JOINT CITY OF BLOOMINGTON-MONROE COUNTY DEER TASK FORCE
FREQUENTLY-ASKED QUESTIONS

A number of questions and concerns have been raised since the Task Force issued its report. The following is intended to address some of the most frequently-expressed concerns and questions.

Why did the Task Force eliminate contraception for further consideration?

At present, two forms of contraception are available for white-tailed deer: GonaCon™ and PZP. GonaCon™ prevents deer from entering an estrous cycle. PZP prevents implantation between sperm and egg and prolongs estrous. GonaCon™ is registered as a pesticide by EPA; however, Indiana's Office of the State Chemist has not approved this pesticide for use in Indiana. At this time, PZP is not commercially available and the use of PZP in deer is considered experimental. IDNR has exclusive jurisdiction over all deer in Indiana – even deer within the City limits. Currently, the Indiana Department of Natural Resources does not endorse the use of either GonaCon™ or PZP in free-ranging deer herds.

To be effective, anywhere from 70-90% of the does in a subject population need to dosed with a contraceptive. Not only do a high-percentage of does need to dosed, but the EPA requires that GonaCon™ be hand-administered and that any deer dosed with GonaCon™ be ear tagged. This requires capture.

IDNR also expresses concern about PZP's extension of estrous in an open system. 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. Furthermore, by extending the breeding season, use of PZP creates a very real possibility of an influx of male deer into the city to breed does. Typically, the highest months for deer-vehicle collisions is October-November, the height of the breeding season. PZP extends the activity cycle of these deer into December and January, if not longer. This increases the potential for conflict, deer-vehicle collisions and further stresses the deer's physical condition. Immunocontraception is estimated to cost $600-800/deer.

Because this technique is not endorsed by the IDNR in free-ranging environments, is costly, requires that the deer population be closed and its bioaccumulative effects are not known, the Task Force determined that contracepting deer is not a viable option. Notably, the Task Force did not eliminate contraception from further consideration until September 2011 – a year into its deliberations.

However, our decision to exclude contraception from further consideration does not mean that an accredited researcher can't submit a research proposal to the IDNR. Any research proposal would be filtered through IDNR's statutory mandate to consider the welfare of wild animals, the relationship of wild animals to other animals and the welfare of people.

Why did the Task Force recommend lethal means when the Task Force's *own survey* indicates that the community is divided on the issue?

When the Task Force issued its survey, from July-September 2011, we made clear that the question asking residents which management approach they would prefer in their own neighborhoods was not intended to be a referendum on which management strategies the Task Force would ultimately recommend. Instead, the survey stated that the Task Force would consider survey feedback as one indicator of community sentiment and would consider community feedback alongside other criteria such as humaneness, safety, efficacy and cost. The Task Force also encouraged residents to consult the Task Force's posted FAQs on deer management before answering this question. Judging from the open-ended responses to the survey questions, it is clear that some residents actually read the FAQs, while others did not.

The survey asked specifically: "What approach to deer do you prefer in your neighborhood?" The survey revealed that when it comes to what residents will accept in their own neighborhoods, people are pretty evenly divided when it comes to hunting and sharpshooting:

- 41% of Bloomington residents strongly supported or supported sharpshooting while 45% percent of residents opposed or strongly opposed it;
- 45% of Bloomington residents responded that they strongly supported or supported hunting in their neighborhood while 40% percent opposed or strongly opposed hunting in their neighborhood.

It is important to note that this question asks what people would tolerate in their neighborhoods. **The Task Force is not recommending hunting or sharpshooting in neighborhoods**. In fact, experts have advised that most "problem neighborhoods" are unsuitable for either of these management strategies. Instead, we are recommending that hunting be limited to five or more contiguous acres of greenspace (and tightly controlled) and that sharpshooting be allowed in appropriate open areas outside of neighborhoods. What tends to get lost in the discussion about the Task Force's recommendations for managed hunting on greenspace is that, at present, there is no prohibition on the discharge of a bow and arrow in the city. Provided one follows all applicable State laws and regulations, Bloomington residents can hunt in the City. Our recommendations for managed hunting (requiring provisions such as a proficiency test, hunter orientation, and hunter accountability provisions) are intended to foster hunting practices that are safer, lower profile, and more humane than what is allowed currently.

After our report was issued, we ran a further statistical analysis of survey responses to management techniques. Interestingly enough, we did not find that the residents living in the southeast quadrant of the City preferred lethal means more strongly than others, indicating that the heterogeneity of preferences in this area of the city is not statistically different from preferences of responders living in other areas. Residents in the southeast quadrant demonstrated a weak support for hunting in their neighborhood, but a stronger support for sharpshooting in their neighborhood. Again, the Task Force is not

recommending hunting or sharpshooting in neighborhoods. While there was not a statistically-significant relationship between living in the southeast quadrant of the city and preferring lethal methods in one's neighborhood, there *was* a statistically-significant relationship between those survey respondents who felt like the number of deer in their neighborhood and in the community was "too many" and acceptance of lethal means in their neighborhood, compared to those who believed the number of deer was "just right." The analysis shows that those who perceive the deer to be too numerous are more willing to accept lethal forms of deer control in their neighborhood.

Why is the Task Force recommending Trap and Kill in neighborhoods when the Task Force's *own survey* indicates that only 30% of Bloomington residents support this method in their neighborhood?

In contrast to hunting and sharpshooting, a lower percentage of city residents supported the use of trap and kill in their neighborhoods: 30% supported or strongly supported and 56% opposed or strongly opposed. Yet, the Task Force is recommending trap and kill be allowed in neighborhoods. This warrants further explanation.

At the time the survey was issued, the Task Force's understanding of trap and kill was one wherein a deer is captured through use of drop nets, cages or some similar device and killed through shot gun, captive bolt or chemical. Because conventional trap and kill techniques do not account for the time the deer is trapped, the Task Force considered the humaneness of this questionable – the longer a deer is trapped, the more stress is experienced and the less humane is the approach. Our deliberations and the FAQs that survey respondents were encouraged to consult reflected this. However, after the survey had closed and after the Task Force initially discussed this issue and voted to exclude it from further consideration, the Task Force learned of a new technique being proposed by the USDA that would acclimate the deer to the site via pre-baiting over time so the deer are accustomed to the trap, moving freely in and out of it so the trap is no longer viewed as a threat or as dangerous. The trap would be monitored for non-target species and to guarantee that the deer was trapped for only a brief period of time. Stress levels of the deer would also be monitored. If the wildlife managers conducting this project determined that deer stress levels were too high, they would stop the project. Death would be caused by a precise gunshot to the head, not captive bolt and not via chemical. We felt like this was a humane and safe option for neighbors wanting to reduce deer numbers in their neighborhoods.

I've been told that we will hear gunshots ringing out throughout our neighborhoods if some of the Task Force's recommendations see the light of day.
This is not true. We are not recommending firearm hunting anywhere in the city. The only lethal action we are suggesting be made available in neighborhoods is the trap and kill method. Trained wildlife managers implementing this technique would use sound suppression devices. Similarly, any sharpshooting effort in appropriate greenspaces (again, not in neighborhoods) would also use sound-suppression devices.

<u>Some observers state that despite the widespread use of hunting as a management tool, the method "has proven ineffective at preventing deer from overpopulating broad areas." If so, why is the Task Force recommending hunting</u>?

Those asserting that hunting is ineffective at preventing deer from "overpopulating broad areas" tend to point to an article by Coté, et al., "Ecological Impacts of Deer Overabundance" (2004)[1]. According to Coté, what has proven ineffective is "hunting as usual," traditional hunting practices that exclude the practice from private land, from urban and suburban areas, that limit the practice to a very short window of time and that focus on antlered deer. The authors point out that, "[t]hese trends, combined with growing deer populations, suggest that deer may have surpassed the point where sport hunting can reliably control their numbers" (Coté p. 135). However, hunting programs that focus on harvesting antlerless deer (does and young animals) is promising, according to the authors. "Hunting antlerless deer generally reduces abundance on a local scale because social groups of females usually remain in the same area from year to year. This behavior prevents a rapid recolonization of the hunted area." (Coté 2004, p. 135, citations omitted.) It is important to note that the Task Force's recommendations for managed hunting include an urban deer zone that extends the hunting season, provides incentives for private landowners to open their property to hunters via landowner liability protection and that focuses on the harvest of antlerless deer.

[1] Coté,S. D, T. Rooney, J.P. Tremblay, C. Dussault and D. M. Waller. 2004. "Ecological Impacts of Deer Overabundance." Annual Review of Ecology, Evolution, and Systematics 35:113-47.

Some say that hunting and other lethal means 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 is why deer herds "bounce back."

This is not an accurate representation. Deer are density-dependent animals. As their population approaches biological carrying capacity, their reproduction begins to drop off. This is because the habitat becomes less productive. This often-cited "rebound effect" occurs when deer move from a situation of being at, or above biological carrying capacity (and reproduction drops to 0.3) to a situation in which deer are below biological carrying capacity. In other words, when a population moves from a denuded landscape to one of ample forage. In these situations, deer reproduction may increase to normal levels. Reducing a deer herd that has not reached biological carrying capacity will not enable the remaining deer to go into a "super reproductive" state. The IDNR estimates that deer in Bloomington now are probably reproducing at a 1.5-2.0 rate, and removing deer will not accelerate that rate.

Deer herds "bounce back" not because deer reduction efforts cause does to become more reproductive. Herds bounce back because management efforts are not maintained. Some observers point to the case of Angel Island. In 1980, 215 of 275 deer on Angel Island were removed, significantly reducing the population. The problem was that no other removal attempts were done until 4 years later. At that point, the population had nearly recovered. The problem was also experienced in subsequent years, when removals were done on a biannual basis, which proved not to be frequent enough.[2]

Some also argue that this "rebound effect" explains why the big hunting states such a Pennsylvania and Michigan have high deer densities. Again, this is not accurate. The reasons these states have high deer numbers is that these states have some of the best habitat for deer -- large expanses of woods interspersed with forest openings and occasional agriculture. Hunting has nothing to do with the number of deer occurring in these states.

In sum, the argument that a hunted deer herd will "bounce back" is true, but only in the absence of management. The Task Force has been very clear that any lethal deer management requires maintenance.

[2] McCullough, D.R. 1997. "Irruptive Behavior in Ungulates" in The Science of Overabundance: Deer Ecology and Population Management, McShea, W., H.B. Underwood and J.H.Rappole, eds. Washington, D.C.: Smithsonian Institute Press.

Some argue that we should not intervene until deer are at biological carrying capacity.
This is not a good idea. Biological carrying capacity refers to 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. Deer in Bloomington are nowhere near biological carrying capacity and the biological carrying capacity of deer in urban/suburban environments is substantial. Some urban environments can support up to 100 deer per square mile if the public is willing to tolerate increased damage to gardens and increased hazardous driving conditions. Indeed deer herds in and around Kansas City and in areas outside of Washington, DC are close to 200 deer per square mile, yet not at biological carrying capacity.

A herd at maximum biological carrying capacity is not a pretty picture. Deer are in miserable condition and habitat is severely degraded. Waiting until the deer herd reaches biological carrying capacity means that more deer will suffer from starvation, many will suffer from disease, many will be victims of deer-auto accidents and more residents may take matters into their own hands. Waiting until deer reach biological carrying capacity at Griffy Woods means that the already-compromised biodiversity might forever be lost. Not only are more deer suffering when they reach maximum biological carrying capacity, but at that point, deer reduction costs are higher.

Lastly, biological carrying capacity does not consider that present day deer exist in a highly artificial environment - a strongly human modified landscape with no natural predators. This is a biological concept being applied to a non-biological system. A better analogy is to ask what is the maximum number of cattle that can be stocked per acre of land?

I hear that disease is actively limiting the local deer herd.
EHD (epizootic hemorrhagic disease) has been found in deer in other counties, including neighboring Morgan County. It is very likely occurring in Monroe County. The disease is transmitted by biting insects called midges. This year's drought provided excellent reproductive conditions for the midge, which could result in significant deer mortality in counties hit hard by the disease.

Neither bovine tuberculosis nor chronic wasting disease (CWD) has been identified in free-ranging deer in Indiana. Recently, deer that might have been exposed to CWD at a captive facility in another state before being transferred to Indiana escaped from a facility in Jackson County. IDNR is working to locate and remove the deer and have the deer tested for the disease. Currently, only one escaped animal is considered exposed to CWD, while the others are classified as "exposed to exposed."

It seems like the loudest complaints about deer come from people who are primarily concerned about deer damage to expensive landscaping.

This is not entirely accurate. While it is true that respondents who feel that there are "too many" deer in their neighborhood and in the community are those who had experienced higher deer-related costs and see more deer on a daily basis, it is not true that these same respondents are motivated primarily by loss of ornamental plants. Further statistical analysis of survey results revealed that the perception of "too many deer" is strongly associated with concern for damage to vegetable gardens, deer vehicle collisions, and damage to ecosystems.

Many indicate that they've read the minutes, so they know the extent and breadth of Task Force discussions

Reading the minutes is laudable. We wanted the notes to be accessible to all, which is why we've gone above and beyond the statutory bare-bones requirements for memoranda (day, room, start time, attendance, votes and adjournment). However, it is important to keep in mind that minutes do not represent a verbatim transcription of what was said. Instead, they are staff summaries of the highlights. Member comments are paraphrased and exact wording is rarely, if ever, captured. Minutes try to include the main points, but leave out much context and many comments.

Some state that for the last two years the Task Force told concerned residents to wait until the recommendations were issued before voicing their opposition to lethal means.

This is just not true. The Task Force has made a concerted and sustained effort to solicit public feedback on how residents perceive deer and would manage them. Since September 2010, any and all concerned residents have been encouraged to attend meetings, participate in outreach efforts, call and e-mail the Task Force. At no point did the Task Force suggest that public feedback was not welcome.

The Task Force wrapped up its deliberations in late March 2012; shortly thereafter, rumors began to fly about sharpshooters positioned on neighborhood rooftops. To prevent the circulation of misinformation, the Task Force posted a note on its webpage indicating that the Task Force was in the process of drafting its report and that members of the public should read the report before jumping to conclusions about the recommendations. Immediately following this caution was the statement, "In the meantime, we still want to hear from you. E-mail us at: deertaskforce@bloomington.in.gov"

It should be further noted, that some have expressed concern with the length of time it took the Task Force to issue recommendations. The length of time it took the Task Force to issue recommendations stemmed from taking our task very seriously, being thorough, and making sure the community was given a chance to be heard. As mentioned above, the Task Force spent a considerable amount of time engaged in community outreach and went to

great lengths to allow all members of the community to voice their opinions on this subject.

The community should keep in mind that the Task Force is comprised of unpaid volunteers with jobs, families, children and community obligations beyond the Task Force. While it might seem like a long wait for some members of the community, it was also a long process for us. We hope the public appreciates the seriousness with which we have approached this difficult topic.

Closing Thoughts

As we stated in our report, we expected that our recommendations would not make everyone happy – some would think it goes too far, others would think it does not go far enough. Indeed, since we issued our report in early October that has been the case. Our recommendations have been variously characterized as "misguided," "fueled by anger" and as something that reads like it is out of *The Onion*.

As community volunteers, we've done our best to examine the science, listen to the experts, listen to the public and develop recommendations that are in the best interest of the deer, our community, other animals and our shared environment. These were tough decisions to make. While we think our recommendations are prudent, humane and responsible, they are not the only way forward when it comes to community deer.

Our work involved the analysis of two very different issues: deer overabundance at Griffy Woods and concerns with deer in neighborhoods. At Griffy, IU scientists have clearly demonstrated the effects that deer are having on the forest ecosystem. In neighborhoods, the issue is different. We've been very clear from the beginning that concerns about deer in neighborhoods are currently almost entirely social, are subjective and are grounded in thresholds for acceptance of deer impacts and interference with human activities.

Our report is just advisory – it will be up to city officials to decide whether or not the present situation regarding deer at Griffy and in neighborhoods are deemed to be problems worth addressing. This is a continuing, evolving community dialogue. Just as public feedback was a vital part of the Task Force process, so too will it be vital during the more formal policy-making process. When it comes to neighborhood deer, it may very well be the case that the community wants more information before moving forward. In this regard, the Task Force reviewed and suggested possible approaches to establish an information gathering and monitoring system in the urban area.

As the discussion on deer continues, we remind concerned residents to approach this issue with the hallmark traits that make our community great: creativity, kindness and respect toward humans and other animals.