the numbers dwindle and the effort becomes more expensive.
- Lead Fragmentation – To limit lead fragmentation, deer should culled by placement of shot to the cranium or upper neck (Stewart and Veverka 2011). At present, lead-free bullets tend to be less precise and stand a greater chance of passing through targets and striking a non-target animal or object (Caudell 2012).
- Notice is given to adjacent property owners before the practice begins.

Sharpshooting is a multi-year effort that requires State oversight. To encourage plant regeneration, biologists advise that it is necessary to spend two or three years using sharpshooting as part of a concerted deer reduction effort; after that time, it is necessary to maintain herd management either through sharpshooting or some other lethal means. Any sharpshooting effort requires approval and a permit from the IDNR (*See “Management Alternatives”*). If the City so requests, Dr. Caudell advises that he is willing to train local law enforcement to conduct sharpshooting at Griffy.

Ordinance Changes

The City prohibits the discharge of a firearm anywhere within the corporate boundaries of Bloomington (BMC §14.20.020) and prohibits hunting at the Griffy Lake Nature Preserve (BMC §11.08.300). However, City code also anticipates the need for hunting as a management tool, stating that “hunting and trapping may be permissible if used as an authorized management tool when the situation warrants and permission for this action is granted by the board of park commissioners.” (BMC §11.08.300). While this provision does not detail the type of weapon that would be approved for a management effort at Griffy, when read with the general City-wide prohibition on the discharge of firearms anywhere within the City limits, it is likely that a sharpshooting effort would require an amendment to the City code. While a change to City code may be necessary, the decision whether to implement a deer management program at Griffy is up to the Bloomington Board of Parks and Recreation.

The City owns a portion of land at Griffy that is outside of the Bloomington corporate boundaries. If a sharpshooting effort is conducted in this area, a change to local code may not be necessary. Similarly, if the effort is conducted by USDA APHIS, a change to code may or may not be necessary. APHIS is authorized by federal law to discharge firearms; however, APHIS defers to the wishes of the local community. Some communities have required a change to local code before APHIS is allowed to engage in sharpshooting. Notably, any management performed by an entity other than the federal government or local law enforcement (for example, White Buffalo) would require a change to the Bloomington Municipal Code.

Measurement

Continued monitoring of herbaceous and woody vegetation is critical to a science-based management approach to deer at Griffy. Measures of forest recovery would include tree seedling regeneration, increased height at flowering of herbaceous plants, plant species richness and herbaceous plant cover. Previous monitoring of these species by IURTP scientists was funded by a grant that will expire soon. City and County government should work with Preserve staff to help secure funding for this monitoring effort.

Funding the Effort

The Griffy Lake Nature Preserve is a public resource enjoyed by all community residents and held in trust for future generations. For this reason, the cost of management should be borne by those holding this land in the public trust. The Task Force recommends that the City fund the sharpshooting effort.

- Partnerships: Because deer do not know human-imposed political boundaries and freely move from city to IU to residential to property within county jurisdiction, the Task Force suggests that Monroe County might contribute funds for the effort. Residents could also help by making private donations to the Parks Board non-reverting capital fund via the Parks Foundation. A deer reduction effort would be strengthened by cooperation from IU.
- Grants: The City should also explore grant funding opportunities for the effort.

Donation of Venison

All deer culled through the sharpshooting effort should be donated to the local food bank. One of the greatest needs in hunger relief is access to high-quality protein. If a small deer provides 40 pounds of meat and one pound of meat can provide five meals, that's 200 meals per deer. A dedication of public dollars for a sharpshooting effort would work to both restore ecological integrity and to improve the human condition; it would be both an environmental and social service good.

Ancillary Effects: Reduced Neighborhood Deer and Reduced Deer-Vehicle Collisions

A sharpshooting effort at Griffy may have an effect on deer abundance in surrounding neighborhoods and deer-vehicle collisions on nearby roadways. Deer move freely between Griffy and adjacent neighborhoods. A cull at Griffy may reduce deer abundance in residential neighborhoods proximate to the preserve. Deer also move freely from Griffy across roads. As indicated by deer-vehicle collision data, State Road 46 Bypass is the site of most auto collisions with deer; this is likely a function of traffic volume as much as it is a function of deer abundance. Some studies suggest that sharpshooting may reduce the number of deer-vehicle collisions on area roadways. In a study where deer herds were reduced by 54%, 72%, and 76% via sharpshooting, deer-vehicle collisions were reduced by 49%, 75%, and 78%, respectively (DeNicola and Williams 2008). A sharpshooting effort may reduce the number of collisions with deer on the Bypass and potentially prevent injury.

II. SHARPSHOOTING OR MANAGED HUNTING -- MAINTENANCE

Any deer reduction effort at Griffy requires maintenance to keep up with annual recruitment of deer and immigration from surrounding areas. It will be up to local decision makers to determine if they prefer to maintain the herd through sharpshooting or through managed hunting, or some other means. Should the City and Parks Board wish to implement a managed hunt, the guidelines offered in the "Neighborhood Deer" chapter of this report might provide guidance.²⁰

Should local officials wish to pursue a managed hunt at Griffy, the efficacy of the effort might be discerned by looking at measures employed by Indiana State parks. At State parks, success of deer management efforts is determined by looking at vegetation, the number of deer harvested per square mile and hunter success. Hunter success is a reference point used by biologists to determine whether a hunting effort is effective. In many State parks, hunter success is set at 0.1 for archery hunting. That means that if 1 in 10 hunters kill a deer, then the State park can skip hunting the following year. However, if hunter success is greater than 10%, this success points to the need for additional hunting efforts the following year. If a managed hunt is implemented at Griffy, those overseeing the hunt will have to determine a Griffy-specific metric.

²⁰ The requirements include, but are not limited to: a City-issued permit; hold harmless agreements; proficiency tests; rules on permissible hunting equipment; required use of tree stands; hunter accountability rules; mandatory hunter orientation; limitations on time and place; "Earn-a-Buck" incentive; rules for field dressing and tracking a wounded deer; right of the City to revoke permits; and an encouragement of hunters to donate meat to the food bank.

MEASURING AND MONITORING

In order to evaluate the effectiveness of any deer management plan and to adapt any plan to changing circumstances, reliable and accurate data is critical. The work of the Task Force was constrained in many ways by a lack of good data. Going forward, it is important to implement a system to better monitor deer herd trends and deer impacts. Monitoring should be repeated on an annual or bi-annual basis so that trends in the system are evaluated and appropriate responses developed.

What follows is a series of suggestions for monitoring and measuring. Given the complexity of human, wildlife, and ecosystem factors shaping the “deer issue,” it is strongly suggested the City adopt a combination of these approaches.

1. DEER MANAGEMENT TEAM

Again, the “deer issue” is not going away anytime soon, and what works at the time of this report might not work a few years from now. The Task Force recommends that the City establish a permanent Deer Management Team to annually review data on deer-auto collisions, damage complaints by property owners and impacts on natural communities. If elected officials choose to implement recommendations offered in this report, a management team will be needed to oversee and administer the recommendations. The composition of any team will depend on which recommendations local officials choose to implement. However, the team might be composed of representatives from law enforcement, wildlife experts, animal welfare and hunters.

2. TRACK DEER-VEHICLE COLLISIONS/MILLION MILES TRAVELED

At present, deer-vehicle collisions on City streets are not actively tracked nor analyzed on a routine basis. To generate the deer-vehicle collision maps contained in this report, the Task Force worked with City GIS and Engineering.

To better identify roadway stretches where deer-vehicle collisions are problematic, the Task Force recommends active monitoring of deer-vehicle collisions. To meaningfully assess whether deer-vehicle collisions are occurring as a function of traffic volume or as a function of deer overabundance, we suggest that data be normalized for traffic volume. For example, while some of the most heavily-traveled roads, such as State Road 46, experience the most deer-vehicle collisions, it may be the case that when the crash data is normalized for traffic volume, a neighborhood street may actually experience more deer-vehicle collisions per million miles traveled. Knowing where crashes occur because deer are overabundant would help guide mitigation efforts. As this collision data is tracked over time, it will be up to transportation experts to decide which mitigation techniques work best for any given stretch of road.²¹

²¹ Most techniques involve reducing deer along the roadway through fencing or lethal means, modifying motorist behavior, modifying deer behavior and roadway planning. However, a number of studies have tested what works and what does not. One technique that does not work is the iconic yellow “Deer Crossing” sign.

3. DEER COMPLAINT SYSTEM

Set up an on-line and/or phone site where citizens can call in or log complaints. Local government could use the location and number of complaints as a metric for deer problems.

Citizens need to have a way for sharing issues they are experiencing with deer. This information is also needed for monitoring the social and economic dimension of people-deer interaction in Bloomington and Monroe County. Data will be used for evaluating the magnitude, nature and location of the problem and devise targeted interventions. Minimal information to be collected include: date, name and contact information of person logging the complaint, description and location of the issue. A complaint log system could be subject to organized efforts to inflate the actual problem. However, individual and place-specific information can be used to control for this. A non-anonymous logging system is also advisable for facilitating community engagement when discussing and devising solutions to the complaints. The City's uReport tool, along with web and phone options, should provide sufficient avenues for citizen reportage.

4. CITIZEN SCIENTISTS

Enlist citizen observers to estimate deer density. For example, at 8 a.m. for one or, ideally, a few days, ask people to record the number of deer they see in their back yard and log the observation with the City or County. This could become an annual event providing information useful for estimating trends in population changes and distribution.

There are various programs involving citizens in scientific projects; see e.g. Cornell's e-bird initiative (<http://ebird.org>), The Great Backyard Bird Count (<http://www.birdsource.org/gbbc>), Wildlife Sightings (<http://www.junponline.com/>), Scientific American online (<http://www.scientificamerican.com/citizen-science/>). Bloomington City Department of Parks and Recreation offers a Citizen Scientist Certification (<http://bloomington.in.gov/citizenscientist>). This group could be involved in facilitating deer and deer impact monitoring.

These signs are so common these days that the signs become "background" and are not marked in the mind of the driver. Drivers ignore the signs. As a consequence, the signs don't do much to reduce deer-vehicle collisions. Signs that *do* appear to be effective are enhanced signs that are installed for a short period of time, usually during the October-December rut season when the majority of deer-vehicle collisions occur.

5. PELLET COUNTS

Conduct censuses of deer droppings as a measure of deer density, as is commonly done in many studies. This could be organized as part of a citizen scientist program and could take place at the same time.

6. LEVERAGE IU RESOURCES

Enlist IU courses to conduct research and/or surveys to estimate densities, for example, courses in biology or SPEA.

7. LEVERAGE EXISTING ON-THE-GROUND GOVERNMENT STAFF

Use City or postal workers who walk (or drive) regular routes on a daily or weekly basis and ask them to make note of the number of deer sightings they experience.

8. MONITOR VEGETATION

Monitor vegetation for browse damage, especially in City parks that would be accessible without permission. Potential problems are, e.g., quantifying deer damage separate from other stressors (e.g., drought), density of deer-preferred species and when the browsing damage occurred. Expert involvement from biologists and foresters could provide valuable feedback.

9. REMOTE CAMERAS

Use existing remote cameras to estimate deer densities.

10. ANALYZE ROAD KILL DATA

City of Bloomington Animal Care and Control currently tracks requests for pick up of dead deer. Usually, these deer have been involved in a collision with a vehicle. As current deer-vehicle collision data tracks collisions triggering \$1,000 or more in property damage to a car owner, this data could provide additional insight into the number of deer that are being hit by cars.

EDUCATION/OUTREACH PLAN

Objective: To effectively inform and educate City of Bloomington and Monroe County residents and other stakeholders of any lawmaker-approved recommendations regarding deer management including, but not limited to:

- Gardening and Living Humanely with Urban Deer
- Deer Management Techniques: Efficacy and Current Regulations
- Facts and Myths about Deer
- Ordinance Changes as Applicable

Strategy: Once officials have decided on deer management strategies, a comprehensive communication action plan should be developed, implemented and assigned to a staff member(s) or other responsible parties.

Example Communication Action Plan: The following provides a menu of options that can be used to communicate various messages. This is suggestive, rather than comprehensive. Suggestions can be utilized in a marketing mix to reach the intended audiences. Cost and the availability of staff to create and manage the deliverables will also determine the appropriate mix.

Objective of Communication	Communication Type	Medium	Frequency	Audience	Cost	Deliverable
<p>Public Safety/Deer Topics:</p> <p><i>*Don't Feed the Deer</i> <i>*Deer-Vehicle Safety</i> <i>*Rut Season</i> <i>*Fawn Season</i> <i>*Injured Wildlife</i> <i>*Living with Urban Wildlife</i> <i>*Deer Resistant Gardening</i> <i>*Others topics as applicable.</i></p>	<p>Public Service Announcements</p>	<p>Press Release Op-Ed</p>	<p>Season appropriate for each topic.</p>	<p>General Public</p>	<p>\$0</p>	<p>Written PSAs and/or pre-recorded PSAs to distribute to radio stations, TV, Pets Without Partners, CATS, Weather Channel Ticker, etc.</p>
<p>Public Safety/Deer Topics:</p> <p><i>*Don't Feed the Deer</i> <i>*Deer-Vehicle Safety</i> <i>*Rut Season</i> <i>*Fawn Season</i> <i>*Injured Wildlife</i> <i>*Living with Urban Wildlife</i> <i>*Deer Resistant Gardening</i> <i>*Others topics</i></p>	<p>Print Materials</p>	<p>Bus Ads Billboard Flyers/Posters Newspaper Ads Magazine Ads Brochures Handouts</p>	<p>Season appropriate for each topic.</p>	<p>General Public</p>	<p>Vari-able</p>	<p>Art files for print materials. Brochures to be available in strategic locations, Farmers' Market, other community events, etc. Flyers can be distributed with adoptable animal posters</p>

Objective of Communication	Communication Type	Medium	Frequency	Audience	Cost	Deliverable
<p><u>Centralized Deer Management News and Information</u></p> <p>* Deer Management Info * Recommendations Report * Data collection * Hunter Info * Gardening Info * Calendar of Events/Outreach Programs * Public</p> <p>Questions/Feedback Collection</p>	<i>Electronic</i>	Facebook Twitter Website E-mail address E-newsletters Listserves	<i>Regular updates /communications as applicable.</i>	1: General Public 2: Hunters 3: Public Safety Entities 4: Property Owners	\$0-low cost	Facebook page Twitter account Website Email address Listserves for communication with each target audience Enewsletter content/design /sign-up box on website.
<p><u>Educate General Public About Deer</u></p> <p>*Deer Management *Deer Friendly Gardening *Deer: Facts vs. Myths</p>	<i>Education Classes</i>	PowerPoint presentations, classes.	<i>Annually/semi-annually.</i>	<i>General Public</i>		<i>Classes /presentations in partnership with the MCHA/City of Bloomington.</i>
<p><u>Educate Public Safety Entities About New Ordinances/Rules</u></p>	<i>Presentations/ Print Materials</i>	PowerPoint/ Print Materials	<i>Annually/semi-annually.</i>	1:Bloomington Police Department 2: Monroe County Sheriff's Department Animal Management 2: City of Bloomington Animal Control 3: IDNR Conservation Officers 4: Monroe County Indiana State Police	\$0-low-cost /staff time	PowerPoint Presentation Print materials outlining local ordinance and state administrative rule changes as they apply to public safety agencies.

DEER AND SUSTAINABILITY

LOCAL FOOD PRODUCTION

Local food production is a key component of the community's commitment to food security. Local food reduces food miles traveled and fosters the provision of affordable, healthy food for all. Numerous local gardeners participate in gleaning and "plant-a-row" initiatives in an effort to help feed area hungry. We have made changes to our land use laws, established community gardens and orchards and worked to support the work of local farmers. Despite these advances, a number of City residents advise that their ability to grow their own food is compromised by an overabundance of deer within City limits. That's not entirely surprising: on average, a deer will consume between 4.5 and 11 pounds of forage per day.



From the beginning of the Task Force's work, local growers have been urging the group to consider the influence of deer on urban farms and community gardens. The City's Commission on Sustainability sent the Task Force a formal recommendation pointing out that the deer population is impairing the community's ability to encourage and expand local food production. The recommendation expressed concern that "consumption and destruction of food and food plants will discourage many people from maintaining such gardens." (BCOS recommendation to Task Force, December 14, 2010). Similarly, the Bloomington Food Policy Council expressed concern that "consumption of food and food plants by deer will discourage people from maintaining such gardens at a time when it is economically and environmentally beneficial to encourage residents to start and expand vegetable and fruit gardens." (Food Policy Council communication, October 2011). Both communications requested that the Task Force take into consideration the "competition between deer and human food needs" in making its recommendations.²²

To better understand the experience of local growers, the Task Force hosted a special meeting dedicated to urban agriculture. Growers told the Task Force that they had experienced more deer damage to crops in recent years and felt that this increase was related to deer abundance, although rabbits, woodchucks, birds and raccoons also eat their fair share of vegetables. While all agreed that raising fence height limits within the City limits would help, the group acknowledged that fencing comes at a considerable cost and may not be affordable to all. Fencing also shifts deer to yards of neighbors who may be trying to grow their own food.²³

²² Indeed, when asked what would be evidence of a successful deer management program, 45% of city and 37% of county respondents to the Task Force's survey responded that "reduced loss of garden food" would be an indicator of success.

²³ Indiana farmers have a long history of dealing with deer damage to crops. IDNR works with farmers to explore hunting and barrier solutions. The IDNR may issue a special out-of-season Deer Control Permit to a

DEER AND FOOD: ANOTHER PERSPECTIVE

While much discussion has pivoted around residents' ability to grow their own food, deer and sustainability dovetail in another way: deer *are* food. Unlike factory-farmed meat that travels thousands of miles to get from farm to table and where animals are raised in deplorable conditions, deer meat is local and it's free of synthetic hormones. The deer from which the meat is derived lived out their lives in a free-ranging environment, not in pens or cages.

Venison is a high-quality, low-fat source of protein. Venison can reasonably be compared to lean, grass-fed beef. A pound of high-quality beef is about \$7/pound. If a small deer renders about 40 pounds of meat, that is \$280 worth of protein. At time when local food insecurity is increasing and the community is placing an ever-greater prioritization on local sustenance, deer as a food source should be examined more closely. Bloomingtonians can already grow their own chickens and slaughter those chickens once the birds are no longer productive. Cultivating the harvest and consumption of local deer seems to be a good next step in strengthening the community's commitment to local, healthy food.

Indeed, "deer hunting for locavores" is a growing movement (Farrell 2009). Novice urban hunters are forming classes and clubs to learn skills that a few generations ago were passed down from parent to child. Classes such as the *Locavore Hunter* and organizations such as *The Bull Moose Hunting Society* (chapters in San Francisco, Washington, DC and Austin, Texas) teach urbanites about deer and how to hunt. Recent years have also seen publications such as *The Beginner's Guide to Hunting Deer for Food* (Landers 2011) and *Backyard Deer Hunting: Converting Deer to Dinner for Pennies per Pound* (Smith 2012). Similarly, Purdue offers venison workshops in several Indiana counties teaching participants proper techniques such as: field dressing, butchering and proper storage and preservation of meat.

However, viewing deer as a food source is not just about "going local." It's about getting food to community members experiencing hunger. In Monroe County, 17% of all households and 50% of low-income households reported having problems paying for food (SCAN 2012). From May 2011 to May 2012, the Consumer Price Index (CPI) for all food rose by 2.8%, but the CPI for meat rose by 5.4% (USDA 2012). In its Annual Food Patron Survey, almost 67% of patrons of Mother Hubbard's Cupboard indicated that they would like to have more access to meat.

farmer who has suffered a minimum financial loss of \$500 attributable to deer damage that has occurred or is inevitable to occur on a commercial crop currently being grown at the time of inspection. Acreage or other contextual considerations may attach. Permits are issued only on the recommendation of a IDNR district wildlife biologist. Permits do not supersede local prohibitions against the discharge of a firearm or bow and arrow.

The number of people that one deer can feed is not trivial: one pound of venison renders about five meals and one small deer provides 200 meals.

The Task Force's recommendations for lethal action are not recommendations that are made lightly. They are an unfortunate, but necessary, response to a human-created situation. However, there is some good that can come from this: hungry people can be fed.

Venison can reasonably be compared to lean, grass-fed organic beef.

1 lb. high-quality beef = \$7/lb.

1lb. venison = 5 meals.

Small deer = 40 pounds.

A small deer provides:

- \$280 worth of high-quality protein.
- 200 meals

DONATION OF DEER MEAT: A COMMUNITY PARTNERSHIP

Any deer culled through a City-financed deer reduction effort should be donated to the local food bank. Similarly, hunters should be encouraged to donate deer meat. Donation of deer requires processing of meat at a facility that is licensed and inspected. The cost of processing is estimated to be about \$1.25/pound. Community members can help offset the cost of processing by donating to one of the following organizations.

- [Indiana Department of Natural Resources Sportsman's Benevolence Fund](#)
- [Farmers and Hunters Feeding the Hungry \(Specify "IN-30" to donate specifically to the Monroe County Chapter.\)](#)

TIPS FOR LIVING WITH DEER



DON'T FEED THE DEER!

Improper diets can create health problems for deer, may spread disease and may cause tension among neighbors. See p. 48 for more on why feeding deer is a bad idea.

THE ENCOUNTER

Deer are not inherently aggressive. Given the choice of “fight or flight,” a deer will almost always choose to run away. Like all mothers, a doe may become aggressive if she thinks her young are being threatened. To reduce the likelihood of an unfavorable encounter, there are a few common sense measures we can all take:

- Never, under any circumstance, approach a deer.
- Be especially cautious of deer with fawns.
- Attacks by bucks are rare, but bucks may become aggressive in "rut" season - October through December.
- If you do see a deer, observe it from a distance, preferably from inside a structure or vehicle.
- Keep your pet inside when there is a deer in your yard.

DON'T DISTURB THE FAWNS!

Fawns are born throughout the spring and early summer months. Around that time, concerned residents call animal and wildlife agencies about lone fawns they find in woods and backyards, assuming these fawns have been orphaned. In the majority of cases, the fawns have not been abandoned. Usually the mother is nearby, aware and attentive. Except when feeding them, mothers hide their young to avoid attracting predators.

If you find a fawn, leave it alone knowing that a concerned and anxious mother is nearby and will take care of the young deer once you leave.

To ensure safety of both people and deer, the Joint City of Bloomington-Monroe County Deer Task Force has consulted experts and offers the following tips:



- Keep children and pets away from the fawn and any other deer. Deer are not inherently aggressive. However, like most mothers, a doe can become aggressive if she perceives that her young are being threatened.
- If you suspect a fawn has been orphaned do not attempt to move or feed it. Feeding fawns cow's milk is a common mistake that can kill a fawn. Feeding fawns must be left up to a licensed wildlife rehabilitator.
- The best way to make sure a fawn is truly orphaned is to check back periodically from a distance where a mother will not see you. Please call WildCare at 323-1313 for advice. If maggots are visible on the fawn (usually on its belly or under its tail), the fawn has been alone for at least two days and WildCare should be called immediately.
- If you suspect that a fawn (or any deer) has been injured, do not attempt to move it. Instead, please call City of Bloomington Animal Care and Control at 349-3492.

DRIVING TIPS

BE VIGILANT:

When you drive, make a habit of watching from side to side, especially in areas of low visibility or where shrubs or grasses are close to the road.

WATCH FOR GROUP BEHAVIOR:

Deer tend to travel in groups. If one deer crosses the road, watch for more to follow. Female deer tend to stay together as "doe groups" in winter and have young fawns following them in the spring and early summer. Keep in mind that a deer crossing in front of you may double back.



OBSERVE DEER CROSSINGS:

Always observe deer crossing warning signs. When approaching a posted area, slow down and maintain a slower speed through these sites. Signs may not always be present where deer may cross. Be aware of typical deer habitat such as wooded areas or natural grass fields, and remain particularly alert while traveling on roadways that pass through these kinds of conditions.

BE AWARE OF SEASONS:

In the fall, bucks are on the move due to rutting, and in some places, hunting seasons. In spring (May-June), yearlings are seeking new territories. Be extra careful driving at these seasons.

BE AWARE OF TIME OF DAY:

Deer are most active at dusk and dawn. Be watchful, especially during early morning and evening, when wildlife may be moving across roads.

USE HIGH BEAMS:

At night use high beams when on-coming traffic is absent. Slow down and watch for the eye-shine of deer near the road edges. If you see eyes reflected in your headlights, slow down immediately.

HONK!

If you see a deer on the road or making its way onto the road, honk the horn. The sound gives the deer an audible signal to avoid.

DON'T SWERVE!

If at all possible, do not swerve to avoid wildlife but brake firmly and sound your horn. Animals are easily confused. If you swerve, deer may run into the vehicle rather than away from it. Swerving could mean driving into another vehicle or off the road into poles or fences.

FENCING

Often the most effective long-term solution to exclude deer from individual properties is fencing. Many fence designs using many different materials have been used with success. Generally, with sturdier materials and better construction, less maintenance will be required and the fence will last longer. If fencing the entire area is too expensive, fencing individual plants is effective. See “Deer Management Alternatives” for suggestions on effective fencing.



REPELLENTS

Repellents can be effective to deter deer over a limited time period in a localized area. Repellents do not eliminate browsing, they only reduce it. When food is scarce, deer may ignore both taste and odor repellents. There are a variety of repellents available. Some you can make yourself. Some are commercially available.

Deer-Away Homebrew

Deer are especially repelled by smells that combine mint and rotten eggs.

Mix the following in a 1-gallon tank sprayer:

- 2 beaten and strained eggs
- 1 cup milk, yogurt, buttermilk, or sour milk
- 2 tsp. Tabasco sauce or cayenne pepper
- 20 drops essential oil of clove, cinnamon, or eucalyptus, found in small bottles at health food stores
- 1 tsp. cooking oil or dormant oil
- 1 tsp. liquid dish soap
- Top off the tank with water and pump it up. Shake the sprayer occasionally and mist onto dry foliage. One application will last for 2 to 4 weeks in dry weather.

For more homemade recipes, see <http://www.deer-departed.com/deer-repellent-recipes.html>.

Hair Bags

Sometimes deer are deterred by human hair. Try putting bags of human hair in fine mesh bags and hang the bags from areas that are experiencing the heaviest browsing. Bags should be placed in the spring, at least 3' apart and replaced monthly. IDNR recommends protecting hair bags from the elements by putting the bag in a plastic container (like a milk jug) and cutting out the bottom of the jug so the smell of the hair can be emitted. Check with local salons and barbers for free hair!

Soap

Bars of soap can be used in the same way as hair bags. Suspend strongly scented soap from tree branches or in bags near the damage, again no greater than 3' apart. Weathering actually makes the soap more effective! (Many people swear by the use of *Irish Spring*, right.)



Bloodmeal

Spread within 30" of the damage, bloodmeal works for a short while, but may attract local dogs and other carnivores.

Commercial Repellents

When considering any chemical repellent, be fully aware of any and all application restrictions. Many commercial repellents are not safe for edible plants. The following is recommended by the IDNR.

- **Hinder®**- is one of a few deer and rabbit repellents registered for use on edible plants. It may be applied directly to vegetables, field crops, ornamental plants, and fruit trees. Depending upon weather conditions, one application is generally effective for 2-4 weeks. For areas smaller than 30 acres, the manufacturer recommends direct application to the entire area. An 8-10 foot wide strip application is suggested for larger fields.
- **Magic Circle®**- is considered safe for most vegetable, orchard, and field crops because it is applied to the perimeter of the area to be protected. Application is recommended for a 6-10 foot band around the crop area. Endurance is greatly influenced by weather conditions. Reapplication is recommended after heavy rains or dew.
- **Thiram®**- is a fungicide that repels the deer by taste. It is sold under a number of commercial names including Gufstason 42-s. Application is recommended for dormant trees and shrubs.
- **Ro-pel®**- may be applied directly to nursery and Christmas trees, ornamental and flowering trees and plants. It should not be used with edible crops.
- **Deer-Away®**- repels deer by both odor and taste. Success has been shown in protecting ornamental trees, shrubs, and flower beds.

SCARE TACTICS

Methods for startling deer might be an effective and economic way to keep deer out of your yard, especially at the first sign of a problem. Strobe lights and noisemakers (such as a radio going on and off during the night) while effective, might annoy your neighbors. Motion-sensitive lights and sprinklers tend to work as well as other scare devices and are less likely to make enemies of your neighbors.



The problem with hazing devices is that they work best in the short term - deer eventually acclimate to scare devices, even when the devices are moved occasionally. Varying the scare devices every week may extend the protection for a longer period. Furthermore, even when placed on a timer, scare devices are indiscriminate and may scare away desired wildlife and actually attract others - for examples, raccoons are reported to love to play in motion-sensor sprinklers.

NEVER attempt to scare away a deer by shooting it with a BB gun, a slingshot, paintball gun or similar device. Doing so is illegal under State law. It is illegal to discharge a firearm within City limits. Noise-based scare devices must follow the requirements of the City's noise ordinance.

DEER-RESISTANT PLANTS



Deer prefer certain plants over others. For example, they love hostas, azaleas and arborvitae. By choosing species that are undesirable to deer, you can reduce the amount of damage to many ornamental plants. Plants with a bitter or spicy taste, milky sap, or thorny, hairy, or tough leaves and stems are unpalatable to deer. However, no plant is truly "deer-resistant" -- deer will browse the best of what's around and there is no definite way to predict what deer will or will not eat. However, there are trees and plants that deer tend not to eat. The following is a working list of deer-resistant plants developed in consultation with the IDNR.

Plants Rarely Damaged by Deer

Trees

- American Barberry (*Berberis canadensis*)
- Paper Birch (*Betula papyrifera*)
- American Holly (*Ilex opaca*)
- Bigtooth Aspen (*Populus grandidentata*)
- Quaking Aspen (*Populus tremuloides*)
- American Beech (*Fagus grandifolia*)
- Gray Alder (*Alnus incana*)
- Hazel Alder (*Alnus serrulata*)
- Southern Arrowood (*Viburnum dentatum*)
- Hawthorn (*Crataegus sp.*)
- Tamarack (*Larix laricina*)
- American Hornbeam: Musclewood (*Carpinus caroliniana*)

- Black Locust (*Robinia pseudoacacia*)
- Eastern Hop Hornbeam (*Ostrya virginiana*)



Black Locust

SHRUBS

- Spicebush (*Lindera benzoin*)
- American Holly (*Ilex opaca*)
- Leatherleaf (*Chamaedaphne calyculata*)
- Pawpaw (*Asimina triloba*)



Spicebush

GRASSES

- Switchgrass (*Panicum virginatum*)
- Big Bluestem (*Andropogon gerardii*)
- Little Bluestem (*Schizachyrium scoparium*)
- Indian Grass (*Sorghastrum nutans*)
- Sideoats Grama (*Bouteloua curtipendula*)
- Bottlebrush (*Elymus hystrix*)
- Prairie Cordgrass (*Spartina pectinata*)

FLOWERS

- **Butterfly Weed** (*Asclepias tuberosa*)
- **Woodland Larkspur** (*Delphinium tricorne*)
- **Penstemons** (*Penstemon digitalis*)
- **Daffodils** (*Narcissus pseudonarcissus*)
- **Wild Geranium** (*Geranium maculatum*)
- **Healall** – (*Prunella vulgaris*)
- **Obedient Plant** – (*Physostegia virginiana*)
- **Giant YellowHyssop** (*Agastache nepetoides*)
- **Rattlesnake Master** (*Eryngium yuccifolium*)
- **Christmas Fern** (*Polystichum acrostichoides*)
- **Evening Primrose** (*Oenothera biennis*)
- **Wild Bergamot** (*Monarda fistulosa*)
- **Bee Balm** (*Monarda didyma* var.)
- **Lemon Mint** (*Monarda citriodora*)
- **Wild Quinine** (*Parthenium integrifolium*)
- **Wild Lupine** (*Lupinus perennis* L.)
- **Purple Coneflower** (*Echinacea purpurea*)
- **Pale Purple Coneflower** (*Echinacea pallida*)
- **Wild Columbine** (*Aquilegia canadensis*)
- **Black-eyed Susan** (*Rudbeckia hirta*)
- **New England Aster** (*Symphotrichum novae-angliae*)
- **Blue Wild Indigo** (*Baptisia australis*)
- **Prairie Blazing Star** (*Liatris pycnostachya*)
- **Monkey Flower** (*Mimulus* sp.)
- **Common Milkweed** (*Asclepias syriaca*)
- **Marsh Milkweed** (*Asclepias incarnata*)
- **Joe Pye Weed** (*Eupatorium* sp.)
- **Queen of the Prairie** (*Filipendula rubra*)
- **Coreopsis** (*Coreopsis* sp.)



Butterfly Weed.



Christmas Fern



Bergamot.

Plants Seldom Damaged

- **Downy Serviceberry** (*Amelanchier arborea*)
- **White Spruce** (*Picea glauca*)
- **Allegheny Serviceberry** (*Amelanchier laevis*)
- **Mountain Laurel** (*Kalmia latifolia*)
- **American Bittersweet** (*Celastrus scandens*)
- **Pitch Pine** (*Pinus rigida*)
- **Flowering Dogwood** (*Cornus florida*)
- **Red Pine** (*Pinus resinosa*)
- **Kousa Dogwood** (*Cornus kousa*)
- **Sassafras** (*Sassafras albidum*)
- **Honey Locust** (*Gleditsia triacanthos*)
- **Elderberry** (*Sambucus canadensis*)
- **Black Chokeberry** (*Aronia melanocarpa*)
- **American Cranberry Bush** (*Viburnum trilobum*)



Flowering Dogwood



Black Chokeberry

ADDITIONAL INFORMATION

To learn more about guarding your plants against deer damage, the following resources may also be helpful:

- Cornell University, Gardening Resources Deer Defenses: Strategies, plants and products to reduce damage in your gardens and landscape
<http://www.gardening.cornell.edu/factsheets/deerdef/>
- DeNicola, A., et. al, Managing White-Tailed Deer in Suburban Environments: A Technical Guide,. Cornell Cooperative Extension. 2000.
http://wildlifecontrol.info/pubs/Documents/Deer/Deer_management_mechs.pdf
- Indiana Department of Natural Resources, Managing Deer Damage.
<http://www.in.gov/dnr/fishwild/2718.htm>

CONCLUSION

Both humans and deer are part of an interdependent system whose integrity depends on balance. By eliminating most predators and fragmenting the landscape, humans have upset this balance. Left unchecked, a deer herd can double every three years. While this would be bad for humans and local ecosystems, it would also be bad for deer – more deer would compete for resources; more deer would be subject to action by frustrated residents; and more deer would be victims of automobile collisions.

Deer are not to blame for this situation – we are. While there is likely no “eternal return” to a landscape untouched by human modification, there are many things humans can do to effect a better balance and to be better stewards of a landscape that includes not just humans and deer, but plants, soils, water, air and all the other critical components of our shared life.

However, it is not just up to the Task Force and government to solve the “deer issue.” Citizens have a part to play too. We will all have to work to better understand deer biology and behavior and to demystify common misunderstandings. Some of us will allow hunting access on our land; others will have to help subsidize deer management. Some of us will have to drop the overgeneralized and unfounded fear that deer are aggressive – they are not. Some of us will have to stop feeding the deer – it’s not good for the deer. We will all have to recognize that deer are an important part of our shared landscape and that neighborhoods should not be sanitized of deer, simply because they are an inconvenience to some.

This report envisions deer culling as a necessary component of ecosystem stewardship. It re-introduces human predation into parts of the community where predation has long been absent. We recognize that our recommendations will not please everyone – some will think it goes too far, others, not far enough. These recommendations are the product of a group of volunteers who have done their best to review the science, consult with the experts and listen to their community members. We have worked to develop suggestions that are safe, effective and humane. We have worked to develop recommendations that are not only in the best interest of humans and our ecosystem, but also in the best interest of deer.

When it comes to deer, it’s easy to get mad at the Task Force, at government and each other. This is a tough issue with no handy solution. This report is just one step in the on-going community conversation about how to co-exist with community deer. Government officials and residents will decide on how, and if, to move forward with recommendations. Going forward, it is useful to keep in mind that ours is a community where residents actively work to re-imagine and re-define their relationship with nature. The deer issue gives us an opportunity to responsibly re-define this relationship further.

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APPENDICES

APPENDIX I

RESOLUTION CREATING THE JOINT CITY OF BLOOMINGTON-MONROE COUNTY DEER TASK FORCE

RESOLUTION 10-03

Creating a Joint City of Bloomington-Monroe County Deer Task Force

- WHEREAS, Many community members are concerned about the number of deer in urban areas; and
- WHEREAS, Some residents are concerned about deer-vehicle collisions, tick-borne illnesses, damage to yard plantings and vegetable gardens and general safety; and
- WHEREAS, Urban environments have created excellent deer habitat and many citizens, through the planting of ornamental and/or vegetable gardens, provide an abundance of food and shelter; and
- WHEREAS, As the number of deer in urban environments grow, so too do deer-human conflicts; and
- WHEREAS, Urban areas can provide substantial carrying capacity for deer and the biological carrying capacity of some urban areas can approach 100 deer per square mile; and
- WHEREAS, Instead of biological carrying capacity, the community must decide how many deer is acceptable – the social carrying capacity; and
- WHEREAS, Many Bloomington and Monroe County residents have contacted elected officials of the City of Bloomington and Monroe County, requesting measures to control the urban deer population; and
- WHEREAS, The Indiana Department of Natural Resources (IDNR) has exclusive jurisdiction over the management of deer per Indiana Code §14-22; and
- WHEREAS, A prudent approach to deer-human co-existence involves a partnership between the citizens, local government and the IDNR; and
- WHEREAS, There is a significant lack of community knowledge about the complexity of addressing deer in urban environments; and
- WHEREAS, Understanding the nature of the deer issue and exploring approaches is in the interest of the citizens of the City of Bloomington and Monroe County;

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE COMMON COUNCIL OF THE CITY OF BLOOMINGTON, MONROE COUNTY, INDIANA, THAT:

SECTION 1. The Joint City of Bloomington-Monroe County Deer Task Force shall be established to explore ways to address deer-human conflicts and to solicit community feedback on different possible approaches. Public education shall be part of the Task Force's charge.

- (1) Members. The Task Force shall be composed of eleven members.
- (2) Appointments. One member shall be appointed by the Mayor, three shall be appointed by the Bloomington Common Council and three shall be appointed by Monroe County Commissioners. One member of the Bloomington Common Council, one Monroe County Commissioner, a representative from the IDNR and the Director of the City of Bloomington's Animal Care and Control shall also serve on the Task Force.
- (3) Qualifications. Members shall include a variety of community representatives and expertise. Preference for Task Force members shall be given to: concerned residents, those with a background in biology (wildlife and/or ecology), veterinarians, gardeners, animal welfare representatives and law enforcement. Members should be open-minded and capable of working alongside members with differing opinions.

SECTION 2. The Task Force shall draft advisory recommendations for review by the City, County and the IDNR.

SECTION 3. The Task Force shall sunset once it submits its recommendations.

PASSED AND ADOPTED by the Common Council of the City of Bloomington, Monroe County, Indiana, upon this 7th day of APRIL, 2010.

Isabel Piedmont-Smith
ISABEL PIEDMONT-SMITH, President
Bloomington Common Council

ATTEST:

Regina Moore
REGINA MOORE, Clerk
City of Bloomington

PRESENTED by me to the Mayor of the City of Bloomington, Monroe County, Indiana, upon this 8th day of APRIL, 2010.

Regina Moore
REGINA MOORE, Clerk
City of Bloomington

SIGNED and APPROVED by me upon this 15th day of April, 2010.

Mark Kruzan
MARK KRUZAN, Mayor
City of Bloomington

SYNOPSIS

This is a City of Bloomington-Monroe County resolution creating a citizen-based Deer Task Force. The resolution is sponsored by Councilmembers Dave Rollo and Andy Ruff of the Bloomington Common Council and Monroe County Commissioner Iris Kiesling. The legislation acknowledges that some in the community have called upon City and County governments to address the issue of deer in urban areas. As the Indiana Department of Natural Resources (IDNR) has jurisdiction over the management of deer, this resolution calls for the Task Force to work closely with the IDNR in exploring options. The Task Force will engage in public education and will draft advisory recommendations for review by IDNR and local government. The group shall sunset once it issues its recommendations.

Signed copies to:
legale(u) deputy m.c. commissioners
CA/CA(B) clerk
annual cope + control

APPENDIX II

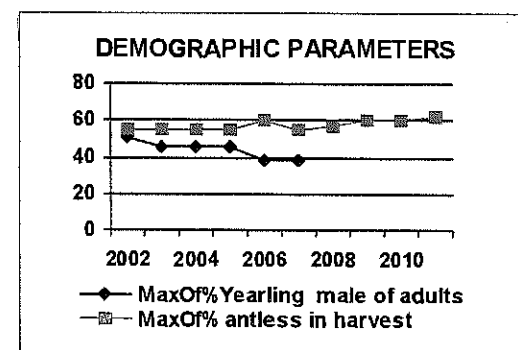
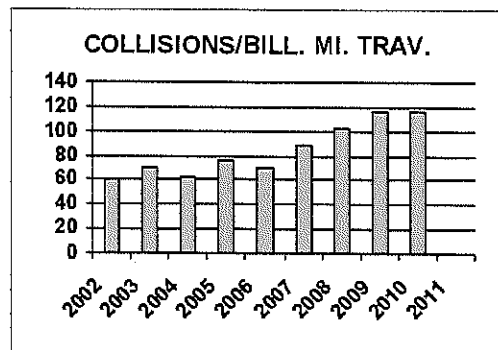
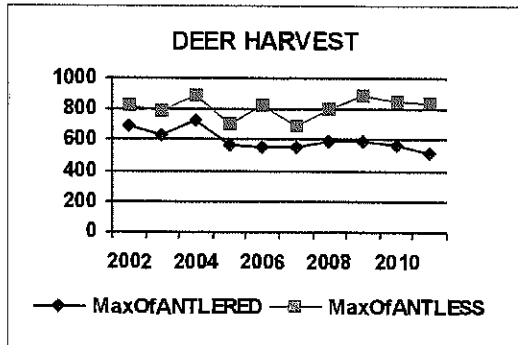
INDIANA DEPARTMENT OF NATURAL RESOURCES DEER DATA SHEET – MONROE COUNTY

COUNTY DEER DATA

County: MONROE

County No.	Total Square Miles	% in Deer Range (09)	Gun Effort (10)	Landowner Attitude (08) (+)200=Worst, (-)200=Best	Hunter Attitude (07) (+)200=Worst, (-)200=Best
53	411	82	21866		
District	Sq MiDeer Range (09)	Target Antlered Goal (07)	Gun Effort/Sq Mi Deer Range	Score (08)	Score (07)
10	342	550	64	104	54
				Rank (08)	Rank (07)
				19	38

Year	Antlered	Antlerless	Bucks Killed/ Square Mile	% Yearling Male of Adult Males	% Antlerless in harvest	Permit Quota	Damage Reports	Deer-Vehicle Collisions	Collisions/ Bill. Mi. Traveled
2002	686	828	1.98	51	55	2	3	61	60
2003	634	788	1.83	46	55	2	18	72	70
2004	729	894	2.10	46	55	2	5	65	63
2005	570	702	1.64	46	55	3	1	79	76
2006	550	822	1.56	38	60	3	3	72	70
2007	562	694	1.62	38	55	3	9	91	89
2008	597	801	1.72		57	3	8	101	102
2009	592	888	1.71		60	4	6	120	117
2010	574	847	1.68		60	4	9	108	116
2011	523	838	1.53		62	4	11	111	



APPENDIX III

Responses to Structured Questions at Community Outreach Meetings:

- Tuesday, 28 June 2011 - 6:00 pm (Templeton Elementary School)
- Monday, 11 July 2011 - 6:00 pm (University Elementary School)
- Thursday, 14 July 2011 - 6:00 pm (Bloomington North High School)
- Thursday, 21 July 2011 - 6:00 pm (Grandview Elementary School)
- Saturday, 23 July 2011 - 10:00 am (City Hall, Council Chambers)

Question 1:

“What are your experiences with deer – both positive and negative – in your neighborhood and in other parts of the community?”

Responses:

- As Renwick developed → led to daily experience with deer.
- Have seen injured/limping deer – a concern.
- Has impacted ability to garden.
- See deer about 3 mornings/week
- Deer cross road near school – a safety concern.
- Highland Avenue -- see about 12 deer in a herd
- Arden Drive – did not have any deer issues until a few years ago. Have installed a 4' fence in back yard, but deer get in fence and knock it down. Deer not afraid of 95 lb. Lab. Liquid fence helps, but needs to be used often
- Have noticed more problems in last 5 years; development seems to have caused a lot of this, taking their habitat (High St., Renwick, Deer Manor, etc.)
- Even if the community designated an area for deer, it will not make a difference since deer have a high reproductive rate
- Also coyotes seen in urban areas
- Deer Park – regular deer population moved as Deer Park developed, then moved again when Renwick developed
- Traffic concerns/car accidents
- Possible social problem of deer shot by bow but dying in someone else's yard
- S. Clifton Ave (High and Hillside) – deer jumped through window, bleeding, caused much damage
- Concerns for young children being outside when doe and fawns present; does won't move (Sheridan)
- Private property problem
- E. Hunter – 5 deer living in yard, concerns about kids being outside
- In Woodstock, have seen as many as 14 deer at a time

- On Mt. Gilead, see deer 2-3x/day; see does, fawns and bucks
- Concern about auto accidents but otherwise likes seeing them; habitat seems sufficient
- See deer by business in town, like in the parking lot of Mother Bear's Pizza; see deer in other odd places in City
- Plant deer resistant plants or fence off plants
- Enjoys seeing deer; important for people to understand other species
- Supports wolf re-introduction
- In Renwick, see a herd of ~10; they eat plants
- In Renwick neighborhood, a doe was hit by a car, sustained brain damage and was running into trees and everything else. Very traumatic for kids and neighbors to witness. Suffering. Police had to shoot.
- Dogs are a good deterrent.
- During rut, Renwick resident had a stand-off with a buck.
- Hunter previously saw about 8 deer/week now see about 8 deer/day
- On Bethel Lane, can be as many as 40-50 deer at a time.
- Near University Elementary, see groups of 2-6 deer in yard daily; the deer are eating things they did not eat before; they push through fencing and netting.
- Concerned with deer-car collisions
- Does are dropping fawns in lawns
- Problems for kids walking to bus stops – they encounter deer
- As deer numbers increase, have noticed a reduction in other species
- Rock Creek – see more deer
- Sycamore Knolls – Negative experience; herd is growing; does/fawns/bucks, impact gardens
- Sycamore Knolls – jump fence, uses spray deterrents, plants hostas for them to eat instead of other plants
- Browncliff – near Griffy – some positive experiences but negative for gardeners, concerns about auto accidents
- Moore's Pike/College Mall – negative/dangerous deer have knocked down fence, concerns about gardening, car accidents (3 layers of plastic mesh fence, woods near them looks like pics of Griffy)
- Seems to be related to development of Ramsey Farm
- SE side, positive, natural yard, deer eat some of it, cover some plants and fence some, enjoy seeing them, recognize that people have altered the environment, other animals eat the plants too, can't exterminate everything that annoys us, accept other creatures
- SE side – High – negative for gardening, tree damage, \$ for fencing/deterrents
- McDoel gardens/S. Rogers – deer are not a problem
- Own a small woodlot -- concern for regeneration of woods, concern about Lyme disease
- Hyde Park – See deer daily, fenced garden, hunter – sees more deer in neighborhood than in the woods
- Take methods to slow traffic to avoid deer collisions

Question 2:

“What are the most important criteria the Task Force should consider in making its recommendations: efficacy, safety, deer welfare, cost, community acceptance, other?”

Responses:

- How do you deal with people who don't want to do anything about deer?
- Suggest Task Force ID and remove fawns
- Overpopulation is severe
- Preservation of human life, property, and diverse ecosystem
- Cost effective
- Use electric shock devices (locally produced)
- Task Force needs to identify the current deer population and figure out what an acceptable number is.
- Suggest the Task Force develop a citizen input website where people report the deer they see
- Concern with deer-tick population and Lyme disease.
- Templeton neighborhood – smaller lots, many deer, fawns born in yard
- Humane treatment of deer
- Quality of life
- Does it impact business/visitors differently than homeowners?
- How do fences affect neighborhoods?
- How did hunting in Brown Co. St. Park work? (worked well – hunt every other year – maintenance) Now seeing return to understory
- People's attitudes are important; we have to assume some risk living with wildlife
- Deer are a symptom of fact that we are not living in harmony, not just with deer but with whole environment
- Must educate people on their place in nature and their role in this situation. If people had a different attitude toward being part of – not apart from – nature, their choices might be different.
- Should the Task Force be swayed by attitudes?
- Annual harvest helps keep herd at a level where they are healthy. Community will accept it if they are educated and feel it is in the best interest of the deer's health.
- Size of the herd needs to be reduced
- If hunting increased in county, would that impact deer in city?
- Are there similarities among the neighborhoods that report problems? If development is an issue, may need to look at ordinances that allow development.
- Indicators of efficacy: Fewer sightings and less damage to plants
- Indicators: Deer welfare, safety and cost. Cost important, especially in these tight economic times.
- Question: If culling is recommended, how would the Task Force know when it has culled enough? May be a need for some kind of count. Maybe some way to engage residents and encourage them to report deer sighting – a way residents can electronically log deer sightings, much like how people catalog birds they see.

- The Task Force might have to try to quantify deer to garner any sort of community acceptance.
- Concerned about safety of management option
- Concerned about keeping people safe from deer
- Concern for diseases that deer carry
 - as it relates to herd health
 - as it relates to human health
- Cost-damages incurred because of the deer and costs incurred to protect property
- Vegan-turned-hunter who has been invited to hunt area around Timbercrest for the last couple of years.
- He has noted an increase in deer in town over the last handful of years.
- Encourages the Task Force to think of cost efficiency, especially in light of current economic climate
- The Task Force should encourage residents to donate funds to Hunters and Farmers Feeding the Hungry.
- Does not want to be taxed to remove deer; how to handle the costs in an equitable manner
- Safety
- Community acceptance – whole range of feelings within one neighborhood
- This problem affects some people more than others
- Where would deer go?
- Not “anti-deer” just concerned about density, forest regeneration, deer affect ability to live in a sustainable manner

APPENDIX IV
PUBLIC OPINION SURVEY

**Joint City of Bloomington-Monroe County
Deer Task Force Community Opinion
Survey** [Edit](#)

Design Survey Collect Responses **Analyze Results**

- [View Summary](#)
- [Browse Responses](#)
- [Filter Responses](#)
- [Crosstab Responses](#)
- [Download Responses](#)
- [Share Responses](#)

Default Report [+ Add Report](#)

Response Summary

Active Filter: My New Filter

Total: 742

Filtered: 727

[Edit](#)

[Unapply](#)

[Show this Page Only](#)

PAGE: 1

1. Do you live in Monroe County?

[Create Chart](#) [Download](#)

	Response Percent	Response Count
Yes	100.0%	727
No	0.0%	0
answered question		727
skipped question		0

2. If "yes," do you live within the limits of the City of Bloomington?

[Create Chart](#) [Download](#)

	Response Percent	Response Count
Yes	76.8%	555
No	22.4%	162
Don't know	0.8%	6
answered question		723
skipped question		4

3. Please indicate the general location in which you live. Please do so by providing cross street or block information (e.g., E. 3rd Street between Morningside Drive and Smith Road, 1200 block of S. High Street, etc.).

[Download](#)

answered question		713
skipped question		14

3. Please indicate the general location in which you live. Please do so by providing cross street or block information (e.g., E. 3rd Street between Morningside Drive and Smith Road, 1200 block of S. High Street, etc.). [Download](#)

	Response Count
Show Responses	713
answered question	713
skipped question	14

Show this Page Only

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4. How long have you lived at your current residence? [Create Chart](#) [Download](#)

	Response Percent	Response Count
0-2 years	12.6%	91
2-5 years	19.9%	144
5-10 years	20.9%	151
More than 10 years	46.6%	337
answered question		723
skipped question		4

5. Do you rent or own your home? [Create Chart](#) [Download](#)

	Response Percent	Response Count
Rent	11.3%	81
Own	88.7%	638
answered question		719
skipped question		8

6. Which best describes the property on which you live? [Create Chart](#) [Download](#)

	Response Percent	Response Count
1/2 acre or less	61.1%	441
Between .6 and 1.5 acres	23.8%	172
Between 1.6 and 3 acres	6.2%	45
answered question		722
skipped question		5

6. Which best describes the property on which you live?

[Create Chart](#)[Download](#)

Between 3.1 and 5 acres	2.5%	18
More than 5 acres	6.4%	46

answered question 722

skipped question 5

[Show this Page Only](#)

PAGE: 3

7. On average, how often do you see deer in your yard?

[Create Chart](#)[Download](#)

	0 deer	1-5 deer	6-10 deer	11-20 deer	21-30 deer	31+ deer	Response Count
Daily	33.9% (151)	59.8% (266)	5.2% (23)	0.9% (4)	0.0% (0)	0.2% (1)	445
Weekly	26.0% (115)	52.5% (232)	12.4% (55)	6.8% (30)	1.1% (5)	1.1% (5)	442
Monthly	28.9% (95)	29.8% (98)	15.2% (50)	11.6% (38)	6.7% (22)	7.9% (26)	329
Yearly	27.4% (82)	20.4% (61)	10.0% (30)	8.7% (26)	7.0% (21)	26.4% (79)	299

answered question 707

skipped question 20

8. On average, how often do you see deer in your neighborhood?

[Create Chart](#)[Download](#)

	0 deer	1-5 deer	6-10 deer	11-20 deer	21-30 deer	31+ deer	Response Count
Daily	23.4% (110)	59.1% (278)	14.3% (67)	2.6% (12)	0.4% (2)	0.2% (1)	470
Weekly	20.0% (80)	44.4% (178)	22.2% (89)	9.5% (38)	2.7% (11)	1.2% (5)	401
Monthly	18.1% (56)	31.0% (96)	18.4% (57)	14.2% (44)	9.4% (29)	9.0% (28)	310
Yearly	11.2% (30)	24.5% (66)	13.4% (36)	12.3% (33)	5.6% (15)	33.1% (89)	269

answered question 702

skipped question 25

9. Which of the following statements best expresses your opinion about the number of deer in your neighborhood?

[Create Chart](#)[Download](#)

answered question 706

skipped question 21

9. Which of the following statements best expresses your opinion about the number of deer in your neighborhood?

[Create Chart](#) [Download](#)

	Response Percent	Response Count
The number of deer is just about right.	23.4%	165
There are too many deer.	49.6%	350
There are not enough deer.	3.4%	24
I have no opinion about the number of deer.	12.0%	85
None of the above. Please explain. Show Responses	11.6%	82
	answered question	706
	skipped question	21

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10. Where do you see deer in your community? Please describe below by citing street names, landmarks, etc.

[Download](#)

	Response Count
Show Responses	634
answered question	634
skipped question	93

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11. Which of the following statements best expresses your opinion about the number of deer in our community?

[Create Chart](#) [Download](#)

	Response Percent	Response Count
The number of deer is just about right.	21.5%	146
There are too many deer.	58.0%	393
There are not enough deer.	1.8%	12
I have no opinion about the number of deer.	10.8%	73
None of the above. Please explain. Show Responses	8.0%	54
	answered question	678
	skipped question	49

12. Please indicate how concerned you are with the following.

[Create Chart](#) [Download](#)

	Not concerned	Slightly concerned	Moderately concerned	Very concerned	Response Count
Deer-vehicle collisions	8.8% (60)	24.9% (170)	25.1% (171)	41.2% (281)	682
Deer damage to ornamental gardens	27.9% (190)	19.8% (135)	16.6% (113)	35.8% (244)	682
Deer damage to vegetable gardens	24.3% (165)	18.6% (126)	17.7% (120)	39.4% (267)	678
Deer health & well-being	17.8% (119)	22.4% (150)	29.0% (194)	30.8% (206)	669
Deer aggression	40.0% (269)	25.3% (170)	16.5% (111)	18.2% (122)	672
Transmission of disease by deer	34.0% (228)	25.7% (172)	19.3% (129)	21.0% (141)	670
Deer damage to biodiversity & the ecosystem	26.6% (177)	19.2% (128)	21.7% (144)	32.5% (216)	665
Other	43.9% (65)	4.1% (6)	6.8% (10)	45.3% (67)	148
			If "other," please explain: Show Responses		113
			answered question		689
			skipped question		38

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13. In the last three years, have you experienced any of the following deer damage to your property? If so, please indicate the degree of the damage.

[Create Chart](#) [Download](#)

	None	Minimal	Moderate	Severe	Response Count
Shrubs/trees	32.1% (209)	20.6% (134)	26.9% (175)	20.4% (133)	651
Fruit-bearing trees	62.0% (367)	14.2% (84)	13.7% (81)	10.1% (60)	592
Flowers & ornamentals	22.8% (151)	17.1% (113)	22.1% (146)	38.1% (252)	662
Vegetables	47.8% (291)	11.2% (68)	14.3% (87)	26.8% (163)	609
Other	61.8% (94)	6.6% (10)	9.2% (14)	22.4% (34)	152
			If "other," please explain: Show Responses		90
			answered question		676
			skipped question		51

14. In the last three years, have you used any of the following methods to protect your property from deer damage? Check all that apply.

[Create Chart](#) [Download](#)

	Response Percent	Response Count
Fencing, netting or screening	43.2%	285
Deer-resistant plants	47.6%	314
Repellants	48.8%	322
Scare-devices (motion-sensor lights, sprinklers, etc.)	13.2%	87
Hunting	3.2%	21
I have not used any methods to protect my property from deer damage	31.1%	205
Other - please explain Show Responses	12.1%	80
	answered question	660
	skipped question	67

15. Approximately how much money have you spent over the last three years to address deer damage in your yard?

[Create Chart](#) [Download](#)

	Response Percent	Response Count
\$0	35.7%	242
\$1-100	24.5%	166
\$101-500	26.0%	176
\$501-1,000	6.9%	47
\$1,001 or more	6.8%	46
	answered question	677
	skipped question	50

16. In the last three years, were you involved in a deer-vehicle collision in Monroe County?

[Create Chart](#) [Download](#)

	Response Percent	Response Count
Yes	1.2%	8
No	91.7%	621
If "yes," where? Please cite street names or landmarks. Show Responses	7.1%	48
	answered question	677
	skipped question	50

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17. What would you consider to be evidence of a successful deer management program?

[Create Chart](#)[Download](#)

	Response Percent	Response Count
Reduced number of deer/vehicle collisions	57.1%	386
Decreased ecosystem damage	49.3%	333
Improved health of the deer herd	35.9%	243
Reduced number of deer in the community	59.2%	400
Reduced loss of garden food	43.2%	292
Reduced loss of ornamental landscaping	47.6%	322
Reduced number of resident complaints	41.9%	283
No management needed	15.2%	103
Other - please explain Show Responses	10.2%	69
	answered question	676
	skipped question	51

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18. What is your gender?

[Create Chart](#)[Download](#)

	Response Percent	Response Count
M	40.4%	272
F	59.4%	400
Transgendered	0.1%	1
	answered question	673
	skipped question	54

19. What is your age?

[Create Chart](#)[Download](#)

	Response Percent	Response Count
18-24 years old	2.4%	16
	answered question	672
	skipped question	55

19. What is your age?

[Create Chart](#) [Download](#)

25-39 years old	20.2%	136
40-54 years old	31.0%	208
55-69 years old	35.3%	237
70+ years old	11.2%	75
answered question		672
skipped question		55

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20. What approach to deer do you prefer in your neighborhood? Before you answer this question, please familiarize yourself with the management options as summarized by the Task Force via its community outreach meetings or its Management FAQs.

[Create Chart](#) [Download](#)

	Strongly oppose	Oppose	Neutral	Support	Strongly support	Response Count
Do nothing	45.7% (262)	16.2% (93)	17.8% (102)	8.7% (50)	11.5% (66)	573
Public Education	2.3% (14)	2.8% (17)	19.5% (117)	41.7% (250)	33.7% (202)	600
Deer-resistant plants	4.7% (28)	5.4% (32)	23.1% (137)	40.6% (241)	26.1% (155)	593
Fencing	7.9% (46)	15.3% (89)	28.4% (165)	31.6% (183)	16.7% (97)	580
Repellents, scaring devices	9.9% (58)	12.2% (71)	31.6% (184)	31.0% (181)	15.3% (89)	583
Contraception (population must be closed; must be administered by a professional)	22.3% (130)	20.7% (121)	20.0% (117)	19.2% (112)	17.8% (104)	584
Trap and relocate (may be allowed by IDNR under very strict conditions - deer must be marked, sterilized and kept in an enclosure, among other requirements); capture myopathy and lack of suitable release sites are significant considerations	30.5% (174)	25.7% (147)	17.5% (100)	12.6% (72)	13.7% (78)	571
Trap and euthanize	39.7% (238)	18.8% (113)	13.2% (79)	11.5% (69)	16.8% (101)	600
Sterilization	27.8% (164)	16.3% (96)	19.4% (114)	19.4% (114)	17.1% (101)	589
Hunting	26.9% (164)	9.8% (60)	14.4% (88)	21.0% (128)	27.9% (170)	610
Sharpshooting	34.6% (208)	10.6% (64)	13.5% (81)	15.1% (91)	26.1% (157)	601
answered question						664
skipped question						63

20. What approach to deer do you prefer in your neighborhood? Before you answer this question, please familiarize yourself with the management options as summarized by the Task Force via its community outreach meetings or its Management FAQs. [Create Chart](#) [Download](#)

Other	28.4% (23)	3.7% (3)	21.0% (17)	11.1% (9)	35.8% (29)	81	
						If "other," please explain Show Responses	106
						answered question	664
						skipped question	63

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21. Any other comments? [Download](#)

	Response Count
Show Responses	301
answered question	301
skipped question	426

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PUBLIC OPINION SURVEY: OPEN-ENDED QUESTION RESPONSES

Question 9. "Which of the following statements best expresses your opinion about the number of deer in your neighborhood? If none, please explain."

- These are stupid choices! "Right" or "too many" is a non issue. They live with us and are friends, accept them anywhere they choose to try to survive. Obey all canine and cat regulations. -- 9/16/2011 8:32 AM
- Open the town to urban Bow Hunting!!! -- 9/15/2011 8:45 PM
- Thankfully, we live in an area that contains enough "natural space" for us to see deer, birds, squirrels, rabbits, etc.. They are a necessary part of the natural landscape, and their numbers are immaterial. -- 9/15/2011 6:15 PM
- There are very many. One group in the small hedgerow behind bin ford. They are increasingly aggressive. Do not leave when humans appear. Mom deer with baby rushed porch. -- 9/15/2011 11:14 AM
- I love the deer and leave my back yard gates open so the deer can come in and lay under my pine trees. -- 9/13/2011 9:42 AM
- There are too many deer. Deer are wild animals and do not belong in the city. -- 9/13/2011 9:19 AM
- I love the deer. They are beautiful creatures! I heard here at the meeting that they cause more problems for the local community of people. -- 9/12/2011 10:56 AM
- Because of the close streets and closeness to campus, I worry both for the safety of the deer and for the unsuspecting drivers. -- 9/12/2011 8:47 AM
- I worry about the deer being that we are close to moores pike. I have seen a 3 legged deer that I assume had been hit by a car. :(there is a family of 5 that often sleep in our back yard. -- 9/10/2011 1:08 PM
- Deer appeared after recent Blackwell development, ca 5 to 7 years ago. We have become the nursery for the deer. I would hate to see them culled just because we all say "there are too many and they do not belong here." Our senseless developing is the true problem. -- 9/9/2011 12:51 AM
- It's a real problem because of my big yard with a small forest. I had 8 deer living back there at one time. I understand from previous owner of my home this has gone on for decades. -- 9/9/2011 12:20 AM
- the number is slightly too high. -- 9/8/2011 4:46 PM
- The number of deer do not concern me as much as the skinny and injured deer I see (possibly the same ones over and over). I read the FAQs and see that the number of deer is not thought to be unsupportable in Bloomington. I find them peaceful to watch (except above-mentioned types) but worry about aggression to my dog, as I have watched her bark at one on the other side of my fence, and the deer began huffing and snorting and walking towards her- the dog is a 50 pound female. Not thrilled about the eating of ornamentals, though I find spraying has been quite effective. -- 9/7/2011 10:18 PM
- I don't really mind the number of deer, other than when they eat all of my hastas, day lillies, and iris in one night. That is annoying, but what can you do? My

neighborhood borders the city/county limits, and seeing deer, turkeys, rabbits, birds, and an occasional fox in my back yard is fairly enjoyable. I feel like I'm cohabitating with nature. Plus, when they're around, I think the deer somewhat help to keep the speed of traffic through my housing edition lower. (I would rather have more deer and fewer speed humps/chicanes around town.) It is weird to see them in the middle of town though. Especially during afternoon hours. -- 8/1/2011 11:03 AM

- Mixed feelings. Like them, but they can destroy plants. -- 7/29/2011 6:10 PM
- I absolutely adore the deer, especially the fawns. I have a feeding station for them. I stopped investing in expensive plants and a portion of my lawn went back to nature. I have a floodlight to illuminate the deer in the winter. I no longer get upset when they eat my flowers. I spend quite a bit of money feeding the deer. I am afraid that someday they will no longer appear. They are the joy of my life because they are so graceful and quiet. They do not bark and even do not chase away the squirrels when they are munching away on the feeding block. They also do not chase away the adorable little bunnies dreaming away on my lawn. I was overjoyed when a few weeks ago a fawn was born at the edge of the tree line visible from my bedroom window. Where else can you experience such a miracle. Please, don't chase the deer away. I can handle more than I have now. -- 7/24/2011 1:11 PM
- 2 TO 8 DEER ON ANY GIVEN DAY IS MORE ACCURATE. WITH THE EXCEPTION OF AN 8 POINT BUCK IN MY BACK YARD THEY RARELY TRAVEL ALONE. ANY WILD ANIMAL OF THAT SIZE IS TOO MANY IN THE CITY AND SHOULD NOT BE NEAR BUSY STREETS. I HAVE BEEN KEPT FROM MY COMPOST PILE. MY TREES AND PLANTS HAVE BEEN EATEN AND KILLED. THE DEER KNOCK DOWN MY FENCES AND EVEN BREAK THE RAILS. -- 7/24/2011 1:53 AM
- I don't like them eating my flowers but I love seeing them and think it is up to us to plant things that the deer don't eat. I want to live peacefully with them. -- 7/23/2011 10:17 PM
- I do not frequently see deer near my apartment, but I do see them frequently on roadsides south of town. However, their negative impacts on city parks and surrounding natural areas are apparent enough to justify a discussion of appropriate management regardless of the number of backyard deer sightings. -- 7/22/2011 3:43 PM
- I don't mind the deer except that those in my yard are scrawny (even though they eat all of our flowers and shrubs) and the ones I see in our neighborhood have that same tick covered look. Plus they get hit by cars. -- 7/19/2011 6:36 PM
- I feel that, because we've encroached upon their living space, it's only natural that they have become part of ours. -- 7/18/2011 12:30 AM
- The number of deer is understandable and doesn't bother me. -- 7/17/2011 7:50 PM
- I love the deer. I wouldn't mind seeing more on a more regular basis. Sometimes they're here daily, sometimes weekly, most recently, less often. It changes. -- 7/16/2011 7:34 PM
- NOT QUITE SURE WHAT THE SEEMS TO BE THE PROBLEM. USE DEER REPELLANT AND/OR JUST SHOO THEM OFF. -- 7/16/2011 6:54 PM

- It's not the deer's fault that they are in my neighborhood. Since their original home at "Deer Park" (the old Sarkes Tarzian estate) had its fence removed, they have dispersed throughout the neighborhood. -- 7/16/2011 3:04 PM
- I know there are many in parts of the town, I think the traffic noise and relatively smaller yards in my part of Bryan Park neighborhood, combine with a lack of green corridors from other places, prevent them from getting as far West as my yard. -- 7/15/2011 2:56 PM
- It's not so much about numbers as it is the damage they are doing. One can do a lot of damage to a small yard. -- 7/15/2011 8:58 AM
- We've encroached on their habitat and now they're forced to wander in search of food. The "control" should have happened back when people were interested in building on the "deers' property"! And I'm not at all happy that they devour my garden! -- 7/15/2011 7:53 AM
- we live next to the park where the herd gathers nightly so it seems as if there are too many but this may be biased give location -- 7/14/2011 5:55 PM
- The numbers seem static suggesting the population size is at equilibrium. This is a good thing. -- 7/14/2011 2:23 PM
- The number of deer vary. One may wander through or a small herd. One year a large herd of 8 or so went through the property. -- 7/14/2011 2:18 PM
- We are on a long-established deer crossing path. Although they are cute, I would like to see fewer on my property. -- 7/14/2011 2:12 PM
- I have only ever seen deer in the neighborhood crossing the streets. 2nd street is very busy and this is quite dangerous. -- 7/14/2011 2:07 PM
- have actually seen less the last 2 years. -- 7/14/2011 12:50 AM
- The deer are diseased predators who came on my deck 3 years ago and ate all the tomatoes in my Earth boxes. I can't have a garden, and over 11 years, we have completely re-landscaped to deer-poisonous and/or deer resistant species. -- 7/14/2011 12:40 AM
- The deer in the city are not a naturally occurring phenomenon. They were in the deer park estate surrounded by 8 foot fences up until it was purchased and transformed into the current rental spaces. The deer have no natural competition since we will not hunt within the city limits this creates un-regulated growth. The cost of relocation is far cheaper than the current costs they inflict on the people and property within the city limits. -- 7/14/2011 12:39 AM
- I don't mind the deer although we have to continually spray our plants with deer-away. -- 7/14/2011 12:12 AM
- Deer: they are a beautiful creature that were here long before we got here so let's move over a little and enjoy them. -- 7/14/2011 12:03 AM
- About three months ago, I saw 21 deer, in a group, in an adjoining yard. This is ludicrous, if not plainly idiotic. There is no reasonable argument that this should, or can, continue. -- 7/14/2011 11:42 AM
- I see the deer outside of our fence because we have 2 dogs with a fenced yard. Neither of these separately would deter a hungry deer, but together, the other offerings of my neighbors make my yard a less preferred stop. -- 7/14/2011 11:24 AM

- When I don't see them, they decimate my flowers, foliage every night, even with the leading sprays. -- 7/14/2011 11:16 AM
- There are large fields behind my house and some woods, so i expect to see a few. -- 7/14/2011 8:05 AM
- Leave the deer alone. We are taking their space and they need someone to go. As long as their not hurting anyone, LEAVE THEM ALONE. -- 7/14/2011 7:53 AM
- WE ARE SO SICK OF PEOPLE WHO DON'T LIKE THE DEER---GET A LIFE AND WORRY ABOUT OUR SOLDIERS WHO ARE BEING KILLED AND LEAVE THE ANIMALS ALONE!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!! -- 7/14/2011 7:26 AM
- We have 5 bucks and about 4 doe on our property alone. They stay there because they can decimate our garden. -- 7/14/2011 7:05 AM
- We suspect there are too many deer for the area, but they seem to be thriving. -- 7/14/2011 6:55 AM
- I have seen a deer in a road twice in the last month. That is 2 deer too many!! -- 7/13/2011 10:26 PM
- These poor beautiful animals have no where to go. -- 7/13/2011 10:19 PM
- How many people are on the task force counting the correct amount of deer per person? -- 7/13/2011 9:34 PM
- Only when I see them by the road do I worry. Many of the streets here have hills and the deer can cause dangerous situations -- 7/13/2011 9:19 PM
- the deer were here before we started building and taking away their land, this is human error -- 7/13/2011 7:52 PM
- I believe there are too many deer for conditions in our area. I do not feel that this means eliminating deer is the only solution. The deer population would not be such a big problem if land was managed better, there were predators to keep deer from lingering in the same area for extended periods of time, etc. -- 7/13/2011 7:20 PM
- I don't mind them if you could keep them out of gardens and flower beds -- 7/13/2011 6:52 PM
- Though the deer seem like too many because they are eating my garden/landscape plantings, I do not want to do them harm. I see them as a part of the landscape that we humans have gotten out of balance. -- 7/13/2011 5:43 PM
- The deer eat edible plants (vegetables, etc) as well as ornamental plants. -- 7/13/2011 5:32 PM
- There are none in my neighborhood, but I often see them on College Mall Rd around the Renwick development and eating the bushes on the other side of the road. -- 7/13/2011 5:23 PM
- I love seeing the deer, but I know they are dangerous to vehicles and tear up yards. I don't want any harm to come to these creatures. -- 7/13/2011 5:21 PM
- I can't believe you would even consider taking advice on "what is the RIGHT number" of deer from self-selected, possibly grossly uninformed or misinformed people and pretending to then determine what a "right" number of animals might be. Mother Nature takes care of that without your assistance. -- 7/13/2011 5:01 PM
- I just recently had a doe and two fawns in my back yard. Cute, but I do not like them eating the new, tender shoots of plants! There are a couple of groups of deer here. -- 7/13/2011 3:19 PM

- I am okay with the number of deer but I am worried about them getting injured by cars and people. -- 7/13/2011 3:17 PM
- I think deer belong in nature and that we have no right expect deer to NOT be in town. If people want them to not eat their plants, fences and chemicals deterrents can be used. If there are areas where deer are in the roads, signage warning and encouraging slower speeds should be put up. The reality is that humans should not have a monopoly on being allowed to live in the city. -- 7/13/2011 3:14 PM
- None in my condo neighborhood, but 'WAY too many deer on High Street when I drive to work every day. Afraid I will hit one. Knew of a person who died as result of deer/car collision in a suburban area. It's dangerous. -- 7/13/2011 3:12 PM
- I don't mind seeing them, but I'm sure the poor things don't want to be walking around a neighborhood like that. There isn't enough green space for them to live safely. -- 7/13/2011 3:06 PM
- I feel that there are too many deer for a residential neighborhood near major roads and I worry about traffic accidents, but other than worrying about them being hit by cars, I have no problem with the deer being in the neighborhood. -- 7/13/2011 2:58 PM
- This area is very rural on the lake and there is a lot more room for deer to roam and feed than in the city - so it is not as urgent a problem in this location than in city locations. -- 7/13/2011 2:50 PM
- I love seeing deer but I feel they're in danger when they show up this far into town. There are very few forested areas in our neighborhood; these deer must have traveled a good distance to show up on the 700 block of West Allen. -- 7/13/2011 2:19 PM
- I don't know if it is that we have more deer, or if we have simply encroached more on their habitat. I do know that they are a terrible problem for my garden. It's become nearly impossible to keep the deer off food plants and flowers. -- 7/13/2011 1:12 PM
- I do not mind the deer too much except when they eat my plants, but I have learned to use natural sprays to keep the plants safe. -- 7/13/2011 1:11 PM
- The deer have been on the ridge longer than my condo has. We live in a small, semi-rural midwestern town and deer are a part of life. -- 7/13/2011 1:07 PM
- I often see deer to the east of Bryan Park, but have only seen them in the vicinity of Davis and Dunn St. once, and never further west than that. I would be fine with having a deer or two in my neighborhood, but would worry about them in our streets, which have much more traffic than those to the east of the park. (I'd rather have more deer and less traffic.) -- 7/13/2011 1:04 PM
- I have a neighbor who actually puts out food for the deer which I am sure attracts many! -- 7/13/2011 1:03 PM
- Probably right for being in the city, but I would definitely want to see a lot more if I lived in the county or a more rural area. -- 7/13/2011 12:54 AM
- Takes some of the joy out of gardening. -- 7/13/2011 12:41 AM
- where are they supposed to go since they have less habitat -- 7/13/2011 12:17 AM
- Recently I have not seen any, but last year there were way too many. I saw groups of females and babies, and single stags frequently. I don't know where they have gone,

but is not likely that I am just not noticing them because my walking behavior hasn't changed much. So right now, I would say the number is about right. -- 7/13/2011 12:16 AM

- Number doesn't seem overwhelming--like it did when I lived east of Bloomington, but I haven't looked seriously for over-browsing. Deer do not both my yard, but I have a dog. -- 7/13/2011 11:44 AM
- I worry about the number of deer, mostly for safety reasons (theirs and ours). But how many is too many? I don't know, and besides, where else are they supposed to go, when we keep converting their natural habitats into subdivisions? -- 7/13/2011 9:47 AM
- To me it's too complex for "just right", "not enough", "too many" categories. "Just right" for who? For us or for the deer? If I had to choose, I guess it would be "too man", but because I'm guessing that they deer are starting to exceed the carrying capacity of the land? -- 7/13/2011 8:19 AM
- The number of deer doesn't bother me. -- 7/13/2011 7:03 AM
- It does not seem like that much except that I see what they do to vegetation around the house--even if I don't see them. -- 7/13/2011 1:27 AM
- We rarely see deer in the neighborhood but we have seen them on rare occasions. I think deer in the neighborhood is a bad idea. They will get hit by a car and/or could hurt someone. -- 7/12/2011 4:10 PM
- I always enjoy it and experience a little thrill when I see a deer. That said, I have noticed there seem to be more, based on number of sightings, and I am worried for the deer themselves. I have seen several fawns that appeared to have been hit by cars this season. That breaks my heart. -- 7/12/2011 2:00 PM
- Something has definitely happened in the last 10 years that we are seeing more in our yard, more often. I can measure that by how the landscaping in my front yard has changed, particularly in the last 3 years. There's really nothing left of it now.

Question 10. "Where do you see deer in your community? Please describe below by citing street names, landmarks, etc."

- I suppose it's not right next to my residence, but I've seen deer across 3rd st. from the old Cheeseburger in Paradise.
- First St., Second St., Ballantine Rd., Jordan Ave, Sheridan Rd., Mitchell St., Covenanter west of High St., Ruby Lane, Nancy St, Hillside, S. Highland, YMCA
- They travel throughout Mayfair subdivision and Arden Place subdivision. They are in yards and in the streets.
- neighborhood, YMCA,
- In addition to Hoosier Acres, primarily the area between High Street and Deer Park, and in Elm Heights.
- in my back yard. 2. on the street at dawn or nighttime on
- Renwick, Arden Place, south of campus, Child's school area, Park Ridge East
- Mostly in the neighborhoods south of the IU campus.
- Sare Rd., Harrell Rd., Rhorer Rd., High St., S. Walnut St. -- 9/16/2011 7:19 PM
- southeast side -- 9/16/2011 6:08 PM
- near the YMCA -- 9/16/2011 4:53 PM
- N Weathers Court and Harvest Lane, which is located off of Union Valley Road near Ellettsville. -- 9/16/2011 10:13 AM
- N Weathers Court in the Autumn Hills addition, which is located off Union Valley road on Harvest Ln. -- 9/16/2011 8:47 AM
- Mainly on 3532 - 3636 E. 3rd. They run behind 3636, down to next E. St. Turn right and disappear in other hoosier acres areas -- 9/16/2011 8:32 AM
- almost anywhere southeast of IU campus, from Elm Heights to College Mall Road -- 9/16/2011 8:28 AM
- They cross the road from one wooded area to another, throughout Edgewood Hills. - 9/16/2011 8:16 AM
- My yard and street. In city- High street. -- 9/16/2011 8:09 AM
- On my property, on my next door neighbor's property, across the street, on Southdowns headed toward Brian Park and headed toward High Street and more. -- 9/16/2011 6:18 AM
- Along Rogers Rd near the church and along Sare Rd near Hyde Park. -- 9/16/2011 3:25 AM
- winston street -- 9/16/2011 12:21 AM
- Maxwell Ln., High St., Covenanter area, YMCA, Miller Dr. -- 9/16/2011 12:15 AM
- Ashwood Lane, The Stands Road, High Street--the entire length -- 9/15/2011 10:26 PM
- In most yards near our home at 2609 E. Seminary Drive in the Renwick Development off Moore's Pike -- 9/15/2011 9:29 PM
- Olcott Park, near the Y, near campus at Southdowns and Jordan, everywhere -- 9/15/2011 9:05 PM
- Bryan Park area -- 9/15/2011 8:46 PM
- Our back yard and yards all up and down the neighborhood! -- 9/15/2011 8:21 PM
- our back yard—woodlot -- 9/15/2011 8:12 PM

- I see a herd of deer in my yard eating everything I plant, depositing droppings and urine, leaving ticks, sleeping next to the house, front and back. If this were a pack of dogs it would not be permitted. They look cute and loveable, but even so, I believe that in town they are both a health hazard and are responsible for destruction of property. -- 9/15/2011 7:59 PM
- On my property -- 9/15/2011 7:43 PM
- In my yard, crossing the street in front of my house, in our neighbors' yards, and in yards in other neighborhoods as I drive toward downtown. -- 9/15/2011 6:55 PM
- We see deer occasionally in a variety of areas in Monroe County. Since they are a natural component of the county, we simply enjoy seeing them, and find no intelligent reason to make note of the locations. -- 9/15/2011 6:16 PM
- Thornton Drive/Covey Lane/Miller Drive/Highland Avenue/Maxwell Street -- 9/15/2011 6:01 PM
- near Smith Rd. neighborhood back of our yard in the street (Fenbrook) my flowers - - 9/15/2011 5:48 PM
- Mulberry Lane, Mulberry Court, Olcott Blvd, Forrester road, Winston -- 9/15/2011 5:42 PM
- High Street, Stands Drive, Rogers Rd., Sare Rd., the Stands -- 9/15/2011 4:45 PM
- cabot court and my backyard -- 9/15/2011 4:32 PM
- Every day on my way to and from work and on my way to lunch. On any given day I see more deer than cats and dogs combined. -- 9/15/2011 4:18 PM
- North Dunn and our yard -- 9/15/2011 4:08 PM
- All over. I am in each neighborhood as a tradesman and they are most everywhere in some number. -- 9/15/2011 3:49 PM
- around High Street and Moore's Pike, along Smith Road, along Hillside Drive -- 9/15/2011 3:20 PM
- I've seen a heard of 10-12 on S Washington St. just south of 1st St., up to 14 in my yard at one time, one or more daily in my yard, and virtually everywhere on the east side at one time or another. -- 9/15/2011 2:50 PM
- All over--at the edge of busy streets, on residential lawns, you name it. -- 9/15/2011 2:42 PM
- everywhere in the southeastern neighborhoods -- 9/15/2011 2:13 PM
- Park-like entry to development at edge of woods off of Moores Creek Rd. -- 9/15/2011 1:45 PM
- One jumped on my car once on Hillside. Other than that, mostly in my neighborhood. -- 9/15/2011 1:07 PM
- Deer frequently stand in the yards on N. Clark St. in the 400 block. -- 9/15/2011 1:04 PM
- Moss Creek Village arboretum -- 9/15/2011 11:34 AM
- In other neighbors' yards; on Robin Road; on Snoddy Road, on Rogers Road; just about anywhere I go in this area - daily walk, dog walk, visiting in the neighborhood. -- 9/15/2011 11:24 AM
- All along Maxwell lane. High street south to sycamore knolls. I pick up an exercise partner in sycamore knolls 6 am every week day. ALWAYS see deer. -- 9/15/2011 11:16 AM

- In yards and in the Southeast Park off of Moore's Pike -- 9/15/2011 10:51 AM
- Running across Sare RD VERY OFTEN! Dangerous! Also I have to survey every morning in my own yard for deer damage. If I spray my plants one night too late, they get eaten. The need to spray my plants is much more frequent than the directions state. -- 9/15/2011 10:21 AM
- In my and my neighbors' yards (see Q. 1) -- 9/15/2011 10:16 AM
- Highland Ave, south of the YMCA Graham Ave, east of Henderson -- 9/15/2011 9:43 AM
- I've seen deer in Spicewood, Hyde Park, Third Street by Eastland Plaza, Hoosier Acres, Sycamore Knolls, Sherwood Oaks, Deer Park Manor, Gran Haven Estates, Child's Elementary School, Winslow Park -- 9/15/2011 9:35 AM
- throughout Arden Place on a daily basis: in the green space south of Windsor Drive and in every yard in the subdivision; on High Street from Maxwell south to Winslow; on Maxwell Lane -- 9/15/2011 9:32 AM
- Winston - main road through Hyde Park and many places along Moore's Pike and High Street -- 9/15/2011 9:08 AM
- on University street and in my yard -- 9/15/2011 8:48 AM
- IU golf course my back yard -- 9/15/2011 8:45 AM
- walking down 2nd Street, in Bryan Park, on Covenanter, On Nancy St. -- 9/15/2011 8:43 AM
- High St, Winslow Rd, Tapp Rd. Sare Rd, -- 9/15/2011 8:37 AM
- Throughout the Blue Ridge Neighborhood, in yards, walking down the streets, and crossing N. Dunn Street -- 9/15/2011 8:27 AM
- Yards and streets all over the stands neighborhood -- 9/15/2011 8:27 AM
- Along N and S Mitchell St, Maxwell Lane and adjacent streets. -- 9/15/2011 8:21 AM
- Back yard, in the street, neighbor's yard, Gentry Estates, Whitley Dr., Graywell Dr., Bill Mallory. -- 9/15/2011 8:16 AM
- Hillsdale and Overhill St -- 9/15/2011 7:41 AM
- In yards between Southdowns, Woodlawn, 1st Street and High Street. -- 9/15/2011 7:12 AM
- Across south side of Bloomington. At Jackson creek School, Olcott Park, YMCA, etc -- 9/15/2011 6:49 AM
- Winslow Sports Park, YMCA, all over Winslow Woods and all streets, including Highland, as well as all neighborhood streets -- 9/15/2011 5:53 AM
- I see deer in every yard and on every street in my neighborhood, Vinton Woods. -- 9/15/2011 12:12 AM
- Along Highland Ave especially near Southdowns, on Hawthorne and Ballantine anywhere from Hunter to Southdowns, on 2nd Street near Rose, on 1st from Ballantine to the east -- 9/14/2011 11:28 PM
- Most often on High Street and Hillside between Deer Park and the Renfrow development -- 9/14/2011 1:55 PM
- In our backyard, front yard, side yard, 1800 E. Arden Dr. Neighbors yards, High St. from Arden to Child's school, Winslow Park, Walkway in Renwick, Hillside Dr. Nancy St., E. 1st St. and Jordan Ave. University and Hawthorne, 17th and Fee Lane, Maxwell St. near W. Side, Arden Dr. and Wilton St. -- 9/13/2011 9:49 AM

- I see them in my addition sometimes -- 9/13/2011 9:42 AM
- along Sare Rd. -- 9/13/2011 9:39 AM
- High St., S.R. 45, College Mall, Hillside, Renwick, Park Ridge East, E. 10th St. -- 9/13/2011 9:33 AM
- Winslow Rd, High St., Sare Rd. -- 9/13/2011 9:25 AM
- All of eastside neighborhood. Elm St., Bryan Park -- 9/13/2011 9:19 AM
- Southeast Park, Arden Dr., All of SE Bloomington -- 9/13/2011 9:15 AM
- All around neighborhood - Not on west side of Bryan park. Along High from Winslow to 2nd -- 9/13/2011 9:11 AM
- entire southeast area -- 9/13/2011 9:05 AM
- Southeast Quad, Eastern half of the city -- 9/13/2011 8:58 AM
- See maps marked with red dots -- 9/13/2011 8:54 AM
- Arden Place, Windsor Dr., Arden Dr., S. Oxford Dr., Wilton Dr. -- 9/13/2011 8:49 AM
- I see them crossing High St., in my yard, on Hillside Dr. and by the YMCA -- 9/13/2011 8:42 AM
- Greenwood Ruby Lane Southdown Dr. Nancy St. Moores Pike -- 9/13/2011 8:36 AM
- Miller, Highland, Olive, Thornton -- 9/13/2011 8:33 AM
- College Mal Rd. to Henderson and 1st St. to Miller Dr. -- 9/13/2011 8:27 AM
- Arden Place -- 9/13/2011 8:19 AM
- Parkway between Sheridan and Southdowns/ from Jordan to Woodlawn -- 9/13/2011 8:15 AM
- Yards, Street Crossings, and just walking out in the street -- 9/13/2011 8:08 AM
- The small ravines on the east and west side of Greenwood Avenue are not fenced and have had a resident population for several years because one of the people on Southdowns has been feeding the deer and has a salt lick in his back yard. Every day you can see the deer along Southdowns between Circle and High Street. The deer migrate along the stream that flows south under High Street at Covenanter and heads down to Moores Pike. As the population has increased, I now see deer every day as I walk along various routes to IU, such as Rose Avenue and First Street, Eastside Drive and Maxwell, Maxwell and Hawthorne, Ballantine and University. The deer population is completely out of control in this neighborhood. -- 9/13/2011 7:21 AM
- Queens way in my neighborhood, High Street, E. side of movie theater property -- 9/12/2011 10:56 AM
- Intersection of N. and W. Maple Grove Rd. in farm fields -- 9/12/2011 10:43 AM
- Virtually everywhere - "deer-trimmed" trees/ bushes, flowers etc. offer further evidence -- 9/12/2011 10:27 AM
- Only in and East of High St. -- 9/12/2011 10:19 AM
- Dunn and Bypass Cascades Park Maxwell and Manor Rd. 17th and Bypass -- 9/12/2011 10:11 AM
- All over the southeast side -- 9/12/2011 10:05 AM
- Sherwood Oaks Park, Winslow __ Park, High Street -- 9/12/2011 9:27 AM
- My backyard (High and Hunter), near 3rd Street and campus, along Hunter. -- 9/12/2011 8:48 AM
- Between Woodlawn Ave. (by Bryan park) and Mitchell. -- 9/12/2011 7:11 AM

Question12. "Please indicate how concerned you are with the following. If 'other,' please explain."

- If the deer did approach, I would be very concerned about them getting into my garden.
- I am concerned that the deer have a place to live, since we humans are taking all the wild places from them
- The deer have a legitimate place in our eco-system. This is their land too! -- 9/16/2011 8:19 PM
- The deer are not afraid of humans and sometime soon someone is going to get killed. -- 9/16/2011 10:15 AM
- Someone is going to get seriously hurt or killed. They (the deer) have absolutely no fear of humans. -- 9/16/2011 8:51 AM
- Residents need to provide suitable food, water, saltlicks, corn to keep deer close by - Vegetable gardens need to be enclosed, lined with fabric softener -- 9/16/2011 8:35 AM
- deer in the neighborhood are an asset -- 9/16/2011 12:23 AM
- They eat all of the seed on my bird feeders every night. -- 9/16/2011 12:16 AM
- Deer damage to our shrubs! They eat and trample just about anything we plant. They are also dangerous for children playing outside. -- 9/15/2011 9:32 PM
- I found a deer tick on me. Lymes disease cannot be far behind as a health problem in this area -- 9/15/2011 9:08 PM
- pets, ticks, fleas, droppings -- 9/15/2011 4:47 PM
- How many months does it require to decide to reduce the deer population? Yes, deer resistant plants are available; however, this cost to homeowners needs to be spread over a number of years and Bloomington seemed to be pleased with the recognition of AIB but floral displays are now decreasing in large numbers and that takes away so much of the Bloom in Bloomington that it makes me sad. -- 9/15/2011 4:11 PM
- Feces--I watch them defecate on and at the edge of my yard regularly. It smells. It cannot be healthy for human beings. -- 9/15/2011 2:43 PM
- Some child is going to be attacked. Over the past 5 years they have become increasingly aggressive. Ticks will surely be increasing as well -- 9/15/2011 11:18 AM
- My concern is about the ignorance of the general populace about deer behavior and rules if followed that might mitigate deer/people interaction problems. -- 9/15/2011 9:45 AM
- Deer people interaction trauma Recently pulled two " sweet " dogs off a struggling, during deer that had been hit by a car. The whole scene was a real ugly mess to behold. It was Nature meets meets pets and cars in the suburbs -- 9/15/2011 6:55 AM
- Deer damage to fencing and danger to pets -- 9/13/2011 9:49 AM
- A deer crashed through a large window and wrecked a room in our home in July, 2009. -- 9/13/2011 9:15 AM
- Ticks drop and spread by dear -- 9/13/2011 8:55 AM

- Deer are right on our front porches, at our mailboxes, between our children and the bus stop. They drop their fawns for the day in our lawn. We cannot avoid them; they are unafraid of us. They regularly stare us down and dance in a fighter or flight manner. -- 9/12/2011 10:30 AM
- Maybe deer if apart of the bio-ecosystem -- 9/12/2011 9:54 AM
- Human hostility toward deer--very concerned -- 9/9/2011 4:03 PM
- Deer culling resulting in weapons used across yards. I will not hesitate to sue the city if ordinance is enacted that allows for killing deer on my property. -- 9/9/2011 12:54 AM
- I've seen them try to cross Atwater, which is busy. One I call, "Wounded Doe" who walks with a limp, likely has been hit. She regularly shows up in my yard with 3 fawns. -- 9/9/2011 12:25 AM
- having deer interact with my young children or having them run into by deer who on occasion run through the yard at high speed -- 9/9/2011 4:07 AM
- As any conservation officer will tell you, when a deer population gets large enough, predators who prey on deer will be next to arrive. The animals who prey on deer are cougars and coyotes. Coyotes have already been sighted in the neighborhood. There are small children in this neighborhood, so obviously this is a problem. -- 9/8/2011 8:30 AM
- we are trying to maintain a native plant/sustainable garden and the deer are just decimating it! the deer are not afraid of people and I do worry about my children's safety I fear for a rough winter and we will have starving deer walking around because the population is too hig -- 9/7/2011 10:02 PM
- I am a cyclist for both exercise and commuting around town. I nearly collided with a deer and her fawn who darted out on Covenanter. I have to keep an eye out for deer every time I get on the bike! -- 9/7/2011 12:45 AM
- We have tried to plant native plants to support bird and insect populations but the deer eat everything but the invasive honeysuckle. -- 9/5/2011 8:08 PM
- Fear for young children and pets, as we have seen two coyote in our yard in the past two years. Deer will draw the coyote, as the coyote will feed on the deer. -- 8/1/2011 4:41 PM
- Are there many deer-vehicle collisions within city limits? I wouldn't think traffic would be travelling so fast that collisions couldn't be avoided by careful drivers. County roads are another story - but most who use these roads know to watch for deer; it's the county afterall. -- 8/1/2011 11:07 AM
- Very concerned about danger to children!!!! I have witnessed deer aggression. They have no fear of humans. They are also economically destructive. -- 7/29/2011 11:50 PM
- Deer have shown aggressive behavior in my backyard, including not moving when I go outside, pawing the ground as if to come after me or my dog (a very large German Shepherd). One night I had to wait for a buck to leave my driveway before I could enter my garage/house. This week, a female deer began following me and my dog during our morning walk. I am especially concerned about the safety of children in my neighborhood (Arden Place). -- 7/26/2011 12:58 AM

- DEER THREATS TO YOUNG CHILDREN (my kids on my own patio) or others who can't defend themselves, like those with LOW VISION/DISABLED (my mother)! -- 7/24/2011 10:09 PM
- I AM ALSO TIRED OF CLEANING DEER FECES OFF MY SHOES...NASTY STUFF! LET THE THE CITY POOPER-SCOOP THEIR PETS LIKE WE HAVE TO. -- 7/24/2011 2:09 AM
- I am very concerned that people seem to exaggerate the number of deer and their aggression. I have found it easy to scare them out of my yard....and if one has a fawn nearby and acts with aggression, then take precautions by leaving the scene and calling animal control. -- 7/23/2011 10:22 PM
- The biggest damage to biodiversity and ecosystem is the people. The deer seem fine to me. -- 7/23/2011 1:29 PM
- Not only deer health and well-being, but the health of the people and their pets also. -- 7/23/2011 1:08 PM
- I am concerned that we have let this continue to grow into a real problem and the population of deer has grown in size at the same time so that it will take a great deal of energy and creativity to solve it now! I understand that Iowa City did solve the Deer situation. Perhaps you could investigate how they worked through it there. -- 7/22/2011 3:08 PM
- my dog (G Shep) gets along fine w/ deer. She just watches them and fawns approach her w/o fear. We enjoy the deer. -- 7/22/2011 1:33 PM
- What concerns me most is developing a community consensus that permits optimal coexistence of human and natural. -- 7/22/2011 10:44 AM
- The city's lack of control over the ever-expanding deer population! -- 7/22/2011 10:11 AM
- The deer situation is absolutely out of control. Personally, it has cost me thousands of dollars and hundreds of hours. -- 7/21/2011 8:54 PM
- They have been seen eating foundation plantings that they don't usually eat. -- 7/21/2011 3:24 PM
- Deer damage to shrubs and young trees in my yard -- 7/21/2011 1:24 PM
- The deer were not destroying our ability to enjoy our property 5 years ago. Now they are completely dominating our yard and environment -- 7/20/2011 10:21 PM
- danger of accidents caused by illegal hunting,poisoning,or other attempts to control deer population -- 7/20/2011 8:21 AM
- A few fanatical, obsessive homeowners who want the deer killed. -- 7/19/2011 11:10 PM
- I answered other because I wanted to explain Deer Aggression. I live in an area with many children and am concerned that they may be harmed by deer. Example: There was a buck chasing a doe in the yards on my street; in that situation, someone could be run over because you know the buck is only interested in the doe and his surroundings. -- 7/19/2011 2:11 PM
- I believe we can drive slowly and watchfully and avoid collisions, though "deer" signs could conceivably help with drivers who otherwise might not notice. There are ways to control damage to gardens, which perhaps more people need to know about; I for one don't mind sharing occasional flowers with the deer. The deer

around here look really healthy to me -- no ribs showing, etc., though I suppose that could change if the deer population grows too large and people are unwilling to allow them to eat some of their greenery. As deer are big animals and as interested as any of us in protecting their young, I believe we should be mindful in the birthing season and when deer are young. Deer ticks are tiny but if people know what to look for, they can check for them. What biodiversity? I suspect that educational campaigns -- and signs -- can go a long way to allaying concerns that people have about their own safety, and likewise for concerns people have about the animals' safety. -- 7/16/2011 7:44 PM

- People shooting deer in my backyard which is a woods. -- 7/16/2011 6:17 PM
- Yes, they are in our gardens. They are a valued part of our world. As to accidents involving deer, most are probably preventable when drivers are aware and driving within the speed limits -- 7/16/2011 12:30 AM
- On deer-vehicle collisions: there might be a danger on Hillside or Sare Road, but elsewhere cars go slow enough that collisions unlikely. -- 7/16/2011 11:55 AM
- If the deer population is large enough to cause an imbalance with species who need the same food supply, then, yes, I am concerned. If deer produce methane, and their production of it is high enough to warrant concern about global warming and about our oxygen supply, then I am concerned. If the deer population is large enough to cause ill health in the herds, then I am concerned about transmission of disease by deer. I need to know more about the current deer population to know how I feel about these issues. When global warming-created droughts occur, I am concerned about the health and well-being of all wildlife. Part of deer management is responsible management of all resources, and responsible management of environmental systems. -- 7/15/2011 10:00 PM
- Because I love seeing the deer -- it always seems magical -- I try not to be annoyed when they eat my hostas. I saw a doe with 3 babies yesterday and it was quite wonderful. I think we should come up with a peaceful way to prevent the city deer population from getting bigger (birth control?) but I frankly enjoy the deer in my neighborhood--along with the rabbits, birds, and occasional possums. Signs here and there to warn motorists unaware of our deer might be a good idea. -- 7/15/2011 8:32 PM
- Increasing population. 2-3 born to mature females each year. -- 7/15/2011 4:01 PM
- Every deer related human fatality is avoidable. Human life is precious. Man is the measure of all things. -- 7/15/2011 2:03 PM
- Very concerned about aggression toward children, especially during rutting season - - 7/15/2011 10:55 AM
- Widespread opinion that deer are "cute" - they are an out-of-control population of wild animals and need to be managed -- 7/15/2011 9:50 AM
- Deer damage to cropland -- 7/15/2011 8:34 AM
- I am fearing for my own security when I go for a walk in the evening. Deer with their young are just about everywhere and they won't go and hide when a human being comes around the corner. Even dogs don't bother them.... -- 7/14/2011 9:51 PM
- over-development of wildlife habitat -- 7/14/2011 9:39 PM

- Ever since I read in the HT about deer having sharp teeth and hooves I'm scared to do much 'shooing away' unless I can quickly retreat inside the house. -- 7/14/2011 8:14 PM
- The continuous growth of the deer population in Bloomington. -- 7/14/2011 6:59 PM
- my neighbor (not sure if she is doing survey) admits to getting lyme disease from tick at SE park --hard not to relate this to deer population -- 7/14/2011 5:57 PM
- Causing damage- to all of the above- cars and vegetation. -- 7/14/2011 4:36 PM
- Very concerned that deer will accidentally trample a small dog or child that gets underfoot. -- 7/14/2011 4:28 PM
- I was nearly startled to death while jogging near my house at dusk. I nearly ran into the thing. Reminded me of the "Grandma got run over by a reindeer" song -- 7/14/2011 4:21 PM
- Damage to plants and flowers on property - very concerned -- 7/14/2011 3:15 PM
- We have displaced the deer from THEIR native ecosystem. We must learn to live in harmony with them. if the people in Anchorage can live with black bears, brown bears, and moose, we can certainly adapt to the presence of deer in our community!!! Grow up people and stop whining, -- 7/14/2011 3:15 PM
- We have a huge tick population in our area and I suspect the # of deer could be increasing the ticks. -- 7/14/2011 2:15 PM
- Economic. The homeowner with little cash is throwing it away to plant a tomato plant or azalea. The homeowner serious about growing fruit trees or vegetables must fence the lot. Which totally changes a neighborhood which is fortunately low on fences. -- 7/14/2011 12:44 AM
- Hey we are all God's creatures and we should learn to live together like different nationalities do. Just because they are animals makes no difference. -- 7/14/2011 12:10 AM
- My dog caught a deer early this Spring, and, had I not been near with a tennis racket with which I smacked him, the deer could easily have caused a large vet bill for my dog. -- 7/14/2011 11:45 AM
- Destruction of hours of gardening -- 7/14/2011 11:19 AM
- There are enough deer that drivers going through the neighborhood are often distracted -- 7/14/2011 9:53 AM
- If people would just be more careful and not have a wholier than though attitude there wouldn't be a problem. God put us on this earth to take care of his animals he created, not get rid of them. -- 7/14/2011 7:57 AM
- IF THE "PEOPLE OF BLOOMINGTON" WOULD TREAT THE LAND AND COMMUNITY AS WELL AS THE DEER DO THEN WE WOULD HAVE A BETTER PLACE TO LIVE. -- 7/14/2011 7:31 AM
- forest degradation due to over browsing -- 7/14/2011 7:21 AM
- Since we have 5 bucks on our property we are worried about deer aggression in the fall and winter season. -- 7/14/2011 7:07 AM
- Swerving vehicle running off the highway or hitting another. Transmission of honey locust trees with large dangerous thorns (up 9 inches long or more) through deer feces. -- 7/13/2011 10:58 PM
- May the deer have their revenge on Bloomington!!! -- 7/13/2011 9:45 PM

- I am very concerned about deer/children collisions as the deer bound out of yards on High Street while many neighborhood children walk to Childs Elementary School. -- 7/13/2011 8:47 PM
- already damaged my car. -- 7/13/2011 8:42 PM
- Deer are so domesticated in our neighborhood that that they look for traffic before crossing the street. -- 7/13/2011 8:20 PM
- I am not concerned about deer. Wildlife belong in our county. -- 7/13/2011 7:01 PM
- Get rid of all the deer. -- 7/13/2011 6:11 PM
- I'm concerned that the "solution" is likely to be worse than the problem. Would you really prefer hunters in neighborhoods? Can that really be safe? It would send a signal to every kid that it's OK to shoot anything that moves. -- 7/13/2011 5:07 PM
- I am concerned about government and local vigilantes meddling with deer in our area. You scare me. -- 7/13/2011 5:04 PM
- Nature has a way of balancing itself. My concern is that many residents come across as whiners and are overly paranoid about "deer aggression." The deer are not tearing down our fence to get to my flowers, vegetables, my little dog or my children. -- 7/13/2011 3:54 PM
- I'm worried that the Deer Task Force has lost their minds asking if I am worried about biodiversity and the ecosystem. -- 7/13/2011 3:47 PM
- I'm concerned about a deer hurting our dog if a deer comes into our yard while our dog is out. -- 7/13/2011 3:46 PM
- They were here first. -- 7/13/2011 3:33 PM
- The City does NOTHING to PROTECT my personal property from Destructive DEER and said they would FINE me .00 for having an electric fence on my own property -- 7/13/2011 3:11 PM
- I suppose this could be filed under the Deer aggression category, but I am concerned for my dogs' safety as the deer often charge them. I have to turn on my hose because when I throw things (such as tennis balls) at them it doesn't deter them. -- 7/13/2011 3:11 PM
- With so much human need in the community, I have a hard time justifying feeding the deer. I am an animal lover, but in tough times, feel I must feed people before/esp. children, before deer. -- 7/13/2011 3:07 PM
- Obvious lack of fear of people on the part of the deer. They do not exhibit the natural shyness that I am accustomed to seeing after growing up in a rural area. These deer are more likely to be aggressive towards humans, if the opportunity arises. Also, humans are more likely to believe that the deer are harmless when in reality the deer are quite capable of causing serious injury to humans. -- 7/13/2011 3:07 PM
- Since my car was totaled by a deer crossing IN 37 in 2010 - it is a big concern -- 7/13/2011 2:53 PM
- I am concerned about our community's over-reaction to deer, frankly. My back yard has 3 to 5 deer standing and sleeping in it daily, and I am proud of it. Yes, sometimes they eat my hostas, and my veggies are under netting, but we be a "safe and civil" community even to deer. -- 7/13/2011 2:13 PM
- Our neighborhood has many retirees and kids and we all love watching the deer. The deer build community as a topic of conversation. -- 7/13/2011 1:39 PM

Question 13. "In the last three years, have you experienced any of the following deer damage to your property? If so, please indicate the degree of the damage."

- I don't grow vegetables, other than herbs. Have tried to grow tomatoes and the deer devour them! -- 9/17/2011 11:26 AM
- You have to be kidding, they will eat anything. -- 9/16/2011 8:54 AM
- Grow apple trees only for deer pleasure. The can have ALL they can find. -- 9/16/2011 8:38 AM
- Plants such as hostas -- 9/16/2011 6:21 AM
- The have broken several bird feeders -- 9/16/2011 12:17 AM
- Their urine kills grass. Where they sleep up near the house, they have killed the grass with their urine. On the good side, their urine also seems to kill invasive climbing euonymus. -- 9/15/2011 8:07 PM
- We have no fruit bearing trees. However, the deer have eaten a trail through the ivy and deer repellent products are costly. -- 9/15/2011 4:14 PM
- Does like to park their fawns in our backyard during the day. They did it so regularly that the fawns created their own spaces in the yard (it's natural and not mowed grass) where little grew any longer. -- 9/15/2011 10:21 AM
- Actually not a concern, but applause: the fallen apples which might rot but instead are eaten by the deer. -- 9/15/2011 9:47 AM
- We have no fruit bearing trees or a vegetable garden but if we did because they "live" in our yard I'm sure they would find them very tasty as well. -- 9/15/2011 9:38 AM
- flower boxes, potted plants! -- 9/15/2011 8:50 AM
- Deer have eaten flowering bulbs right out of the ground -- 9/15/2011 8:30 AM
- Damage to fencing – moderate -- 9/13/2011 9:50 AM
- Bucks are ruining trees -- 9/13/2011 9:16 AM
- Deer ate acorns from our 60' foot tree in our small backyard all winter and it was filled with manure -- 9/13/2011 8:50 AM
- The deer have decimated my gardens. This is not just 'damage' but the complete elimination of many native species that I planted when I moved here 10 years ago. They were thriving until 5 years ago, but the deer browse since then has been too intense to allow anything other than a few unpalatable species to survive. -- 9/13/2011 7:36 AM
- Damage to wild vegetation in woods -- 9/12/2011 10:47 AM
- I don't grow fruit-tree, flower bed and vegetables for the concern of deer damage. -- 9/12/2011 9:56 AM
- Responses include serious tree damage at our previous house in Bloomington -- 9/11/2011 6:29 PM
- I'd say they probably destroy large chunks of our garden every spring and sometimes parts of our fence. -- 9/9/2011 4:04 PM
- Seeing them wounded and often bleeding, physically thinner each year and no longer "wild" animals, very passive and lethargic! -- 9/9/2011 12:54 AM
- I gave up on planting any flowers or vegetables on my .72 acre property. They eat everything. -- 9/9/2011 12:29 AM

- native plants -- 9/7/2011 10:04 PM
- Browse line appearing at edge of woods behind homes... -- 8/5/2011 4:06 PM
- We have a limestone terrace in our backyard that the deer love to climb through to eat plants. They even sometimes sleep on the top level. The weight of these deer walking on a fragile surface that was poorly constructed to begin with has just decimated the terrace and caused thousands of dollars in damage. We have already spent rebuilding one level of the terrace. -- 8/3/2011 11:28 AM
- absolutely nothing growing naturally under trees; land looks sterile except for taller trees; no habitat for any other wildlife -- 8/1/2011 7:37 PM
- I do not bother trying to grow vegetables or fruit-bearing trees in my yard. -- 7/26/2011 1:00 PM
- Destroyed vegetable garden fencing. -- 7/24/2011 2:52 PM
- My yard, front and back is filled with gardens, but I only have minimal damage because I choose to spray the plants that I know they like to eat or cover them with nylon netting - which seems to work better than anything else I've tried - and I have tried many! -- 7/23/2011 10:26 PM
- Have had a lot of deer excrement in the back yard, although right now there is little. Don't do the trees and ornamentals...etc. so checked "none" I have a vegetable garden with a fence so the deer can't get in. -- 7/23/2011 1:13 PM
- The deer have paths through my property. They wander from one point across the back around the side and across the street and back again. They rest along the way and eat up whatever they encounter. They birth, the life cycle proceeds outback...know what I mean? -- 7/22/2011 3:16 PM
- Feed on bird feeder but so do squirrels. -- 7/22/2011 1:35 PM
- The deer have eaten the Ivy right off our house. The are an invasive pest. -- 7/21/2011 8:56 PM
- It has RUINED the undergrowth of our 3 acres of woods. -- 7/21/2011 8:55 PM
- None for vegetables because we had to fence the garden. If not, there would not be a garden. -- 7/21/2011 3:25 PM
- Deer stealing sugar water from a hummingbird feeder -- 7/21/2011 1:26 PM
- We do not have any fruit-bearing trees, but they have killed one of our dogwoods by removing the bark. We have given up on growing flowers and vegetables, and most of our perennials are being destroyed -- 7/20/2011 10:24 PM
- Herbs -- 7/20/2011 9:16 PM
- We don't have fruit trees. -- 7/19/2011 12:37 AM
- If I did not use stinky deer sprays, netting and other protection methods damage would be severe on almost everything. -- 7/18/2011 9:33 PM
- I have a large vegetable garden and orchard. Damage has been none to minimal because I invested a lot of money in a deer fence, similar to the one at the community gardens near Winslow park -- 7/17/2011 9:07 PM
- We have just moved into this house and we are in the process of planting all of the above and very concerned about not getting plantings that the deer like. But I do not think that will stop them. I have seen deer pull down tree limbs from our neighbors, eat all of their hostas and flowers. -- 7/17/2011 4:16 PM

- Tree death due to girdling (tearing bark off by rubbing antlers) -- 7/17/2011 8:44 AM
- I have sprayed with liquid fence just to have some flowers in my yard. IN case you don't know, flowers are expensive! So is the spray! -- 7/15/2011 3:17 PM
- They eat just about everything that grows in my yard -- 7/15/2011 1:49 PM
- I used to have a vegetable garden. Then I tried flowers. Now I just hide some herbs in amongst the weeds. -- 7/15/2011 1:16 PM
- I have too much shade for fruits and vegetables -- 7/15/2011 10:57 AM
- I only checked other because my I know many people who have told me of plant damage and I've seen the fences around the gardens. I, however, have a second story deck with plants that the deer cannot access and they don't seem to bother my other plants in the yard. -- 7/15/2011 10:41 AM
- I have a high wooden fence all around my property that has been in place for many years -- 7/15/2011 9:53 AM
- If we had fruit-bearing trees and vegetables they would have been eaten. -- 7/15/2011 9:29 AM
- Even though the deer have only killed one young peach tree in my yard, I regularly lose any anticipated fruit harvest from all of my smaller fruit trees. I think I got one apple pie out of my apple tree and one pear (although the drought was a complicating factor) - no peaches, but that may have been a squirrel as the pits we're left at the base of the tree. -- 7/15/2011 9:12 AM
- The deer do eat some of our flowers, but I don't mind. -- 7/14/2011 9:08 PM
- I have put fences around my veggie gardens and every night I put plastic sacks over my MANY beautiful daylilies. Takes about an hour or so. Then I have to take off the sacks in the morning. -- 7/14/2011 8:17 PM
- The deer have severely damaged several ground cover beds. -- 7/14/2011 7:31 PM
- Deers jump into our yard and cause damage to some structures associated with the fences. -- 7/14/2011 7:01 PM
- I don't have flowers, vegetables, fruit trees. The deer eat everything else here. -- 7/14/2011 6:04 PM
- We don't grow a vegetable garden because of the fear of damage by deer....although we would like to. -- 7/14/2011 4:57 PM
- Yard... tracks, poop, spots from where they lay -- 7/14/2011 4:37 PM
- The only way I can keep plants is to fence them. -- 7/14/2011 3:50 PM
- .
- About 10 years ago we added deer-proff fences around some of our property which help keep the damage lower. Outside the fences, the wildflower cover is greatly diminished and the trees are damaged often. -- 7/14/2011 2:19 PM
- Rubbed street trees with bucks' antlers each fall. -- 7/14/2011 1:48 PM
- there are areas in my yard where work has been done and the deer stomped in the mud, had to have dirt brought in the smooth it back over to seed and straw. -- 7/14/2011 1:18 PM
- They ate 250 day lilies in a trice, last Spring. -- 7/14/2011 11:47 AM

- trellis and other items have been knocked down by startled deer -- 7/14/2011 9:56 AM
- Mkes my dog bark hysterically in the middle of the night. I'm sure the neighbors love that! -- 7/14/2011 9:20 AM
- THEY ARE BEAUTIFUL AND SHOULD BE VIEWED AS A COMPLIMENT TO LIFE. WHERE IS THE TOLERANCE TO EVERYTHING AND EVERYONE IN THE COMMUNITY? -- 7/14/2011 7:36 AM
- gave up trying to establish fruit trees and no longer put out a garden because of deer browse -- 7/14/2011 7:26 AM
- My main concern is deer vehicle collisions. A boy died on our road due to this. People come before deer. -- 7/13/2011 8:42 PM
- Lawn damage. -- 7/13/2011 8:21 PM
- Deer eat anything and everything in our yard. There are no 'resistant' plants with the population we have. Everything we plant has to be fenced and deer will even knock the fencing over or eat anything they can reach inside or outside the fencing. Many native plants that don't grow large enough to get beyond the reach of deer are almost impossible to establish or maintain on our property. -- 7/13/2011 7:39 PM
- We plant some vegetables in our yard specifically for the deer. -- 7/13/2011 7:00 PM
- bird feeder being emptied -- 7/13/2011 6:47 PM
- Hit two with my car! Ouch! Both times the deer seemed okay but it cost a 躉 deductible each time. -- 7/13/2011 5:27 PM
- The damage to my shrubs, flowers and ornamentals is from people who are enjoying Bryan Park but also thinks that means they can unapologetically let their unleashed dogs run haphazardly through the non-fenced part of our yard destroying flowers I have planted. Or, they allow their dog to defecate in our yard and then leave the mess. Most people enjoying our neighborhood are not like this, but you would be surprised how many are like this. But, we choose to live in this area, so we deal with it rather than move. -- 7/13/2011 4:03 PM
- We had one hibiscus shrub eaten by a deer 2 years ago while we were away on vacation. Otherwise, we have never seen evidence of deer on our property. -- 7/13/2011 3:56 PM
- We don't have a veg garden because of the deer -- 7/13/2011 3:49 PM
- Culinary herbs -- 7/13/2011 3:47 PM
- Have given up trying to grow vegs and most flowers -- 7/13/2011 3:42 PM
- I have a good fence around my yard so they don't get in usually. -- 7/13/2011 1:32 PM
- It is impossible to grow anything that the deer eat. We constantly apply products but it doesn't help. -- 7/13/2011 1:12 PM
- Yard.....they have created pathways! -- 7/13/2011 1:10 PM
- The tops of my blue spruce (2 of them) were cut out in order for one of the fraternities to have Christmas trees! -- 7/13/2011 12:37 AM
- A deer impaled it's back leg onto our fence..city police came out and shot it and animal control had to haul it away -- 7/13/2011 12:24 AM

- I have a shade garden, and almost all of my plants are eaten yearly by the deer in the neighborhood. We finally put a fence up in our front yard, which has decreased the amount of damage, but there are still plants that are destroyed. -- 7/13/2011 12:20 AM
- I have deer resistant gardens out front and put all my vegetables and lilies in the back behind a fence. -- 7/13/2011 11:58 AM
- Pulled farm fence loose from post when jumping over -- 7/13/2011 11:48 AM
- Eating birdseed from birdfeeders -- 7/12/2011 11:04 PM
- I don't live in the city - deer pressure is Ok where we live but in town I see deer everywhere and not at time I would expect to see them. Now Bloomington is like Brown County State Park was prior to the deer reduction hunts. -- 7/12/2011 2:14 PM
- Some "nesting" damage (where they have bedded down for the night). -- 7/10/2011 9:29 AM
- stone walls -- 7/9/2011 10:25 PM
- Most of my yard fenced in and impervious to deer, so only notice damage in front, and on walks in other streets -- 7/8/2011 4:23 PM

Question 14. "In the last three years, have you used any of the following methods to protect your property from deer damage? Check all that apply."

- Experts tell us nothing really works except killing the deer. -- 9/17/2011 11:26 AM
- hanging ribbons, old cds, walking around the property at night. -- 9/16/2011 8:33 PM
- dog hair -- 9/16/2011 8:21 PM
- Hunting - Anyone doing such needs immediate arrest and life behind bars. Deer do not damage, only humans and their kids constantly damage. -- 9/16/2011 8:38 AM
- Deer-resistant plants won't protect your property - it's just that the deer don't like to eat them as much as they like other plants. The plants do not act as a repellent. -- 9/15/2011 8:07 PM
- They torn the netting! -- 9/15/2011 4:14 PM
- Deer have eradicated all the tulips, hostas, and all the ivy they could reach. They have severely damaged sedum, lillies, rose bushes, ferns, small trees, unidentified bushes and even a holly tree. I find one or more piles of deer feces in my yard virtually daily. All the repellents, scar devices work for a short time but not the long run. The herd needs to be thinned. -- 9/15/2011 2:58 PM
- Sensor lights at both my house and at neighbor's; these do not work -- 9/15/2011 11:27 AM
- Deer Away on organic spray has worked but it is very expensive and must be sprayed at least once a month -- 9/15/2011 9:38 AM
- no need to protect the property. -- 9/15/2011 7:14 AM
- Outside dog -- 9/15/2011 6:56 AM
- does not apply -- 9/14/2011 1:56 PM
- Have had our dog chase them out of the yard. They don't take him very seriously and always return. At times they've acted aggressively toward him. -- 9/13/2011 9:50 AM
- Shouting, clapping hands -- 9/13/2011 8:50 AM
- The deer knock down fences, eat plants that are marketed as resistant, and do not seem repelled -- 9/13/2011 8:44 AM
- There is no practical method for protecting my front gardens from the overwhelming number of deer. In the question below, the key issue is not the amount of money I have spent recently, but the loss of previous investment and loss of value to my property because of the damage to the landscaping with native plants. -- 9/13/2011 7:36 AM
- My property is too large to effectively fence (within my budget). They seem to eat some plants that are supposedly deer-resistant so that concerns me that they are really not getting what they need. -- 9/9/2011 12:29 AM
- I have used scare-crows with some success in the past, though not in the last 3 years. -- 9/8/2011 3:37 PM
- Setting dogs on them. -- 9/8/2011 8:31 AM
- I try to chase them away whenever I see them on my property -- 9/7/2011 10:04 PM

- Scarecrows. Or scaredeers... -- 9/6/2011 4:11 PM
- Deer fence...all these devices are get very costly -- 8/1/2011 4:43 PM
- BB Gun -- 7/24/2011 10:12 PM
- Adopted a large dog from the shelter. -- 7/24/2011 2:52 PM
- B-B'S DO NO LASTING GOOD. -- 7/24/2011 2:13 AM
- Chasing them out of the yard -- 7/23/2011 1:31 PM
- Have a large noisy dog that chases them away. -- 7/22/2011 10:00 AM
- Even though we have used the above devices these do not deter the deer from damaging our property. -- 7/21/2011 8:56 PM
- we chase them with a supersoaker. It is more fun for us than scary for them -- 7/20/2011 10:24 PM
- Well, if you would permit bow hunting in the city limits, I would help manage the population destroying my garden every year unless I wage constant war with water scarecrows. This year, they destroyed 14 tomatoes before I got the crows up, and even ate the okra and destroyed the plants, cropped the tops of the beans, and stripped my blackberries as they were almost ripe. LOTS of work. They have no natural predators. I do not want to kill them all or see them disappear. But I suspect there is an over population, and they can be destructive. -- 7/20/2011 4:10 PM
- Allow dogs loose ... with invisible fence collars, though sometimes they chase the deer across the fence line. -- 7/19/2011 6:41 PM
- Leaving our dog out in the back yard where the vegetable garden and apple trees are. -- 7/18/2011 1:33 PM
- Again we have just moved into this house and we have just begun to plant. We are definitely on a deer route. I would like to use fencing but our back yard is considered a front yard and we can only put up a 4 ft fence. -- 7/17/2011 4:16 PM
- Verbal scaring -- 7/16/2011 7:17 PM
- I have used a natural repellent (ginger?) around plantings I wanted to protect. -- 7/15/2011 10:16 PM
- I put up a high wooden fence many years ago -- 7/15/2011 9:53 AM
- We're careful not to have plants deer really like -- 7/15/2011 9:29 AM
- So far I have found that stringing fishing line along a row of 5 ft steel posts (with holes in them)--the lines strung at both 4' and 2' heights, is a terrific way of keeping the deer away. No electric shocks, but bumping into something unseen seems to spook them. -- 7/14/2011 10:09 PM
- The plastic grocery sacks over each daylily bud/flower cluster. Very tiring and tedious. I have begun considering an electric fence. -- 7/14/2011 8:17 PM
- I try to chase them off with projectiles. -- 7/14/2011 7:01 PM
- I rent an apartment, so it's really not up to me -- 7/14/2011 6:54 PM
- My husband clapping his hands, whistling and saying "shoo". It's soooo funny I should film it for Utube. -- 7/14/2011 4:57 PM
- Placement of ornamental and herb plants in locations that are less accessible to deer. -- 7/14/2011 3:23 PM
- Fencing but it is more than 3 years old. -- 7/14/2011 2:36 PM
- Deer resistant plants were not! -- 7/14/2011 2:28 PM

- throwing stuff at them, chasing them with the broom, -- 7/14/2011 2:27 PM
- The deer interact with our fencing and have learned to walk around it. We are careful but we have had fawns squeeze through the fence where racoons have damaged it. -- 7/14/2011 2:19 PM
- The only thing that works is purposely designed deer fence -- 7/14/2011 2:07 PM
- spray of beaten egg with water. It works. -- 7/14/2011 1:21 PM
- I acquired a 100-lb German Shepherd that's just as fast as they are, but I can't leave him out all night. -- 7/14/2011 11:47 AM
- Dogs and fencing. -- 7/14/2011 11:34 AM
- I would be pleased to invite skilled hunters to my yard. -- 7/14/2011 11:20 AM
- air pellet gun -- 7/14/2011 10:24 AM
- electric fence surrounding garden area (in my fenced back yard--this actually works) -- 7/14/2011 9:56 AM
- IF YOU WOULD TRESPASS ON MY PROPERTY I WOULD NO SHOOT OR GET RID OF YOU. WAKE UP PEOPLE AND STOP BEING SO OPINIONATED AND ONLY SEEING YOUR SIDE OF LIFE. -- 7/14/2011 7:36 AM
- Tree wrap, yelling, headlights -- 7/13/2011 11:00 PM
- Have barky dogs. -- 7/13/2011 10:29 PM
- Fencing is not encouraged or in some cases permitted in our neighborhood -- 7/13/2011 10:01 PM
- Fence around garden -- 7/13/2011 9:35 PM
- An increase in the number of neighborhood residents and their pets (e.g., dogs) seems to have alleviated property damage by deer. -- 7/13/2011 9:32 PM
- they do not always work. for example, in last year's drought conditions deer "resistant" plants were also eaten. I have given up gardening in my yard and rent a plot where I drive in the evenings to vegetable garden. -- 7/13/2011 8:49 PM
- Shouting, yelling, throwing rocks. -- 7/13/2011 8:21 PM
- 1 fence around vegetable garden -- 7/13/2011 7:02 PM
- I have tried wire and mesh barriers around plants. They eat anything that grows through. -- 7/13/2011 5:30 PM
- We have a fence, but it was installed so our little dog could be off a leash, not because of deer problems. -- 7/13/2011 4:03 PM
- organic home-made repellants in addition to store-bought repellants -- 7/13/2011 3:52 PM
- We have a fence, but the deer jump it. Last year the police shot a deer that had broken it's leg trying to jump over a fence in our back yard. -- 7/13/2011 3:49 PM
- I've gradually figured out plants that the deer are not interested in eating (daffodils, mint, most culinary herbs)... I don't even bother with things they like to eat (tulips, sunflowers, etc...). -- 7/13/2011 3:47 PM
- Not used methods to protect my property as its not been any issue at all for us. That said, extensive hunting has been done on relatives properties to cull the deer population. Mostly Western Monroe County and Eastern Green. -- 7/13/2011 2:39 PM

- I already have a short fence and a dog that seems to keep them out. Other yards in the area are not fenced so I think the deer go to the areas of easy access. -- 7/13/2011 1:32 PM
- Have asked neighbor to quit feeding the deer but he has not stopped. -- 7/13/2011 1:05 PM
- electric fence -- 7/13/2011 12:49 AM
- my dogs chase them away -- 7/13/2011 12:40 AM
- We have a fenced in back yard and a dog. This deters the deer from our back yard, even though they will enter the back yards of our neighbors who have fences but not dogs. Part of their route in our neighborhood goes through these yards. They do have open access to our front yard and that is where we have seen some damage. -- 7/13/2011 12:27 AM
- My yard is fenced, and I have dogs. Even so, I rarely see deer in my neighborhood. -- 7/13/2011 11:05 AM
- We moved in last July. I've been reluctant to plant anything as many of our neighbor's yards provide access to our yard for the deer to enter. Want to talk with neighbors about helping to fence in their yards. -- 7/12/2011 7:28 AM
- Seems pointless to try. All the methods my neighbors try either stink to high heaven or I could have a front yard of plastic bags I put over things--neither is appealing. -- 7/11/2011 3:37 PM
- battery powered deer zappers -- 7/11/2011 11:13 AM
- Just bought some devices that are supposed to discourage them, but haven't put them out, yet. -- 7/10/2011 9:29 AM
- would have hunted if not in the city. -- 7/8/2011 11:09 PM
- We chase them whenever we see them. They are terrified of our big blue exercise ball, which when tossed or rolled from a safe distance, freaks them out. -- 7/8/2011 3:41 PM

Question 16. "In the last three years, were you involved in a deer-vehicle collision in Monroe County? If 'yes,' please cite location."

- S. Walnut St. and Dillman Rd. -- 9/16/2011 7:20 PM
- Hillside, as mentioned above. -- 9/15/2011 1:13 PM
- Sare Rd. near Rodgers rd. -- 9/13/2011 8:55 AM
- Moore's Pike near Renwick -- 9/13/2011 8:37 AM
- Lampkins Ridge Pond -- 9/13/2011 8:10 AM
- N. Russell Rd. -- 9/12/2011 10:32 AM
- Highway 45 East -- 8/20/2011 3:12 PM
- Snoddy road -- 8/1/2011 4:43 PM
- High Street -- 7/25/2011 9:15 AM
- On Dec 23, 2009 (I believe) after a Christmas pie baking party, I hit a deer on Allen Street right off of 2nd St. There was a pack crossing and I tried to refrain from hitting any of them, but I hit one. -- 7/23/2011 1:13 PM
- No - but i was behind a car on Hillside that swerved and hit one. -- 7/19/2011 6:41 PM
- Rhorer Rd close to Old Walnut Street Pike. Numerous close calls in this area and also on Snoddy Road and Rhorer Rd. close to Snoddy. Also, in our neighborhood--Gran Haven Estates -- 7/18/2011 9:33 PM
- Not in Monroe County but in Indiana. My son was hit by a deer whose hoof went through the windshield. He sits far enough back that he was not hurt but the car was totaled. My husband and I hit a deer on our motorcycle. A lot of damage to the motorcycle. We were not hurt. -- 7/17/2011 4:16 PM
- 37 and tap road -- 7/17/2011 3:51 PM
- Rt 37, S bound near the Morgan County line. -- 7/16/2011 11:07 PM
- nearly, on Moore's Pike between roundabout and S. High St. Maxwell Lane just after turning off S.High St. -- 7/15/2011 4:44 PM
- We were involved in an indirect way. In about 2000 my children, then about 5 and 8 were playing in the backyard and came into the house telling me they had gotten very close to a deer. It made me very curious because at that time the deer would run the minute my kids slammed the back door to go outside. When I asked them to show me, they took me into the backyard and had me look across our small tributary creek that feeds into Jackson Creek into a small patch of woods that is in our neighbor's backyard. I didn't see anything at first, then a very large buck with a huge rack reared up snorting trying to get to its feet. I was so shocked and afraid at how close my boys may have been to this huge animal and I was concerned for the deer as well. It turned out to have most likely been hit by a car and had no use of its hind quarters and was immobile. I called every agency I could think of (by that time it was after 5pm) to get some help and really got the run around. After numerous phone calls to try to find someone help me to put the creature out of its misery, I finally called the police. They came, and with a miserable attempt at shooting to kill the deer, it laid there and suffered its death. I am emotional now as I recall the event. It was heartbreaking and horrible for my kids to know this, even though I kept them inside. The next day I had just as much trouble finding the right place to call to

remove the decaying deer. I finally found someone (don't recall who) that came with a truck with a winch to haul the deer away. It was an ordeal to say the least. At the very least, there needs to be clear and concise measures for an incident such as this regarding our deer population. Every agency that I called would inform me that it was a "city" issue or a "county" issue, etc. -- 7/15/2011 10:41 AM

- Delap Road -- 7/14/2011 11:08 PM
- SR 37 southbound, just north of Bloomington HS South -- 7/14/2011 3:23 PM
- South 446, just past the crossing of Knightbridge Rd. -- 7/14/2011 3:15 PM
- no collision, but so many near misses I can't count them, mostly in the Green Acres area -- 7/14/2011 2:27 PM
- Across from the twin lakes baseball fields - however traffic was very heavy so I was stopped and she bumped into me, then got up and ran away. We both were unharmed. -- 7/14/2011 2:09 PM
- not is the city breeden rd -- 7/14/2011 12:28 AM
- We might have crossed the Monroe County line, but I hit one on 46 heading back from Brown County. That road is terrible for deer. -- 7/14/2011 11:34 AM
- Well, nearly, twice. On High Street. -- 7/14/2011 9:20 AM
- MY ANSWER IS NO!!!!!!!!!! IF PEOPLE WOULD STOP DRIVING SO FAST AND OVER THE SPEED LIMIT THEN WE WOULDN'T HAVE TO WORRY ABOUT HITTING DEER. WHAT IF CHILDREN WOULD RUN IN FRONT OF YOU---ARE YOU GOING TO GET RID OF THEM OR HIT THEM AND BLAME THEM FOR BEING IN THE ROAD? -- 7/14/2011 7:36 AM
- SR 45 close to Mt. Gilead road Robinson road Old SR 37 north of the Morgan-Monroe SF entrance -- 7/14/2011 7:26 AM
- Too many close calls to count on Arden, Wilton, Oxford, Thornton -- 7/13/2011 11:54 PM
- Bottom Rd, near intersection of Simpson Chapel and Bottom -- 7/13/2011 10:54 PM
- On the Bypass, by the Showalter house sign. Car was totaled, deer probably died, I was knocked out. Not fun!!! -- 7/13/2011 10:29 PM
- Hwy 45 and Breeden Rd -- 7/13/2011 9:35 PM
- hywy 46 and curry pike -- 7/13/2011 9:15 PM
- koontz road -- 7/13/2011 8:42 PM
- twice. -- 7/13/2011 8:42 PM
- I collided with a deer on Moore's Pk, just east of Smith Rd., and had a deer run into the right rear quarter panel of my vehicle on Winfield Rd. -- 7/13/2011 7:40 PM
- Near New Unionville on Brummett's Creek Road. I was going slow enough that the deer got up and ran away, but I have come close many times on Hwys 46, 45 and 446. -- 7/13/2011 5:47 PM
- By Sherwood oaks -- 7/13/2011 5:27 PM
- Winslow Road near Grossman Farm. -- 7/13/2011 3:47 PM
- on IN 37 south bound near the Monroe County Hospital -- 7/13/2011 2:54 PM
- On State Road 45 E near line of city limits. I clipped one that jumped out of the darkness, but the deer shook it off and appeared to be fine. My car was okay too. -- 7/13/2011 2:15 PM

- 37 near Monroe Hospital. -- 7/13/2011 1:38 PM
- Hwy 45 and Curry Pike. 5,000 dollars of damage. Three deer hit the vehicle. -- 7/13/2011 1:12 PM
- Lost Mans Lane -- 7/13/2011 1:05 PM
- on unionville rd -- 7/13/2011 12:41 AM
- SR 46 West, near the western edge of the county -- 7/13/2011 12:27 AM
- I was on High St, close to Hillside. It was the car in front of me that ran it over, but it traumatized me! -- 7/13/2011 12:23 AM
- I was westbound on State Road 45 between New Unionville and Bloomington, just east of where Mt. Gilead Rd. meets S.R. 45. -- 7/12/2011 5:55 PM
- This is in response to question 15. If I replaced all the landscaping the deer have damaged in my front yard, it would be over . Like I said, it seems pointless to replace at this juncture. -- 7/11/2011 3:37 PM
- at the Monroe/Brown County line near Long's Landing.

Question 17. "What would you consider to be evidence of a successful deer management program? If, 'other,' please explain."

- people re-educated to see that the deer deserve a place to live, what measures can be taken to protect property and how to plant. -- 9/16/2011 8:34 PM
- I love living in a city where I see deer roaming freely. The treatment of animals signifies the true condition of the hearts of human beings living within that society. - 9/16/2011 8:23 PM
- A community that focuses on far more serious issues and treats deer with respect and compassion. -- 9/16/2011 6:10 PM
- A strong declaration that deer are part of our community and MUST be treated with total respect and care. -- 9/16/2011 4:56 PM
- Stop making wild animal and property owner co-habatat issues constantly irritating enough to make monroe county totally disgusting! Stop Interferring with everything you can dream up. native wildlife habitat require pledges for all to respect wildlife -- 9/16/2011 8:39 AM
- Total eradication of the in-town population. -- 9/15/2011 9:11 PM
- Let us hunt them! -- 9/15/2011 8:47 PM
- It seems the deer herd is pretty healthy. They look good. They seem to have a lot of food choices from our yards. They reproduce prolifically and their babies look healthy. They are cute and I would like them out in the country, but they are SO out of place in town. -- 9/15/2011 8:09 PM
- The citizens of this community need to be educated about the importance of the natural world and it's effect on our world. Humans have much more to lose in this irrational frenzy of fear, by continuing to attempt to control and destroy nature, than by learning to appreciate and coexist with it. -- 9/15/2011 6:25 PM
- I have seen no indications of successful management programs; the number of deer in the community has escalated in the past years - new fawns every spring and they grow up with no natural enemies. -- 9/15/2011 11:29 AM
- I don't know -- 9/13/2011 8:34 AM
- The complete elimination of deer in Bloomington. If individuals or organizations like Deer Park want to keep deer, then they should be required to fence them in. It should not be the burder of everyone else to fence them out. -- 9/13/2011 7:39 AM
- Feeling of personal safety. Deer who run when they see people like they used to do. - 9/12/2011 10:32 AM
- I am unaware of what deer eat, so more information about how to make my yard less interesting to deer would be nice. The property and surrounding area is so little and highly trafficked that I worry about the deer and driver collisions. -- 9/12/2011 8:52 AM
- Reduced population of ticks and chiggers -- 9/9/2011 12:55 AM
- Seeing the number of deer disappear in my neighborhood and specifically, my yard, would be encouraging. -- 9/9/2011 12:34 AM
- Educating the public about how to peacefully co-exist with the animals that inhabit our environment. After all, it's their world too. -- 9/7/2011 5:13 PM
- More deers. -- 9/6/2011 4:11 PM

- Distracted drivers scare me a lot more than the deer. I bike everywhere and I don't have a single issue with deer. However, I-pod clad walkers, bikers, drivers and those on cell phones have come so close to me while I am biking. -- 8/5/2011 4:35 PM
- Less possibility of deer aggression as they are plentiful in with the city and parks... - - 8/5/2011 4:07 PM
- Reduced property damage -- 8/3/2011 11:29 AM
- Restoration of naturally lush forest ecosystems throughout the county with return of smaller animals/bird varieties to the scene -- 8/1/2011 7:40 PM
- There seems to be NO RECOURSE when you have a deer problem in your very own yard; a successful deer program will include a system for recording concerns and tracking those concerns over time. -- 7/24/2011 10:18 PM
- I would suggest educating residents on how vegetation can be protected (e.g. repellents, fences, deer-resistant plants) -- 7/24/2011 10:54 AM
- I have read that managing the deer through birth control is not a viable solution unless 90% of the deer were treated. This doesn't make sense to me because if 50% of the does did not reproduce each spring due to birth control in salt licks or a similar delivery system, that would mean 50% less new deer than if it wasn't used, wouldn't it? And, eventually, the number would have to be reduced. THIS IS WHAT I WOULD LIKE TO SEE HAPPEN. -- 7/23/2011 10:32 PM
- Unfortunately I think the deer will just be forced out. I prefer the deer to dogs and cats that bring disease, noise, and destruction also. -- 7/23/2011 1:33 PM
- Reduced incidence of pet related injury and death from deer. Reduced fear of going out at night for a walk by myself. -- 7/23/2011 1:14 PM
- I like the numbers about where they are. I'd like to know how the numbers have fluctuated over the past several years. I would like to know more about deer contraception. -- 7/22/2011 10:49 AM
- We want the situation to return to where it was 5 years ago when we could actually grow a garden without worrying about it being devoured by the deer -- 7/20/2011 10:26 PM
- A trap, spay/neuter, and release by veterinarians and veterinary school students would be good way to deal with it. -- 7/19/2011 4:46 PM
- See earlier responses re: signs and educational campaigns to deal with many of these concerns (ecosystem, garden, landscaping damage; deer/vehicle collisions, etc.) -- 7/16/2011 7:46 PM
- THE BEST GOVERNMENT IS THE LEAST. DEAL WITH YOUR PERSONAL DEER PROBLEM IN YOUR OWN FASHION. -- 7/16/2011 6:59 PM
- Educate people to learn to live with and appreciate nature--driving watchfully, planting deer resistant shrubs etc., even watching out for turtles on the road--and maybe even quit littering. Life is short--why not be part of it instead of the incessant whining and resisting of everything in the natural world. -- 7/16/2011 12:38 AM
- The large number of deer/vehicle collisions is largely a people-management issue, rather than a deer-management issue. -- 7/15/2011 10:23 PM
- I like having the deer in our neighborhood -- they are an asset. You could put up signs on streets warning unwary motorists to watch out for deer--just like they need to do in the country. -- 7/15/2011 8:34 PM

- no deer would make me happy -- 7/15/2011 3:18 PM
- Deer are above the pre-Columbian populations in Indiana. I don't want to introduce predators so let's expand hunting. -- 7/15/2011 2:06 PM
- Honestly ... I have no idea. Deer are simultaneously annoying as hell and impossibly cute. I like that my kids can see deer in our yard and it's evidence that Bloomington has a viable "urban forest". Deer just kind of come with a tree city designation. On the other hand, it's heart-breaking to see a deer limping around because you know it slipped on an icy road or was struck by a car. It also sucks to return home from vacation and find all your hastas mowed to the nub. I guess I lean to a reduced number of deer, but what should that population be and how much am I willing to spend to make it happen? -- 7/15/2011 9:19 AM
- Get rid of them. I fear it will take a small child being attacked to get anything done. It is very sad -- 7/14/2011 6:27 PM
- If people would leave the area. -- 7/14/2011 3:01 PM
- Virtually no deer. Ours is an urban neighborhood. This is not a case of building in deer habitat. As I understand it, this population moved in around 2003, and for some reason was allowed to grow. They seem to be two herds, of nine or ten each. -- 7/14/2011 12:46 AM
- There are devices to place on vehicles that warn of deer in the vicinity. Raise enough garden fo both; you donate to shelters etc why not deer. Resident need to get on with their lives and enjoy the beauty of the animals.Ornamental yard are jus stuff to impress your neighbors - Jones vs Smith's. -- 7/14/2011 12:16 AM
- no deer -- 7/14/2011 11:48 AM
- Deer do not belong in the city on busy streets. -- 7/14/2011 11:22 AM
- A reduced number of deer will automatically lead to all the above! -- 7/14/2011 9:58 AM
- No task force needed either. -- 7/14/2011 7:58 AM
- Leave the animals alone. -- 7/14/2011 7:47 AM
- TOLERANCE -TOLERANCE -TOLERANCE -TOLERANCE AND MAYBE YOU CAN CHANGE ALL THE OPINIONS YOU HAVE THAT YOU TRY TO FORCE ON OTHER PEOPLE BECAUSE YOU HAVE DECIDED TO OPEN YOUR BIG MOUTH. -- 7/14/2011 7:38 AM
- This is the stupidest idea since well the flower pots all over our streets, millions of dollars in walking paths the list is endless how about a task force on getting jobs moved into our community that do not deal with IU or oops I forgot there is nothing else but fast food and ??????? -- 7/13/2011 9:50 PM
- How do we know we need improved health? Are they not healthy now? By "community", I mean urban area -- 7/13/2011 9:37 PM
- Deer are a nuisance animal in the city. No solution that "protects" or increases deer population is reasonable. -- 7/13/2011 8:22 PM
- quit taking their land and building bloomington, lets discuss parking downtown -- 7/13/2011 7:55 PM
- Resident complaints are not a good indicator. Some people would complain if they lost one plant or saw any deer. Although anyone can have a collision, many could be avoided if people were more attentive and cautious drivers. Rabbits are almost as

big a problem as deer in some years and many people don't even know how to determine which animals are eating their plants. I don't believe lost off ornamental landscaping should even be considered significant since lots of the ornamentals are probably non-native and possibly invasive and wreck as much havoc as the deer population. -- 7/13/2011 7:43 PM

- Sycamore Knolls has experienced several confrontations between pets and people by aggressive does, even when fawns weren't visible. -- 7/13/2011 5:37 PM
- Real success would be for your group to disband. -- 7/13/2011 5:05 PM
- I think people need to accept the deer or move to an area that does not have a "deer problem." -- 7/13/2011 4:04 PM
- Legalize Bow hunting in the city -- 7/13/2011 3:13 PM
- controlled culling of the herd, with resulting meat distributed to local food banks. -- 7/13/2011 3:08 PM
- It is definitely a CITY problem - and a danger to drivers in all areas of Monroe County., -- 7/13/2011 2:55 PM
- Deer are a part of our environment just like squirrels and birds. Ideally, I would like to leave the deer as they are and get a tax break on humane garden/plant preservation methods like netting, sprays, fencing. -- 7/13/2011 2:18 PM
- I think that the deer task force will be helpful in more urban areas, but don't feel like the rural areas really need much addressing. -- 7/13/2011 2:05 PM
- STOP taking natural forest land which is their natural habitat to build widenTHEY WERE HERE FIRST..... -- 7/13/2011 1:42 PM
- Not having deer in my yard every time I come home at night. -- 7/13/2011 12:58 AM
- People management is what's needed. -- 7/13/2011 12:37 AM
- Fewer limping or injured deer -- 7/13/2011 9:33 AM
- Any one of the above would be welcome evidence. :) -- 7/12/2011 5:56 PM
- As previously stated, I like seeing deer in the neighborhood, but I am concerned for the herd(s) that they might be outgrowing their ability to live in a densely populated neighborhood, and face starvation, disease, or getting run over. Can we cull the herd in a human way every so often? Relocate a few deer, or sterilize some of the females to keep the herd size in check? -- 7/12/2011 2:13 PM
- Deer do not belong in the city period. Up to 10 years ago we did not have deer in our neighborhood, except in Deer Park. Now they are an every day, ALL DAY, experience, foraging for food. This year we had a deer with a totally torn up belly recuperating in our back yard. -- 7/9/2011 10:37 AM
- whatever management program you adopt there will be a cost that (i feel) will be much higher than any "effect" from the program. the deer will come back. the flowers will be eaten. this is the complaint du jour. Give them a token solution you can afford. And save the money, time, and effort for things that you can really change - like sidewalks, drainage, planting trees, etc. -- 7/8/2011 4:52 PM

Question 20. “What approach to deer do you prefer in your neighborhood? Before you answer this question, please familiarize yourself with the management options as summarized by the Task Force via its community outreach meetings or its Management FAQs. If ‘other,’ please explain.”

- encourage natural predators of deer. -- 9/17/2011 11:30 AM
- I am totally against wounded deer in our neighborhoods; this violence is a bad example for our children and a poor model of tolerance for all live forms -- 9/16/2011 8:36 PM
- Deer are beautiful animals who unfortunately live in a town packed with people, homes and cars. I'd support sterilizing or relocating them - studies show that other communities HAVE done so successfully - otherwise, let's do the best we can not to hit them and to allow them to live in our community. Hunting, euthanizing or sharpshooting??? You have got to be kidding! -- 9/16/2011 6:13 PM
- If hunting, sharpshooting or trapping and euthanizing are ever permitted in this community, that would be HORRIFIC. -- 9/16/2011 4:59 PM
- Provide feeding areas, apple trees etc. Leave them alone! Do something constructive for a change you forced ugly bike paths on us. spy on grass heights. code enforcement crap. rental restricts. -- 9/16/2011 8:46 AM
- Sterilization is too expensive. This deer population is destroying our city. All gardeners have come to hate them for the money they cost us and the damage they create. Tall fencing is an option but will destroy the open feel and sight line or many areas. Either cull the deer or update the fencing laws so we can protect our property. -- 9/15/2011 9:22 PM
- Bow and Arrow sharpshooters should be encouraged to participate in a doe kill in specified sections of the community that express the greatest loss. All meat should be given to the Community Kitchen. If a resident wants a kill to happen on their property they could be requested to buy the permit for the sharpshooter. Other communities in other states have had success with this bow and arrow hunts; however, I did not see reference in the information that other communities had been contacted and yet this process has taken more than a year so another three fawn are now grazing in the yard! -- 9/15/2011 4:31 PM
- Sharpshooting is ridiculous. Someone will get hurt. Over hostas? This is a total waste of taxpayer funds. -- 9/15/2011 3:53 PM
- Repellents and scare tactics do not work in the long run. The herd needs to be thinned. -- 9/15/2011 3:00 PM
- Want neighbors to stop feeding! -- 9/15/2011 11:38 AM
- This problem is not going away is only going to get worse I live in near east an old neighborhood. This is not country -- 9/15/2011 11:20 AM
- Several of these options are very costly so I'm sure that they are not an option. -- 9/15/2011 9:41 AM
- Fencing, moving to deer resistant plants and repellants already widely in use and only marginally effective. -- 9/15/2011 9:37 AM
- The meat from the deer could be donated to community food banks. -- 9/15/2011 8:41 AM

- Educating people NOT to put out salt licks, or other things to attract the deer, would be helpful. Having neighbors who try to "care" for the wild animals in the neighborhood only adds to the problems. -- 9/15/2011 8:34 AM
- Maybe you could partner with the local resident who developed the electrical deer moving device and he could use Bloomington as a case study of how to move deer out of an urban area into a forested area. Perhaps these devices could be used to drive the deer to forested areas. Once the deer have been moved to another area that needs them in town. Then we should raise the number of deer that a hunter can hunt. giving either a small cash donation, tax write off but they have to donate the hunted venison to a food bank/community kitchen. As a fundraiser local restaurant chefs could put together a special venison dinner or/and cookbook that could be sold for deer management. -- 9/13/2011 9:37 AM
- Public education and deer resistant plants should be pursued in conjunction with a control strategy such as hunting and sharpshooting and in order to achieve the most balanced approach and the highest viable social carrying capacity. -- 9/13/2011 9:02 AM
- I am a single parent. I could fence in my entire yard, but have considered it a very large expense. This year to grow food I have chosen to rent a plot and drive my car to a garden. This seems asinine to me, but at least I will be able to grow food. -- 9/13/2011 8:46 AM
- I do not know to what extent a plan is needed or which methods are best. -- 9/13/2011 8:35 AM
- I am not marking any of the other options because of possible misinterpretation in compiled results of this survey. If we had the same biomass of rats in Bloomington, the city would have exterminators going door to door. The deer population throughout southern Indiana is ten times higher than the sustainable level for protecting the plant biodiversity. The concept of maintaining an urban deer population is short-sighted nonsense. The current growth in the urban deer population is due to the previous availability of suitable food plants, but they are eliminating those plants as their population overshoots a dwindling carrying capacity. -- 9/13/2011 7:51 AM
- Combination of suggestions depending on the findings -- 9/12/2011 10:58 AM
- Bow Hunting -- 9/12/2011 10:22 AM
- Supports Sterilization in limited number of deer. -- 9/12/2011 9:58 AM
- Could "herder" dogs be used. (On a lighter note, how about tigers from the Feline Rescue at Centerpoint IN? :-)) -- 9/11/2011 6:35 PM
- Address the cause of this development which is over development and building activity and coming along with the lack of green corridors that allow the deer to travel to the forest. Encourage green corridors at easements and private lots. The deer are trapped in the city; they did not choose this habitat. Fox, coyote, and other predators are a good prey animal management plan -- we have too many rabbits too and they eat my lettuce as well. And yes predators can live near humans. The literature shows that coyote live in Chicago and they will not eat your baby or pet dog !! -- 9/9/2011 12:57 AM

- Just to comment, I think relocation (even with the consequences) should be part of the solution along with sterilization. Any option such as fencing or scaring deer away pushes the problem to the next neighbor. Its not the deer's fault they're not in a suitable habitat, so I hesitate on other options in the direction of euthanizing or hunting. Similar to cat/dog population control, sterilization seems a better option, in spite of its problems. -- 9/9/2011 12:46 AM
- This is a technical question that I'm not qualified to answer. Other communities across the country face this problem. As with streets, city management, or any other municipal problem, the city should follow best practices. -- 9/8/2011 8:34 AM
- the deer in my neighborhood are so unafraid of people you don't even need a sharpshooter. you could get within 5 feet of the deer and they don't even move -- 9/7/2011 10:07 PM
- The public is pretty well educated on this issue, deer resistant plants don't address the issue of trying to use native plants, fencing is expensive and prohibited in front yards, contraception and sterilization too expensive, relocation unrealistic. Would like to see deer used as food source for Community Kitchen, etc. -- 9/5/2011 8:15 PM
- There are a lot of over-reactive myths out there about deer. We have not been over-run by deer in our "neck of the woods" and I am in a rural area. Other animals cause more damage to gardens, ie. rabbits, than the deer have last year and this summer. I just think the loudest voices in Bloomington have been the mose UNINFORMED voices. Let's keep our heads cool and work this out thoughtfully and responsibly. -- 8/5/2011 4:39 PM
- I only oppose those checked as they are costly and don't tend to work well. Removal is usually proven to be the best option. -- 8/5/2011 4:11 PM
- Bow and arrow -- 8/3/2011 2:07 PM
- I would like to see a not-for-profit catch deer and start a meat processing plant. Teach the unemployed how to work in the plant, and use the products to sell to the community or feed the poor. This creates jobs, feeds the poor, creates a manufacturing situation, and grows the tax base. "Teach them to fish....." -- 8/1/2011 4:48 PM
- Reduction/elimination of the deer population in the urban environment. Deer do not belong in neighborhoods that are 40-60 years old within the city! There is no shortage of deer in Indiana - there are too many deer in Indiana. This is not a natural situation. There are no predators to keep the deer population in check. Feed the needy with the meat that can be harvested. -- 7/30/2011 12:02 AM
- I have fencing around my backyard and the deer jump over it to enter my yard. -- 7/26/2011 1:03 PM
- I truly believe people make too much out of the whole thing! Yes, they eat my prize roses.....unless I take the responsibility of covering them or spraying them or moving them to our back yard that has a tall privacy fence (that they could jump over but don't) I recently had grandchildren living in our neighborhood for 5 years on Montclair and although they were active and outside each day playing, walking to and from school, etc. not ONCE did they feel threatened by a deer although they saw them daily. Do I believe there have been a few instances where the mother doe

acted bold and not afraid? Yes, I do but I believe a little public education about how to respond to this could go a long way in solving the problem. Twenty years ago, we lived on Sanibel Island, FL where alligators roamed the bike paths and sunned in people's back yards - now that IS a dangerous animal, but the school children and adults were educated about how to avoid encounters. We lived for a year recently in Orange Co. California where there are many mountain lions roaming the hills....once again, very dangerous animals and once again, people are expected to respect the signs and warnings in the paper about how to avoid contact and what to do if you see one. So, when I hear all the uproar over the predominately gentle, shy deer - even though they eat plants we don't want them to and a few try to protect their fawns from dogs (by the way, I have a dog and keep him away from any deer when we're walking - it's pretty simple to head in the opposite direction when one is spotted) , I have to almost laugh and want to say, listen people, we truly don't have a SERIOUS problem, just an inconvenient one. -- 7/23/2011 10:52 PM

- Basically I think the deer will just die out. The people and their pets have taken the habitat and made it too difficult for the deer to survive. Dogs and cats make noise, bring disease, and are destructive. The cats kill hundreds of birds in our neighborhood, and use the sand boxes as bathroom boxes. I have never seen the so called "aggressive deer", although I can see that if they are attacked by a dog that they will respond. I would like to see a committee formed to reduce the number of cats, frankly. -- 7/23/2011 1:41 PM
- Repellants and scaring devices....where are they supposed to go? That is not a good solution. -- 7/23/2011 1:17 PM
- Basically, anything to rid our neighborhood of deer. -- 7/21/2011 3:27 PM
- Deer resistant plants do not "work"-- eventually the deer eat them. Hunting and Sharpshooting -- there are food banks all over Monroe County that could benefit from the food. We just need to organize the hunters and the distributors. -- 7/20/2011 10:30 PM
- What is "sharpshooting?" If it is to kill them, no. Allow bow hunting to thin the numbers to healthy levels and slow down the destruction over population produces. I have a steel chain link fence around my yard, to keep neighbors from using it as conduit to park. They were trampling it and disturbing our cats. The deer simply jump right over it, plus it is open on one side to allow a drainage path that goes under our back yard to enter that drains the south side of the entire neighborhood. - - 7/20/2011 4:15 PM
- Be smart on this ... these are not Bambi. We have removed their natural predators and are feeding them our lawns. just like large rodents they have run amuck. -- 7/19/2011 6:44 PM
- I understand that hunting cannot be done within the city limits. Will hunting outside the city limits possibly reduce the number of deer within the city? -- 7/17/2011 10:10 PM
- I understand that it is not possible to introduce wolves, but that would be absolutely ideal. Try to find a way! -- 7/17/2011 11:55 AM
- MAKE THE DEER WEAR ORANGE JACKETS SO THEY CAN BE SEEN AND AVOIDED -- 7/16/2011 7:01 PM

- Helena Montana used sharpshooters about three years ago and took out around 200 deer. It can be done. -- 7/16/2011 11:12 AM
- If deer are going to be hunted as part of a deer management program, the hunters MUST be experienced and tested for marksmanship ability (including archers and those who use firearms). They must obtain Monroe County Deer Management Program_Membership_ by passing marksmanship tests. Deer who are hunted must be cleanly killed, not left injured or half-dead, so ammunition and weapons must be approved by a Monroe County Deer Management Program_Membership Board_. -- 7/15/2011 10:56 PM
- Kill the deer and give the meat to the hungry, there's plenty of hungry people around. -- 7/15/2011 3:21 PM
- hunting if the meat can be used by someone -- 7/15/2011 1:49 PM
- this entire phobia on deer is a waste of our time and taxpayer money. Stop obsessing about this. -- 7/15/2011 12:11 AM
- The Sarkas Tarzian property was deer habitat until it became Deer Park; then fences were put up on the perimeter and the deer were removed to the neighborhood. I suggest herding the deer back to Deer Park. -- 7/15/2011 9:34 AM
- I can't state strongly enough how I feel about hunting deer in the city limits. My kids are frequent visitors to the woods near my house and even the best hunters occasionally miss their intended target. I'm neutral on the idea of trap and euthanize - as long as the traps themselves aren't lethal and can't accidentally hurt someone. -- 7/15/2011 9:23 AM
- I didn't think that sterilisation was a viable option but if it is, then that is a possibility. -- 7/15/2011 9:00 AM
- Not using guns, but skilled cross-bow-ers to kill a huge amount of deer. This infestation has happened here in the last 3 or 4 years. It has grown rapidly and, as in people population explosions, can only grow exponentially until there is a fair amount of disaster. -- 7/14/2011 8:21 PM
- I believe that if deer are to be killed in any way that the deer meat should be utilized, given to food banks, etc. -- 7/14/2011 8:06 PM
- I dont feel as though we should have to fence all of our yards to deal with this issue. Sterilization and transporting to another area do not work. Kill them, give the meat to the Community Kitchen and Shalom Center. -- 7/14/2011 6:31 PM
- I think there could be a "hunt" where the food then goes to the local foodbanks. Something must be done when we are slamming on brakes in the middle of the day as the deer cross High, Hillside, and other busy streets. -- 7/14/2011 4:39 PM
- The deer should be hunted and the meat can be used in the many community kitchens or for the hungry. Take care of two problems at once. If you trap and relocate deer, they or other deer can find their way back, not a very smart solution. If you trap and euthanize, be sure that the meat is used for food. An animal that is killed purposely should be eaten. -- 7/14/2011 4:17 PM
- People should leave the area. -- 7/14/2011 3:05 PM
- For those deer that are hunted the meet should be given to the needy or sold. -- 7/14/2011 2:33 PM

- I live with hunters nearby constantly. They are single-minded, discourteous, dangerous, and do not observe "season restrictions." My family is not able to walk safely on our own land during certain times of the year because of reckless hunters. I do not believe sanctioned hunts of any type would be healthy for deer or humans. We must find a better way to solve this problem. -- 7/14/2011 2:25 PM
- no noncense approach is hunting. Not only the hunters them selves would have food but if they got over quota they could give to food banks or others that were not able to afford meat in stores. Deer is a high protine low fat meat. Any other method is coastly and infective. Deer will come back to where they feel safe and town in safe no hunters no natural preditors. With in 5=7 years it would be right back to where it is now. -- 7/14/2011 2:24 PM
- How do hunting and sharpshooting differ? -- 7/14/2011 2:09 PM
- I realize there is no easy or cheap solution. Or one that everyone can easily stomach. But it should have been handled back when there were two deer. This isn't like "weeds," where the solution is for people to adjust their idea of what plants are acceptable. Name a big mammal, and 20 of them in an urban neighborhood is a bad idea. -- 7/14/2011 12:50 AM
- Put yourself in the deer's place....which one of the above would you like to be chosen for. I think euthanize might fit the bill best. I think all the Developers that took their lands from them should be trapped and shot! Then there would be no problem! -- 7/14/2011 12:23 AM
- There are hungry people in our community. Each of the deer can provide significant amounts of protein. Its solipsistic and thoughtless to let these deer live here as if we, the people, were in a wild environment. But, since they are here, let them feed hungry people on a sustainable basis. -- 7/14/2011 11:51 AM
- Citizens who consider this a real problem might be willing to contribute dollars to hire skilled hunters to do away with the deer and to process the meat for the food banks. -- 7/14/2011 11:26 AM
- Ordinances (with stiff fines) for those (including some in my neighborhood) who put out corn every night to feed the deer and other wildlife--thus encouraging them to stay. I don't mind bird feeders (I have one), but not deer and rodent feeders! -- 7/14/2011 10:02 AM
- have a list of land owners that will allow hunting on their property (bow or gun). Then, hunters can look at list and contact property owner. Their are always hunters looking for access and property owners that would allow hunting but no one ask. This would mesh the 2. Also a venison donation campaign for local food banks would help with acceptance of area residents and put venison to good use. -- 7/14/2011 9:11 AM
- I marked several possibilities since I think multiple approaches should be applied simultaneously to really be effective. I marked "strongly opposed" to several options since I believe that they would never be realistically considered (although might very well be effective if used) and so and indicating my support for them would be totally worthless. -- 7/14/2011 8:36 AM

- I support management of the deer in the county if it means the deer are not killed or injured. The deer were here before man. Urban sprawl is a problem, and we continue to build houses everywhere there is land (it seems). The deer must go somewhere when the woods are torn down. -- 7/13/2011 1:17 PM
- Do something to increase deer's natural predators (wolves) in the area. Education public about how to live among wolves and deer (don't keep small dogs outside). -- 7/13/2011 1:14 PM
- Enacting a law against feeding deer and enforcing it with stiff fines. It is not enough to simply educate people. Most people know that it is unwise to feed deer. If they knew they could face stiff monetary penalties by doing so, with a high likelihood of being caught, fewer people would feed deer. -- 7/13/2011 1:00 PM
- Allow hunter to come in ones a year for a time kill as many as they want. -- 7/13/2011 12:54 AM
- They should rise to limit on deer hunting -- 7/13/2011 12:43 AM
- Too bad we aren't discussing this approach for other annoying populations. -- 7/13/2011 12:39 AM
- I am okay with hunting as an overall part of the solution, particularly where the deer remains are put to good use, but I live in the city limits and so this is not an option for our neighborhood. -- 7/13/2011 12:31 AM
- Promote education on controlling human population so there is room for deer and eventually predators. County's plan to increase lot sizes and control additional building on slopes is step in right direction. -- 7/13/2011 11:54 AM
- Reintroduce large predators. Wolves, cougars. Reduce global human population. -- 7/13/2011 11:07 AM
- No good options, according to your FAQs, but if we could eat them, the population would decline. Hunting with guns has dangers, maybe less with arrows. How about running them to exhaustion, like some Africans do, and then killing them humanely? Probably impractical, but we need to come up with some answers. Thanks for your work on this. -- 7/13/2011 10:08 AM
- Organized program for selective harvest. -- 7/13/2011 9:48 AM
- With people on welfare in our community, and with our community kitchens going without enough food, why can't the deer be harvested by experts and the meat given to the needy and sold to cover the expenses of such an undertaking. Yes, I realize this is too obvious a choice for our so-called progressive town of Bloomington, but you can't say it isn't sensible. Deer are a food source in a community where there are people going hungry. -- 7/12/2011 11:39 PM
- What about tranquilizer dart and euthanize? -- 7/12/2011 11:37 PM

Question 21. "Any other comments?"

- I like seeing deer and other wildlife in the neighborhood. I think we should co-exist in a healthy eco-system. But we need to reduce the current population and find a way to control it, since the deer habitat decreases dramatically (e.g., Ramsey Farm) each year. I am willing to contribute my share to the cost of humane control (birth control, sterilization), if the city will not pay for it. The deer have learned to make our yards their habitat, not simply a forage area. We have to learn to select plants that do not attract them, knowing that they may still eat them. -- 9/17/2011 3:35 PM
- Public education is desperately needed. People need to be taught NOT to feed the deer because then they lose their fear of humans and can become very dangerous. (2) I have lived in Bloomington for nearly 40 years. In that time the deer problem has worsened significantly, and my guess is in another 10 years the deer will outnumber the people. Why not tackle the problem now before it becomes even more difficult? -- 9/17/2011 11:32 AM
- Drive carefully and enjoy these beautiful creatures. -- 9/16/2011 8:39 PM
- Please consider the kind of community we wish to be. I urge a decision that supports life and leans toward cooperation with our animal neighbors. I shudder at the thought of our children, whom we encourage to love animals, seeing bleeding, scared deer going through their yards and along the streets. Have you heard a deer scream? It is an ugly thing I do not want my children exposed to. We need to be a safe and civil city for all beings. -- 9/16/2011 8:39 PM
- Please think carefully about creating a truly humane and sustainable society before reaching your final judgment. The deer and other wild animals should have a place in our human world. We can protect our food with fences. -- 9/16/2011 8:26 PM
- Please make some logical decisions on this one. Killing deer because they are a nuisance or eat neighborhood plants is unacceptable. -- 9/16/2011 6:14 PM
- Let's keep Bloomington the compassionate, caring and progressive community it long has been. Killing innocent deer will be unacceptable. -- 9/16/2011 5:01 PM
- Laws and fines against neighbors who purposely attract deer by feeding them and putting out salt or mineral blocks. -- 9/16/2011 10:43 AM
- The Eva Brown Home @ 3532 E. 3rd needs to become Deer refuge and preserved as historic site at all cost, city needs to purchase and preserve it! We have community kitchens for homeless where our city operated feed and nesting acres to encourage wildlife habitat sanctuaries? There is NO management of anything in Monroe County. IU students are encouraged to register to vote when they don't live here, IU controls city politics! Hoosier acres needs golf cart permits between smith rd south side of third st. college mall and moores pike... A far greater community asset than worrying about our permanent wildlife welcome residents: deer, foxes, skunks, snakes, racoons, possum, etc. -- 9/16/2011 8:46 AM
- the presence of wildlife like deer influenced me to buy my house in Bloomington -- 9/16/2011 12:26 AM
- Capture, contraception, and sterilization are not viable options. -- 9/16/2011 12:20 AM

- Glad the community is studying the issue and planning to deal with it. -- 9/15/2011 10:32 PM
- It is ironic that Bloomington has a leash law for domesticated animals such as dogs and yet the city permits large and potentially dangerous animals to wander at will through our yards and city streets. -- 9/15/2011 9:40 PM
- Please take care of this issue. It is a matter of time before lymes disease arrives with severe consequences. I am for culling and most of my neighbors are also. -- 9/15/2011 9:24 PM
- We have a high enough population of deer. Open the town to a 1 week bow hunting season in the first week of November. All licenses required. -- 9/15/2011 8:49 PM
- I have successfully handled deer damage with careful use of repellent sprays, planting deer resistant plants, and fencing one small area. I have never been threatened by deer. -- 9/15/2011 7:48 PM
- We have had one deer have three sets of twins in our back yard/lot in the past 3 years. We enjoy seeing them, but have to block off our yard if we want to have any flowers or vegetables!!! They eat everything within sight if allowed to get to it. We have spent hundreds of dollars on fencing and liquid spray-on repellent to try to keep our flowers and tomatoes each summer, and sometimes it works and sometimes they still get in the "barrier" we put up with the fencing. I wish there were some sort of birth control you could add to corn or some food that they could eat and not reproduce anymore. thanks! -- 9/15/2011 6:07 PM
- It is time to take the issue of deer damage to garden plants seriously. -- 9/15/2011 5:50 PM
- Do something!!!! -- 9/15/2011 4:53 PM
- Interesting that the this site is powered by SurveryMonkey so I suggest no more "monkeying" around by a committee or City Council and let's begin the process of reduction where residents are calling for it and if a section of Bloomington or the 2 mile fringe doesn't want it....that's okay to put them at the bottom of the action. But please start with those of us requesting results. Thanks very much. -- 9/15/2011 4:31 PM
- NO sharpshooters!!! No bow hunters!!! Tell people to plant something the deer will leave alone. It works. -- 9/15/2011 3:54 PM
- I've lived in Bloomington for a year now and have been shocked by the number of deer within city limits. I've been in a deer-vehicle collision before that totaled my car (not in Indiana), so I'm particularly aware of the issue. I am very concerned about the possibility of deers transmitting diseases, too. -- 9/15/2011 3:24 PM
- TAKE ACTION AND QUIT TALKING ABOUT IT. -- 9/15/2011 3:00 PM
- This is a quality of life issue for many people. It is also, at least potentially, a public health issue. My youngest children are teenagers, but I wonder about the little ones across the street and the deer feces that are scattered in our neighborhood daily. -- 9/15/2011 2:48 PM
- I enjoy seeing the deer actually. We have delighen in watching fawns being raised this year. Even though they do eat plants in my yard, it's annoying but I should have selected a better deer resistant plant. They are part of the natural landscape and ecosystem and we need to get along with them. We can intelligently select ways in

which to do that - they don't have that ability, only we do. I don't HAVE to have a garden in my yard - that's why I can go to the farmers' market. People who insist on having things a certain way aren't in line with nature and reality. -- 9/15/2011 1:52 PM

- The deer in my yard regularly decimate approximately half of extensive plantings of hosta and other ornamentals. The most effective deterrent has been a product called Liquid Fence - expensive but worth it. This, of course, involves labor to spray without the prospect of rain. -- 9/15/2011 1:20 PM
- Please, under all circumstances, do not kill the deer. -- 9/15/2011 1:06 PM
- This entire Bloomington Community is being overrun by deer; I see them on Hillside Drive, Winslow Road, Sare Road, Snoddy Road, Rhorer Road, Smith Road, South Walnut, on and on - most areas in which I drive. I do believe we have a serious problem with the deer population and while I know it is not an easy one to solve, something must be done. Otherwise, greenspace for which Bloomington is well-known will be decimated and flower and vegetable growers/lovers will no longer wish to live here. I am one of those! -- 9/15/2011 11:39 AM
- Not doing anything will mean a bigger problem later. The herds just get bigger and aggressive. Truly someone is going to get hurt -- 9/15/2011 11:21 AM
- As far as community problems go, the growing deer population (if it is growing) is pretty minor. I'd rather see the town and county put their resources elsewhere. Collisions would be a public safety problem, but I don't know how common they are. High-speed collisions would be the biggest problem, but that's not a neighborhood problem. I'd rather see the city and county concentrate on making the area more bike friendly in stead of overly worrying about deer. -- 9/15/2011 10:27 AM
- Salt licks with contraceptives would be a reasonable way to limit the number of deer in the city. As I write this, there are 5 deer lounging in my yard which overlooks a creek. It's their mid- morning ritual each day. They have eaten every impatient, hosta and begonia available. Our planter boxes on the porch provide a salad bar for them each morning. We have lost hundreds of dollars in plants. Our yard is shaded and so we are limited to the type of plants we can grow. Good Luck making everyone happy with this "growing" problem. -- 9/15/2011 9:47 AM
- Fencing is unsightly and expensive. Repellants of short duration, and the palate of deer-resistant plants is small. -- 9/15/2011 9:38 AM
- I realize this is a difficult issue but it has become impossible to garden in my yard as it appears to be on a daily (or nightly) migration path for many deer. If they are 'creatures of habit' who travel the same paths through neighborhoods, I can support planned killing with meat going to food pantries. -- 9/15/2011 9:19 AM
- Quality of life for both the deer and Bloomington citizens has suffered by having these beautiful creatures so close to our densely populated city. Please do not ignore the problem any longer!! -- 9/15/2011 8:53 AM
- I always drive 10-15 miles under the speed limit when I am driving on High St. as I've had 2 incidents where I've almost hit a deer. I warn everyone that drives that way to keep there eye out for deer. I also worry about the health of biodiversity among plant species. People need to understand that high deer populations are not only unsafe for us, but bad for the overall health of the deer as well. I think it would

be a great idea to donate the venison to local food banks. I would even pay for the meat! I love venison! -- 9/15/2011 8:44 AM

- Have had baby deer born in back yard and left by mother to hide for day. Have seen as many as 8 deer in herd, traveling through back yard. Completely eaten hostas and tomato plants this past summer. Deer seem to have a regular path through our back yard. We keep seeing some of say deer over and over (one doe has a distinctive limb, left front leg). Leave for work at 05:30 am, see lots of deer in yards in Gentry Estates. -- 9/15/2011 8:28 AM
- Plants and shrubs are things that can be replaced. Deer, if gone, cannot be replaced. Respect our wildlife. An option for those opposed to the deer population would be to relocate to the downtown area where there are fewer deer and less wildlife. Thank you -- 9/15/2011 8:27 AM
- My wife and I have walked our dogs in the neighborhood for years without any problems. Our dogs are accustomed to seeing the deer and the deer do not seem to be bothered by the dogs, only cautious.. -- 9/15/2011 7:21 AM
- Hunting is probably the most humane thing you can do to lower number of deer in urban areas. Donate meat to food programs. -- 9/14/2011 1:58 PM
- HC 26 Married Couple If nothing is done we may expect a doubling of the deer population yearly, alone with a doubling of deer/vehicle collisions, deer tick populations, with potential Lyme's disease implications, declines in biodiversity, problems with ornamental and edible plants and so forth. we have created an ideal habitat for the deer and eliminated natural predators. It is our responsibility to protect human life and property as well as the natural environment. Through sharpshooting and donation of the meat to food banks. If the city does nothing about the deer, there will be more incidents of people trying to take things into their own hands such as occurred recently in Morgan County. If the city does not eliminate the deer, then they must at least allow people to surround their property with high enough fences including front yards to keep the deer out! Our once beautiful front yard shade garden has been decimated by the deer. -- 9/13/2011 9:55 AM
- HC 25 I have lived here 11 years and until they put in Renwick I did not see deer in my yard. Once they started coming in my yard and our addition I think it is a shame that something hasn't been done on Sare Rd. to keep automobiles from killing the deer and fawns. I really like the deer and they are welcome in my yard anytime. -- 9/13/2011 9:46 AM
- HC 22 I have deer in my backyard - I am afraid to walk in the yard without looking. I feel this is wrong that I should be afraid on my own property - I think the only way people in Bloomington will take decide to get serious is only after a child has been killed. -- 9/13/2011 9:30 AM
- We have a severe deer problem in SE Bloomington. Unfortunately, the solutions are likely to rankle many of our citizens and thereby cause us to do too little to resolve the problem. I hope I'm wrong. HC 20 -- 9/13/2011 9:17 AM
- Great job task force! Your thorough, inclusive, balanced, open approach is impressive and appreciated. HC 17 -- 9/13/2011 9:02 AM
- Encourage trained hunters with larger limits or long season in county wide area HC 15 -- 9/13/2011 8:52 AM

- I read in the Commission minutes where a member stated that deer were a part of the ecosystem. I do not understand this as we are not allowing cougars within the city limits. I have enjoyed seeing occasional deer, but feel increasingly frustrated by the growing population in my area. HC 14 -- 9/13/2011 8:47 AM
- Pass a fence-in, not fence-out, law regarding deer. Prohibit the feeding (including salt) of deer within Bloomington. Eliminate the deer, either on a city-wide basis or in response to specific complaints -- I will happy to complain about the deer that are in my yard daily if there is someone with the authority to do something about the problem. Educate people about what they can do on their own property within the city and pass the appropriate laws regarding liability. For example, if some shoots a deer with an arrow while on his or her property, but the deer runs off to die elsewhere, is there any liability issue? -- 9/13/2011 8:04 AM
- HC 6 14 years old -- 9/12/2011 10:54 AM
- HC 4 My cat has been attacked by does with no visible fawns -- 9/12/2011 10:22 AM
- I personally love seeing the deer around but have almost, on several occasions, hit them driving very slowly through my neighborhood. Especially the fawns. Also it's a daily battle to prevent them from eating my hosta, impatiens, phlox, and other plants that both I and the deer love. I don't know what means is best to control them. I know I don't want them killed. Thanks for this survey. -- 9/12/2011 7:19 AM
- I find it sad that we are spending time and resources on this because some people with expensive gardens value them over animal well-being. I signed the original survey to study this issue but quickly realized the proponents were focused instead on killing the deer. The only intervention I support is something that will protect and enhance deer health. People with gardens can build fences if they care that much. I've had a lot of damage to our garden and that's just the way it goes when you are sharing a habitat with different creatures. -- 9/9/2011 4:10 PM
- The FAQ was helpful to understand the Task Force's challenge. This is tough, but the solution has to be a compromise that looks at the well-being of both the residents and the animals. Good luck and thanks for allowing us to provide input. -- 9/9/2011 12:48 AM
- I will not live in a community where I can hear a gun shot and know an animal has been killed. I will not live in a community where I might see an active hunter/"sharpshooter" or where I meet see a wounded/killed animal. -- 9/9/2011 12:32 AM
- I'm sympathetic to the deer -- we have encroached on their ecosystem through too much development and suburban sprawl -- but I do think there are too many deer in our urban neighborhoods (i.e. 2nd Street) and this is probably bad for the deer and does damage to neighborhood gardens. I don't have a good solution in mind and I would like a solution of some sort, but I think doing nothing is preferable to enacting policies that are cruel to the animals. Good luck! -- 9/9/2011 12:21 AM
- As i shared in the survey, I believe that education for the gardeners is important. I do not see a problem. The deer are fun to watch and are a part of the natural wildlife of this area. I do NOT support hurting, killing or relocating. thank you for soliciting input... -- 9/8/2011 7:39 PM

- Anything that is done should be humane and should obviously not damage the people in the city (like shooting within city limits!) -- 9/8/2011 4:52 PM
- I frequently see deer that are lame -- a doe with one lame back leg, and a young buck with front knees that "buckle." I think he is the son of the lame doe (whose new fawn seems to be ok). When the young buck was a small fawn, we noticed the "buckling" of his front knees. He is most often seen with the doe and the new fawn. They are often in our yard and neighborhood. -- 9/8/2011 4:38 PM
- I'm guessing that the City can't do much about this. The lack of natural predators and abundance of food make our neighborhoods ideal deer breeding grounds. If they are hunted it would be great if they could be used for food. -- 9/8/2011 3:41 PM
- Deer pose a threat not only to my family but also to my dogs who bring the ticks inside the house and threaten my family. I would like to see them eliminated from my yard and my neighborhood. -- 9/8/2011 3:39 PM
- My greatest concern is that if the deer population is allowed to increase unchecked there will, in the near future, be much larger issues- hungry/starving and injured deer; breeding deer being aggressive; destruction of vegetable gardens which is frustrating, expensive, and gives one the "why even try?" attitude after a couple of seasons. Fencing veg gardens is expensive - expensive to buy, erect and maintain- and many times does not solve the problem, especially for a larger garden. Many types of fencing and netting hinder ingress and egress as applies to bringing in tools and hoses. Having ornamentals may not be nourishing to the body, but a pretty neighborhood, or landscape, nourishes the soul -- fencing totally defeats those aesthetics. -- 9/7/2011 10:37 PM
- We never had such problems before Deer Park took down their fences and let all of their deer out. It is a HUGE problem to have this many urban deer. The only effective and humane way is to cull the deer. Thanks Task Force for all of your hours of work and for continuing the conversation and working for a solution. -- 9/7/2011 10:09 PM
- The problem is severe. I am strongly in favor of having bow hunters kill off as many deer as possible, with the remains donated for food. Frankly, I foresee injuries to cyclists and possibly to children if the problem is not addressed. I simply cannot believe we as a community have tolerated this for so long! -- 9/7/2011 12:51 AM
- You guys are doing a great job. Keep the deers coming. But maybe put mittens on their antlers so they more quiet when I sleeping. -- 9/6/2011 4:13 PM
- Appreciate the time that the Task Force has put into this problem. I have been following the various reports and saw that some of the solutions I thought might work turned out to be unrealistic. Hope you can find a way to reduce the herd so that while some are left, the overpopulation is controled. Would love to find Spring wildflowers returning to places in Griffy woods where they have been grazed to nothing. -- 9/5/2011 8:20 PM
- I am the owner and operator of KW Custom Deer Processing located on the southside of Bloomington. I would like to introduce the donation of the killed deer meat to our community through Farmers and Hunters against hunger. If there was funding raised to cover the butcher fee we could remove 100 deer from the Monroe

county area this year and the cost would be 5,000 dollars. I can be reached at 812-325-6278 for questions -- 8/20/2011 3:14 PM

- I love the deer-it is not their fault. However, it is not in the deer's or our best interest for them to continue reproducing with no predators. So although I may not like the action taken, SOME action is needed and I will accept it. -- 8/14/2011 6:30 PM
- I hope this get read. The loudest, most offensive people are the complainers about deer. The deer aren't the problem. The uneducated loud-mouths are the problem. They did not invade our neighborhoods---we invaded theirs. The deer were here first, so how do we co-habitate thoughtfully, responsibly, and respectfully. As a matter of fact, why don't some of these complainers learn first how to get along with the other humans, their own species, before they start attacking another species. ---- Sandy Merritt/Stella Ridge resident -- 8/5/2011 4:41 PM
- Thank you! -- 8/5/2011 4:12 PM
- Thank you for addressing this issue. Your time volunteering to work on this issue is appreciated. -- 8/4/2011 3:03 PM
- The overpopulation of deer places an undue burden to the working class who can't afford the deer damage to cars and gardens. My grandson had an accident with a deer and deer also destroyed his garden, neither of which he could afford on a salary for caring for disabled people. -- 8/3/2011 2:10 PM
- I enjoy the deer to a degree; however, there are just too many of them. My dog has to go potty at all hours, and it's dangerous when my husband walks out at night and startles a deer sleeping underneath a tree or bush. Or when we go out and a baby is nearby (which means momma is nearby and ready to defend her young). We have baby deer in our yard numerous times during the year. We also have a dog that is territorial, and I don't want my dog getting mixed up with a deer. We've also seen bucks in our neighborhood with full racks!!! It's rare, but we've seen a few of them. I have no idea if the males are aggressive, but we always try to steer clear of them. It's tough though when its around your own home! -- 8/3/2011 11:38 AM
- For someone just moving to Monroe County, all the forest lands for sale look like they have been drenched in herbicides. The forests look shockingly dead compared to other suburban Midwestern forests that harbor some deer but are also alive with rabbits, squirrels, owls, woodchucks, raccoons, foxes, skunks, chipmunks, mice, toads, and all the other creatures hiding in or spying for food in the many various flowering and other understory plants that make living near forests so interesting. Have people in Indiana had this deer problem for so long that they have forgotten what forests are supposed to look like? -- 8/1/2011 7:52 PM
- I am amazed at how many people in this community feed the deer! We definitely need to educate this group! -- 8/1/2011 4:48 PM
- I am most concerned about the aggressive does since I have small children who play out in my yard where deer freely roam. The deer in our neighborhood show no signs of fear towards humans and at times seem more aggressive than I would expect. -- 7/31/2011 7:59 PM
- Brown County State Park went through this about 20 years ago. Why does the wheel need to be reinvented at considerable cost and effort? -- 7/30/2011 12:04 AM

- The deer have become a big problem that seems to be getting worse every year. My preference would be to limit their reproduction if feasible, but I would not be opposed to eliminating excess numbers. Although I like the animals and enjoy watching them, their damage to ornamental plants is a big problem. I also worry that their current rate of reproduction is unsustainable and the problem will only worsen. I also think car-deer collision, which seems to be one of the few constraints on their population, is terribly harmful to the car and occupant and provides a terrible death for the animal. -- 7/25/2011 1:28 PM
- I have lived in my house for 3 summers, and this small but semi-wooded yard has been the actual birthing spot and where the fawns stay hidden and nurse for the coming weeks. I can't let my child walk to the house door from the carport alone because they are often so close and will NOT "shoo". Evening walks in the neighborhood are the same way with the deer not shoo-ing and I have to cross the road with my toddler in my arms and my 3 year old too. The bucks have been in this neighborhood too, and they make you PETRIFIED as a mother of young children when you are on a walk or even in your driveway (as happened in fall 2009). I don't feel like I am safe, and I certainly don't feel like my children are safe when we are alone in the yard. And yet, the deer give birth every year in our yard, and still there is no recourse or provision to ensure our SAFETY. -- 7/24/2011 10:43 PM
- Thank you! We're counting on you for some relief! -- 7/24/2011 2:53 PM
- Thanks for taking on this problem. I think it will be difficult to find a balanced approach for both the humans and the deer. -- 7/24/2011 10:44 AM
- Our neighborhood considers the pleasure of having the opportunity to live with the deer one of the benefits of our location and strongly oppose any attempt to reduce or eliminate them. -- 7/24/2011 6:22 AM
- OVER 40 YEARS WE WORKED W/MASTER GARDENERS AND ARBORISTS TO HAVE A YARD WE COULD AFFORD AND HANDLE AS WE AGED, KEEP YOUNG TREES GROWING AND ADD BEAUTY TO OUR NEIGHBORHOOD AND CITY. THE DEER HAVE TAKEN THIS ALL FROM US. WE WILL SOON BE LEAVING THE HOME WE HOPED TO SPEND THE REST OF OUR LIVES IN. WE NO LONGER HAVE A CHOICE. -- 7/24/2011 2:22 AM
- Thank you for the opportunity to express my thoughts! -- 7/23/2011 10:52 PM

JOINT CITY OF BLOOMINGTON-MONROE COUNTY DEER TASK FORCE MEMBERS

DR. KEITH CLAY is a Professor of Biology at IU and the Director of the IU Research and Teaching Preserve. He has been a resident of Bloomington since 1986, and was formerly a member of the Bloomington Environmental Commission and the Bloomington Commission on Sustainability. Much of his research has focused on plant-animal interactions and has been conducted in Griffy area.

DR. STEFANO FIORINI is currently an Adjunct Assistant Professor of Anthropology and Associated Faculty in the [Anthropological Center for Training and Research on Global Environmental Change \(ACT\)](#) at IU. His main research focus is on collaborative and participatory approaches to the management of natural resources. In this context he particularly looks at the impact policies and initiatives of cultural, environmental preservation and sustainable development have in shaping peoples' relationship with local places and the natural environment. These research activities involve interdisciplinary collaborations, the application of qualitative and quantitative methodologies, and the understanding of the research problems across time and at different scales of analysis, requiring the application of geographic information system and participatory techniques. He has conducted fieldwork in Italy, the Brazilian Amazon and Scotland; engaged in applied work in Scotland and Indiana. His work has been published in various journals such as *American Anthropologist*, the *Journal of Applied Ecology* and *Human Organization*.

BOB FOYUT is an engineer and a State-licensed wildlife rehabilitator who is active in many animal welfare-related issues on both the State and local level. For many years, Bob served on the Board of Directors at WildCare and currently is a member of the Emeritus Board. While a volunteer at WildCare, Bob served on a number of wildlife teams, including the raptor, reptile and deer teams. Bob also served on the Animal Welfare Action Coalition in 2004-05, a group whose goals included offering local government recommendations for improving the lives of animals in Monroe County.

JUDITH GRANBOIS is a writer and editor, retired from IU's Poynter Center for the Study of Ethics and American Institutions. A long-time gardener, she is active in the Bloomington Garden Club. She serves as president of The George E. Archer Foundation, which supports children's gardening through grants to nonprofit agencies in Monroe and adjacent counties.

JOSH GRIFFIN is the District 8 Wildlife Biologist for the Indiana Department of Natural Resources. He provided the Task Force with technical advice and served on the Task Force in a non-voting capacity.

SARAH HAYES is the CEO of the Monroe County Humane Association (MCHA), the longest standing animal welfare organization in Monroe County with a mission to lead, advocate and educate for animal welfare. She is also the President of the Indiana Alliance of Animal Control and Welfare Organizations. Additionally, she has served as a board member for several national humane organizations including the National Federation of Humane Societies. Through her tenure with the MCHA, Sarah has led or supported many large scale animal abuse cases including cockfighting, dogfighting, puppy mills and animal hoarding. Sarah has also provided expert testimony in support of various animal protection bills to the Indiana General Assembly. Sarah has been involved with animal welfare for over 10 years with a previous career in non-profit marketing at the Indiana University Foundation.

IRIS KIESLING has lived in Bloomington since 1966. She is in her fourth term as Monroe County Commissioner, and previously served as President and Vice President of the Commissioners. She was elected president of League of Women Voters from 1981-1983. She served on the Bloomington City Council for nine years, and was its president in 1990 and 1995. In addition to public service, Iris also has an extensive record of community service in the non-profit sector.

THOMAS MOORE is a PhD candidate at the School of Public and Environmental Affairs at IU. He wrote his Master's thesis on human-bear interactions in agricultural Japan. His current research includes the effects of habitat change and habitat fragmentation on wildlife, and how changing environmental conditions impact current laws.

LAURIE RINGQUIST is Director of Animal Care and Control for the City of Bloomington and has served in that capacity since 2003. She has a Master's degree in Public Administration and has spent the last twenty years as a public servant working for various local government units in Texas, Florida and Indiana. She is a founding board member of the Indiana Alliance of Animal Control and Welfare Organizations.

DAVE ROLLO is a member of the Bloomington City Council representing District IV. He holds a B.S. and M.S. in biology that includes graduate coursework in ecology. Dave has sponsored numerous pieces of legislation related to sustainability, including an ordinance creating the Bloomington Commission on Sustainability (BCOS). He has served on BCOS since its inception and served on the City's Environmental Commission for eight years.

SUSANNAH SMITH-BURCHELL is a competitive archer and hunter. A married mother of three, Smith-Burchell has lived in Bloomington for almost 30 years. While she currently works in administration for a private utility company, her previous experience as an EMT/Paramedic has helped her understand the biology of deer while closely studying their habits and behavior in the interest of becoming a more effective hunter.