## Coexisting with Deer

An advocate's guide for preventing deer culls in your community



### How to use this toolkit

We fight the big fight for all animals, but we can't do it without your help. This toolkit is designed to add power to your passion; to enable you to be the most effective advocate for the deer in your community.

Suburban development has created an environment in which deer thrive; our backyards provide the "edge" habitat (where forest meets field) they prefer, offering ample supply of food and water. Access to abundant resources leads to healthy deer and higher reproductive rates, and as deer populations increase, so too do deer-human conflicts. The result too often is an assumption that there are "too many deer" and a call for lethal control.

This toolkit is designed to empower advocates like you to take action, be it against planned lethal measures, or proactively encouraging the adoption of a humane deer management plan. It's often thought that the voice of a large, national organization is enough, but the voice of a constituent – yours! – is actually the most powerful tool in the fight for the welfare of deer in your community. Local decision-makers want to hear from *you*, not an outsider. A groundswell of local opposition to a deer cull, or in support of a humane deer management plan, has the greatest impact. This toolkit will provide guidance on how best to voice your opinion, and how to inspire others to do the same. The toolkit is organized as follows:

- Learn the issue: Knowing more about the types of conflicts your community may be having with deer can help you better understand how to address them humanely.
- Gather information: Asking key questions of the community and its leaders will equip you with the details needed to develop your strategy.
- Take action: What should you do? Included in this section of the toolkit is a list of steps you can take to oppose lethal management and to encourage the adoption of a humane deer management plan.
- Helpful tools: Communicating effectively is paramount to success. We've included sample language for everything from social media posts to testimony, as well as factsheets you can distribute to your community.

**Don't have much time?** We recognize that life is filled with competing priorities and we applaud you for making the deer in your community one of them! Following this toolkit from beginning to end will enable you to make the greatest possible impact, but if you only have a few moments to spare, skip straight to the Take Action section on page 10. There you will find tips for actions requiring less time (yet still having a great impact!) such as posting on social media or writing a letter to the editor. This toolkit's Helpful Tools section (beginning on page 14) makes any of these actions easy by providing sample language.

PHOTO CREDITS

FRONT COVER: NBKIMAGES/ISTOCKPHOTO.COM; PAGE 5: RICHARD ELLIS/THE HUMANE SOCIETY OF THE UNITED STATES; PAGE 6: ELRPHOTO/ISTOCK.COM; PAGE 7: SAMUME/ISTOCK.COM; PAGE 8: RICHARD ELLIS/THE HUMANE SOCIETY OF THE UNITED STATES; PAGE 11: RICHARD ELLIS/THE HUMANE SOCIETY OF THE UNITED STATES; PAGE 13: MATTHEW JONAS/THE HUMANE SOCIETY OF THE UNITED STATES; PAGE 15: RICHARD ELLIS/THE HUMANE SOCIETY OF THE UNITED STATES; PAGE 16: JOHN HARRISON; PAGE 18: RICHARD ELLIS/THE HUMANE SOCIETY OF THE UNITED STATES

### CONTENTS

How to use this toolkit	2
Contents	3
Learn the issue	4
Why killing deer won't solve conflicts	5
A note on deer fertility control	3
Gather information	J
Take action10	)
Helpful tools14	4
Sample letters to officials14	4
Sample request for meeting1	5
Sample social media items10	5
Sample letter to the editor and opinion piece (op-ed)1	7
Sample resolution19	•
Factsheets	)
Deer in the garden20	כ
Deer-Vehicle Collisions22	2
Lyme Disease24	4
Why killing deer doesn't work20	5

### Learn the issue

### SOURCES OF CONFLICT BETWEEN DEER AND PEOPLE

Suburban areas invite deer with resources that are more easily accessible than in mature woods where most vegetation is out of reach in the forest canopy. Grassy parks, blooming gardens, and ornamental plants provide good nutrition, leading to excellent physical condition and higher reproductive rates of deer. Safe from hunting and predators, and sometimes fed intentionally, deer become habituated to people and occupy public and private spaces.

For some, the presence of deer is a welcomed wildlife viewing opportunity, while for others it means disturbed garden beds and road hazards. Competing attitudes towards deer lead to differing perceptions of severity and frequency of conflicts, ultimately resulting in opposing management strategies. Unfortunately, a commonly suggested strategy is lethal management, but reducing the number of deer won't solve deer-human conflicts.

Effective conflict solution requires determining their source. Below is a brief description of the most common sources of conflict with deer and ways to resolve them humanely.

For more detailed information about each of the topics below, see the factsheets at the end of this toolkit on page 20.

### BACKYARD AND GARDEN COMPLAINTS

Flowers and ornamentals in suburban gardens and yards attract nibbling deer, much to the frustration of gardeners and landscapers. Some damage is unavoidable when there are deer, but it can be minimized by planting deer-resistant varieties and excluding deer using barriers like deer-proof fences, netting, chicken wire and hardware cloth. Repellents providing a bad taste or smell can work well when used in combination and applied diligently. Scare devices work best in conjunction with other tactics and include motion-sensing "scarecrow" water sprinklers, those that provide mild electric shocks, or others that emit deer distress calls.

#### About feeding deer: Intent versus impact

It is often with great intent that community members feed deer. Perhaps they are worried about deer surviving the winter or they want to attract deer to their yard because they enjoy their presence. But while they may enjoy the congregation of deer that feeding creates, their neighbor might not (which may lead to a call for a culling of deer). Additionally, the impacts of feeding deer can be deadly for the animals in other ways. Altering a deer's diet can upset his or her digestive system. Feeding stations can also congregate deer near roads, increasing the risk of collisions with vehicles. Fed deer can lose their fear of humans and become aggressive. These reasons and more are why it's often said that fed wildlife is dead wildlife!

### **DEER-VEHICLE COLLISIONS**

It is estimated that each year there are roughly 1.5 million deer/vehicle collisions on U.S. roadways. Many factors contribute to these collisions including road design, conditions and placement, as well as driving speeds. Fortunately, there are many humane and effective ways to prevent deer-vehicle collisions, the most important of which is responsible driving (not driving distracted and obeying the speed limit). Communities can also take steps to make roads safer by installing wildlife crossing overpasses, enforcing speed limits, erecting fences, and placing moveable, changeable message boards at accident hotspots to alert drivers to pending roadway dangers and to broadcast seasonable tips.

### LYME DISEASE

The black-legged tick is the culprit for the spread of Lyme disease. Originally, the tick was called a "deer tick," a misnomer that has perpetuated the false belief that deer alone are responsible for Lyme disease. In truth, Lyme disease has a complex ecology in which multiple hosts and varying landscapes affect both its presence and impact on people. Of the numerous hosts, deer are the most visible, leading some communities to advocate for deer culls to reduce the spread of Lyme disease. However, studies show that killing deer doesn't reduce the population of Lyme disease causing ticks, and in fact, may put the public at more risk. The Centers for Disease Control (CDC) and health authorities don't recommend hunting to control Lyme disease as it hasn't been shown to work.

There are practical solutions for deterring the spread of Lyme disease. Avoiding the disease is possible by checking the body thoroughly for ticks, steering clear of overgrown fields or woods with tall grasses or plants, wearing light-colored clothing to make ticks easier to see, and using insect repellent with Deet on socks and pant legs. Additionally, the 4-poster bait box system and the Damminix Tick Tube are both devices that can be used to kill ticks.

### **AGGRESSIVE DEER**

It's rare, and subject to interpretation, but on occasion a deer will show aggression towards dogs or people. This is typically the result of humans feeding deer, going into enclosures where bucks are in rut, or near a deer protecting her fawn. Not feeding or approaching deer, keeping dogs on leash, and hazing (using deterrents to move an animal out of an area or to discourage an undesirable behavior or activity) are all ways to avoid incidents. However, it's important to remember that deer are typically afraid of dogs and humans.

### **BIODIVERSITY LOSS/FOREST REGENERATION**

Deer can impact ecosystems and forest biodiversity, but so can other factors such as acid rain, pollution, and weather extremes. Succession can contribute to less diverse forests and fewer sun-loving flowers, yet deer are often blamed. It's vital that community leaders have baseline data collected so that deer impacts can be measured, and make sure any action plan is tailored to achieving very defined and realistic goals which can be reliably assessed.

Borrowing from the field of forestry, there are various ways to increase biodiversity and forest regeneration: permanent or movable fencing, overstory thinning, small patch cuts, liming, fertilization of soil, stem protectors, etc. Perhaps most important is to begin by setting specific goals and understanding what is and is not possible and recognizing the impact our aesthetic preferences have on what we think a forest "should" look like.

For a bibliography of resources about deer ecology, behavior, and management, see the "Bibliography" section of the deer conflict management template found at humanesociety.org/deer.



### Why killing deer won't solve conflicts

It is commonly assumed that an organized cull or hunt will make for a sustained reduction in the deer population and reduce the number of deer-human conflicts. However, killing deer is not an effective solution, nor does it address the sources of conflict between people and deer. There are better and more humane strategies for resolving deer issues.

### WHY KILLING DEER DOESN'T WORK

Deer are highly prolific, and their high reproductive rate can quickly compensate for declines in their population. When deer numbers are reduced after killing programs, the remaining female deer may respond to greater food abundance by giving birth to twins or triplets (even normal reproduction is more than sufficient to compensate for a population reduction from killing programs). Fawns also have higher survival rates and earlier onset of sexual maturity.

To be successful, a killing program must not only significantly reduce the deer herd, but it must also sustain enough pressure to prevent this bounce-back effect, while also preventing deer from the surrounding area from wandering in. All of these requirements pose an insurmountable challenge in most urban and suburban communities.

#### How many deer "should" there be?

Lethal control often prompts arguments as to just how many deer "should" be in an ecosystem or community. The terms "biological carrying capacity" and "cultural carrying capacity" are often used. For definitions of these terms and an explanation of why focusing on the number of deer (instead of conflicts with deer) is problematic, see the "Comprehensive Approach" section of the Deer Conflict Management Plan at humanesociety.org/deer.

### WHY KILLING DEER DOESN'T SOLVE CONFLICTS

Common arguments made to support killing deer are that it is necessary to protect ornamental trees, shrubs and gardens, prevent deer/car collisions, reduce Lyme disease, and/or to protect parks and wooded areas from "overbrowsing" and biodiversity loss. However, these conflicts with deer are not solved by reducing the deer population. Instead, conflicts need to be addressed at the source. Even if the deer population can be brought to a low level, an unprotected hosta will always draw any remaining deer near!

To some degree there will always be conflict between people and deer, so it's important to encourage tolerance for the presence of deer in the community.

For solutions to common conflicts with deer, see the factsheets on page 20.



### WHY DEER HUNTING AS A CONFLICT MANAGMENT TACTIC IS PROBLEMATIC

### A recurring, costly challenge

Getting deer numbers to a low level, and then keeping them at that level, can be extremely difficult and result in the need for perpetual annual hunts or culling activities. Even if deer numbers are lower after lethal removal efforts, it then requires more effort by hunters or sharpshooters to take out the same number of deer (since the deer will be scarcer and warier) in subsequent years. Lower deer numbers also make the environment less attractive to hunters and drive up costs for professional culling. If public hunters are used, there are indirect costs for the community such as law enforcement staff time. In addition, town attorneys need to explore if the town or community is covered for all liability regarding culling activity.



### Complications with bow hunting

Bow hunting is not considered an instant kill method (unless the arrow penetrates a vital organ like the heart, which is uncommon). Dozens of studies show high crippling rates even when the most modern bow hunting methods are used. Crippled deer often succumb to injury, blood loss, shock, and other secondary complications, which may take hours, or even days. Bow hunting is also not effective; archery hunters spend 14-18 days in the field per deer taken.

### Logistical challenges

There are many logistical challenges to a hunt in a populated area. Homeowners may be surprised by wounded deer on their property. Access to public parks may have to be restricted during hunting hours. State laws restricting weapons discharge can sharply limit the amount of land where population management activities can take place.

Accessible and inaccessible areas also pose a logistical challenge in that deer will move between the two. Deer will move into "safe" areas within their habitat in response to hunting or culling activities. Once lethal control has ceased, they move right back into their original territory. Localized deer home ranges in urban and suburban areas mean that deer killed in one area may not be the ones causing conflicts elsewhere.

### Controversy

Any sort of cull or hunt will result in controversy, often dividing communities and drawing attention away from other issues of public concern. Some may support the hunt, while others might raise safety issues (e.g., stray arrows going into yards or homes) or ethical concerns (e.g., lethal control should be a last resort). Doing "something" (e.g., a deer cull) may appease those who want to see action taken, but if the conflicts aren't solved, then it's ultimately a waste of taxpayer dollars.

### A note on deer fertility control

Deer fertility control is an innovative and advancing field with demonstrated applicability to suburban and urban deer populations. Options range from immunocontraception (using a vaccine that induces an immune response to block reproduction) to surgical sterilization (which involves surgically removing reproductive organs or interrupting the fertilization pathway).

Most of these tools are still in experimental phases, and thus are not available for general use at this writing. However, researchers are refining and field-testing deer fertility control methods, while policy managers pursue federal and state registration to allow for future management applications.

Additional resources may also be found through The Botstiber Institute for Wildlife Fertility Control: www.wildlifefertilitycontrol.org, or through the Science and Conservation Center: www.sccpzp.org



### Gather information

Whether you're trying to stop a proposed cull or proactively encourage the adoption of a humane management plan, asking some key questions of your community leaders will help you develop your strategy.

### **KEY QUESTIONS:**

- The number of deer. Often communities get mired in arguments about how many deer there "should" be. Terms like "biological carrying capacity" and "cultural carrying capacity" are used in an attempt to determine a specific number of deer for a particular ecosystem or community (for definitions of these terms and why they may be problematic see the "Comprehensive Approach" section of the Deer Conflict Management Plan). The result is an arbitrary number based more on political judgment than biology that is equally dissatisfying to the gardener who wants to see fewer deer, and the nature lover who wants to see more.
  - What is the basis for the assertion that the deer population is too high? Have any censuses of the local deer population been done and if so, what type and who conducted them? Is the entity which said deer numbers are too high the same entity which would benefit financially from a deer killing program?
  - If the community is saying there should only be x number of deer per square mile (or overall) what is the basis for that assertion? How many deer will need to be removed and what is that figure based upon?
  - How will the bounce-back in deer numbers be dealt with, year after year?
- What are the relevant procedures and processes? Knowing how decisions are made will enable you to take appropriate actions.
  - Who are your elected officials and what authority do they have? What is the process for getting a humane deer management plan approved or a cull stopped? At what points in this process can you make an impact?
  - Are HOA/town/city procedures and bylaws being followed? (e.g., are meetings being properly posted, giving adequate notice and allowing for resident input? Are resident approvals, where required, being obtained for expenditures?)

### • The rationale for lethal management.

Uncovering what might be prompting some to call for lethal action could help you develop a humane alternative.

- How many (if any) complaints are being received? Who are the complaints from, and are the complainants residents? What is the specific nature of the complaints? If data is being collected, what kind and who is collecting it?
- Are any attempts being made to resolve the complaints in a non-lethal manner (e.g., using repellents or deer-resistant flowers to protect flower beds)?
- Sharp shooting and bow hunting. In the event of a proposed cull, asking some key questions can help illuminate the logistical and safety issues with sharp shooting and bow hunting.
  - How many archers will be needed -- over exactly what area --- to take out how many deer?
  - What is the projected cost of sharp-shooting deer? Over a 5 and 10 year period, what will the cumulative cost be for annual deer kills? What will the additional indirect costs be, especially for law enforcement?
  - What steps will be taken to assure residents' safety? Will resident activities on the property be curtailed in any way? Does the community have appropriate liability insurance?
  - Since bow-hunting incurs such a high crippling rate, what system, if any, will be set up to respond to homeowners who see crippled deer? What is the cost to the community of increased law enforcement/ response? Will there be a reporting system set up to respond 24/7?
  - What will the community do to evaluate the impact of the hunt on deer-human conflicts? How will success be determined?

### Take action

Having learned the issue and gathered information, you are ready to take action. This section is divided into actions you can take to engage your local officials, your community, and the media, as well as those you can take to influence policy. Be sure to see the Helpful Tools section on page X of this toolkit for sample language and materials, making taking action that much easier!

### **ENGAGING LEADERS**

### **Contact your officials**

Public officials take constituents' interests seriously; they prioritize responding to constituents over nonconstituents. Writing letters, sending emails, and making phone calls to your leaders is perhaps the most important step you can take to help the deer in your community. Make your voice heard! Be cordial, factual, and stick to two or three key points that the official might most be interested in (i.e. deer culls are ineffective and logistically challenging). See a sample letter to officials on page X of this toolkit.

### Request a meeting with your officials

Politely request to meet with your officials (see page 15 for sample language). You can attend the meeting by yourself or invite other constituents (i.e., your friends, family, neighbors) to participate. Plan for the meeting to last about 15 minutes (be sure to be on time!) and be aware that you may actually meet with a staff member rather than your elected official. Call or email to confirm the meeting two or three days before the scheduled meeting time.

#### Prepare your materials:

 Convert your research into concise fact sheets to use in your efforts to oppose a cull and/or to encourage the adoption of a humane deer management plan. This toolkit contains sample fact sheets that you can adapt for your needs (found on page x).

#### Helpful tips for your meeting:

 Before any meeting with an official, research the person you'll be meeting with as much as you can, develop an agenda and prepare a packet of the materials you developed to leave with the official.

 Dress professionally, be cordial and listen to and address their concerns. Practice your presentation ahead of time. If you do not know the answer to a question, tell the official you will find out and get back to them. Do not be discouraged if the official agrees with only a portion of your proposal. Compromise is often necessary in advocacy. Be candid about which entities will likely be in opposition.

#### Follow up:

 Promptly follow up on your meeting by sending a letter or email thanking the official for their time, briefly re-state your position, and respond to any unanswered questions that came up during the meeting.

### Testify at a town hall meeting

Perhaps the most important action you can take is to attend a town hall meeting where your local elected official(s) will be present. Typically there is a chance to present public comment or ask a question, but it is important that only those involved (e.g., residents) do so as officials get turned off by "outsiders." This is an ideal opportunity to discuss why a humane deer management plan is a good alternative to a cull and put the issue right before the decision-makers for a comment. There is normally a time limit of about three minutes for oral testimony in meetings of commissions and councils, so please keep your remarks brief and concise (see the sample letter to officials on page X of this toolkit for language to use). You might also coordinate with other advocates to ensure that you don't duplicate each other's testimony and instead each focus on a specific topic. For example, one person can talk about how killing deer doesn't work, another can focus on how bow hunting is problematic, and another can explain why focusing on solving conflicts with deer is the answer. Having all residents who are against lethal management and in support of a humane deer management plan, the coalition you've worked so hard

to build, wear the same color shirt, or even a button, is a way to make it clear to officials the weight of your collective voice.



#### **ENGAGING THE COMMUNITY**

#### **Build a coalition**

Getting your community to voice opposition to a cull and/or support humane deer management takes significant effort and requires outreach to officials and engaging others in your community. Even in big cities, it can be common for very few people to get involved in local issues (which means a small group of people are often changing policies). Getting active support from diverse groups in the community can make or break the adoption of a humane deer management plan and/or the stopping of a cull. Let them know of your efforts and secure letters of support, commitments to meet with their elected officials, attend and/or testify at hearings, and outreach to other community residents.

#### Spread the word on social media

Engage your local network on social media, asking only those directly involved (i.e., constituents) to contact

their officials to voice their opinion (officials get turned off when hearing from "outsiders"). Inform them of scheduled community meetings and ask them to get involved by submitting letters to the editor and op-eds and contacting their elected officials. Social media is a great way to find like-minded individuals who will help you in your mission! Our toolkit includes a sample share graphic, tweets and Facebook posts (see page 16). You may also find creating a Facebook group of like-minded neighbors helpful for responding to not only this issue, but also future animal welfare issues that arise in your community.

### Organize a public education event in your community

If you have a strong grasp on the issue and how it impacts your community, consider hosting a public event to educate fellow citizens about solutions to and preventing conflicts with deer, and encourage them to take action to stop lethal management and encourage the adoption of a humane management plan. (The factsheets found in the Helpful Tools section on page 14 of this toolkit are great resources for such an event). You'll want to invite key stakeholders to co-host, speak at or attend the event.

### Prepare for oppostition

While every community is different, the odds are that someone in your area will support a cull or a hunt and oppose the adoption of a humane deer management plan. Be sure to prepare sympathetic officials with information about the opponent's concerns and the data, facts and talking points to address them (see the factsheets on page 20 for helpful material).

#### **ENGAGING THE MEDIA**

#### Submit letter to the editor of your local paper

Letters to the editor are an important tool for influencing public opinion, as they are typically the most widely read section of the newspaper. Lawmakers frequently read the opinion section to gauge the interest of their constituents on a variety of matters. The more letters submitted to the same publication that express similar viewpoints, the greater the likelihood that one or more letters will be published, so encourage others to write as well. It can also help shape news coverage if editors recognize this as an issue that's important to readers.

The average letter to the editor is only about five or six sentences – keep it short and direct. Some papers list their word count limit in the letters section. Your main point (i.e. deer culls are ineffective and impractical) should be clearly stated in the beginning of the letter to grab the reader's attention. Don't forget to include an "ask" (i.e. the action you want readers to take after reading your letter). Timing is also important, so submit your letter before a deer cull or vote on the adoption of a humane management plan is scheduled to occur. This toolkit contains a few examples of letters to the editor that you can adapt for your needs (see page 17).

### Submit an opinion piece to your local paper

Opinion editorial pieces (commonly known as "op-eds") are similar to letters to the editor, but they are longer and provide more context regarding a particular issue. While letters to the editor may be around 250 words or fewer, op-eds may be 500 to 800 words. Media outlets are more likely to publish op-eds written by individuals who have authority on a particular issue or are seen as a leader in their community. Outline your stake in the issue - are you a veterinarian, wildlife rehabilitator, animal shelter or rescue worker or volunteer, scientist, member of academia, hunter, hiker, wildlife watcher, or parent, school or community association board member concerned with animal welfare or public safety? Say so! Your main point (i.e. deer culls are ineffective and impractical) should be clearly stated in the beginning of the op-ed to grab the reader's attention. Don't forget to include an "ask" (i.e. the action you want readers to take after reading your op-ed). Timing is also important, so submit your op-ed before a deer cull or vote on the adoption of a humane management plan is scheduled to occur. See page 17 for a sample op-ed.

### Use the media to influence public opinion

After you submit letters to the editor and opinion pieces ("op-eds"), request to meet with the newspaper's editorial board to encourage them to weigh in supporting you position. Cultivate a relationship with local reporters and keep them updated on developments.

### **INFLUENCE POLICY**

Below are actions you can take to encourage the adoption of a humane deer management plan.

### Learn the process

The process for adopting local policies varies around the country, so take the time to become familiar with how things work in your community. An official or employee in your local government may be able to help you. Attend a few meetings of the governing body you hope to influence. Listen to the kinds of questions they ask and the issues they take most seriously. By understanding their general concerns, you will be able to craft your arguments accordingly.

### Find a friend in office

Public officials end to take constituents' interests seriously, so try talking to your own councilmember, county commissioner or alderman first. As much as we would like the people we vote for to agree with us, this may not always be the case. If your own council member is not interested, do not despair. Try to find other official(s) with an interest in animal issues and pitch your idea to them. Often, your local animal control bureau or nonprofit humane society can point you toward a sympathetic decision-maker.

### Provide sample policy

Providing sample policy that your community leaders can adopt makes it easier for them to do so. Our template deer conflict management plan is ready-toadopt and includes step-by-step actions (the template can be found at humanesociety.org/deer).

You can also encourage your officials to adopt a resolution confirming the implementation of a humane deer management plan. Though not legally binding, a resolution provides guidance and serves as a formal opinion on the issue and is worth pursuing. We have included a sample resolution on page X of this toolkit, but it is important to make sure that you and legislative experts on the issue thoroughly review the language that you submit - please email us at wildlife@humanesociety.org for assistance.

### Lobby elected officials

If a public hearing and vote has been scheduled regarding your proposal, make every effort to ensure that you have the votes you need for it to pass. Ensure that you have met with every official, provided your information packets and responded to their concerns. Don't be afraid to ask whether you have their vote. Encourage as many residents as possible to write to and call their officials. Reach out to your coalition partners to help publicize the issue and issue a call to action through alerts and letters. They key is to convince a majority of the officials to vote in your favor.

### **Public hearing**

Once your elected officials call a public meeting to discuss your proposal, you will need to determine who will testify at the hearing and get others to attend. Work closely with your supportive officials on how best to present your case to other officials. They may recommend limiting the number of speakers.

Plan ahead to make sure that everyone does not speak on the exact same points (a common problem at public hearings). You most likely will have very limited time (probably only three to five minutes per person), so dividing talking points among a handful of speakers can ensure that all of your key arguments are heard. It is especially influential if you can get those who will be implementing or enforcing the humane management plan to testify in support. Professionals in uniform add an additional air of importance and mainstream acceptance to an issue.

Also, it is a good idea to make sure the elected officials can readily identify those in attendance who are in support of your proposal. Create stickers/buttons for people to wear or matching T-shirts with the same, relevant message (e.g., "[city] citizens for humane deer management").

### Follow up after the hearing

Oftentimes, an issue is not voted on at the time of a public hearing. During the hearing, take careful notes on who speaks in opposition, what their arguments are and how the officials respond to them. Also note what questions the officials ask. This will help you provide information to officials following the hearing to help alleviate any specific concerns. Check in with your sympathetic officials to debrief about the public hearing and decide on what steps to take next.

### After the vote

If a vote is taken and you win, celebrate! If you lose, take all that you have learned during the campaign and put it to good use when you try again. It can often take several attempts before a community adopts a humane management plan, so do not be discouraged if your first effort fails. Talk to the officials who opposed the adoption of the plan and discuss what changes could be made to garner their support in the future. Remember that regardless of the outcome, you educated many people with your message. Public education is critical to the success of any animal welfare campaign and, over time, an educated public can push for positive changes in the lives of animals.



### Sample letters to officials

### LETTER AGAINST A DEER HUNT

[DATE] [OFFICIAL'S ADDRESS]

Dear [OFFICIAL],

I am a resident of [city] and I oppose the deer hunt scheduled for [date].

Killing deer doesn't control their populations. Their high reproductive rate will quickly compensate for any deer removed. Each year, [city] must kill enough deer to significantly reduce the herd, and then continue to kill deer to keep the population from bouncing back. Our community will not want to fund this killing program forever.

Killing deer is also impractical. Once the killing starts, deer will move into areas off-limit to hunters, and once it's over, they'll move right back into their original territory - we'll be back to square one!

A more effective alternative is a non-lethal deer management plan focused on resolving conflicts with deer, not reducing deer numbers. I have included a template deer conflict management plan that is readyto-adopt and provides step-by-step actions we can take that address conflicts through a practical, humane, sustainable process that everyone can get behind.

In the interest of creating a more humane community, I ask that you cancel the hunt. Your support will show that [city] cares about the responsible management of our state's natural resources and the wildlife that share our neighborhoods. Thank you for your time.

Sincerely,

[NAME] [ADDRESS & CONTACT INFORMATION]

### LETTER IN SUPPORT OF A HUMANE DEER MANAGEMENT PLAN

[DATE] [OFFICIAL'S ADDRESS]

Dear [OFFICIAL],

As a resident of [city] I am writing to voice my concern for the deer in our community.

I've heard some mention of the fact that there are "too many deer" in [city]. However, the "problem" with deer is not that there are too many, it's that we have conflicts with them. Gardeners rightfully get upset when deer browse on the gardens they worked so hard to create. Hikers worry about getting Lyme disease from ticks when out in our beautiful woods. But there are solutions to these conflicts - such as fencing and tick repellents solutions that work! The included document outlines step-by-step actions that address conflicts with deer through a practical, humane, sustainable deer management plan. Most of all, it's communitysupported. I took a poll on Twitter and an overwhelming majority of respondents, who are residents of this community, said they were in favor of a non-lethal deer management plan.

In the interest of solving our conflicts with deer, I urge you to adopt this humane deer management plan. Thank you for your time.

Sincerely,

### [NAME] [ADDRESS & CONTACT INFORMATION]

### Sample request for meeting

### LETTER OR EMAIL REQUESTING TO MEET

[DATE] [COMMUNITY LEADER ADDRESS]

Dear [COMMUNITY LEADER],

My name is [your name]. I am a constituent and would like to schedule a meeting with you or an appropriate staff person to discuss a practical, humane option for managing the conflicts with deer in our community. Would you be available on any of the following dates [list dates]?

[If others are attending] I expect several other constituents to attend the meeting and will forward their names prior to the meeting date.

I have included a copy of the template deer management plan I will be proposing and will bring a copy to our meeting.

Thank you for your time. I look forward to hearing from you.

Sincerely,

[NAME] [ADDRESS & CONTACT INFORMATION]



### Sample social media items

### SAMPLE FACEBOOK POSTS

Facebook can be a great way to mobilize your coalition to take action. But remember, community leaders only want to hear from those in their community, not "outsiders," so be sure to target your post to those directly involved in the issue – and ask others to do the same!

- [City] is considering lethal management of deer to control the population, but killing deer is ineffective as populations quickly bounce back. It's a waste of time and resources! Please join me in urging Mayor [Name] to cancel the deer cull taking place on [date]. If you are a resident of [city] call [phone number] to voice your opinion. Please only call if you are a resident!
- 2. [City] has proposed bow hunting of deer to control the population, but bow hunting poses logistical challenges, as well as safety concerns. Urge your local officials (find out who represents you at the link below) to cancel the bow hunt on [date] and to adopt a humane deer management plan instead.
- 3. Killing deer doesn't solve conflicts with them. Instead of focusing on reducing the number of deer, we need to learn to coexist! Write a letter to the editor of your local paper to voice your support for a humane deer management plan.
- 4. Attention all members of [HOA]! A meeting has been scheduled for [date and time] to vote on a proposed deer cull. Come voice your support for a humane deer management plan!

### SAMPLE TWEETS

Tweets have a certain character limit, and can include a photo, video, GIF and even a poll. Incorporate the use of a hashtag (#) in your postings. Be mindful that using too many hashtags can clutter a post and make it more difficult to read. Retweeting other tweets is also a great idea!

1. Killing deer is not the answer. Peaceful coexistence is possible! Say "no" to the @city

deer cull. #noto[city]deercull
#supportcoexistence

- @Mayor please cancel the deer cull in @city. Deer culls are ineffective and impractical. A humane alternative is available! #noto[city]deercull #supportcoexistence
- @City needs a humane deer management plan, not recurring, costly deer culls. @offical vote yes to support coexistence! #supportcoexistence

### SAMPLE GRAPHIC TO GO ALONG WITH SOCIAL MEDIA POSTS



### Speak up for deer!

The city of Springfield is planning to kill deer. Contact our city leaders now to urge them to cancel this killing program and to use humane solutions for solving conflicts with deer instead!

Photo Credit: John Harrison



# Sample letter to the editor and opinion piece (op-ed)

This sample can be used for inspiration, but do not copy and submit verbatim as newspapers prefer to print letters that are unique submissions to their publication.

### SAMPLE LETTER TO THE EDITOR: WHY KILLING DEER DOESN'T WORK

As a resident of [city], I was disturbed to learn that a deer cull has been proposed. I, and many other citizens and community leaders, ask that the cull be cancelled.

Killing deer doesn't solve conflicts with them. Their high reproductive rate will quickly compensate for any deer removed. Each year, [city] must kill enough deer to significantly reduce the herd, and then continue to kill deer to keep the population from bouncing back. As a taxpayer, I don't want to fund this never-ending deer killing program.

Killing deer is also impractical. Apparently, there will be accessible and inaccessible hunting areas. What's to keep the deer from moving into the "safe" areas until the cull is over, then moving right back into their original territory?

Let's focus on solving conflicts with deer, not on reducing their numbers. [City] should adopt a practical, humane, sustainable deer management plan. There will always be deer. We must learn to coexist!

### SAMPLE LETTER TO THE EDITOR: WHY BOW HUNTING IS PROBLEMATIC

As a resident of [city], I was disturbed to learn that a deer bow hunt has been proposed. I, and many other citizens and community leaders, ask that this hunt be cancelled.

Arrows do not kill deer instantly; crippling rates are high even when the most modern bow hunting methods are used. Bow hunters must follow the blood trail and find the wounded deer as she succumbs to injury, blood, loss, shock, or even infection. Suffering may last hours, or even days. Should our children see this? What happens if a crippled deer comes onto private property? Or worse, a stray arrow? A safer, more effective solution is to implement a practical, humane, sustainable deer management plan focused on resolving conflicts with deer, not reducing deer numbers. There will always be deer in [city]. We must learn to coexist!

### SAMPLE OP-ED

A few days ago, [city] officials announced they were authorizing a deer kill, which is set to take place on [date], citing complaints from residents that there are "too many" deer. But killing deer is not the answer – it is ineffective and impractical.

Deer are highly prolific, and their high reproductive rate will quickly compensate for declines in their population. The cull may initially reduce the number of deer, but the remaining female deer may respond to greater food abundance by giving birth to twins or triplets. Fawns will survive better and start reproducing at an earlier age. The end result will be a quick "bounce-back" in numbers – we'll be right back to square one! This approach will waste the community's time and resources.

Killing deer is also impractical. Apparently, there will be accessible and inaccessible hunting areas. What's to keep the deer from moving into the "safe" areas until the cull is over, then moving right back into their original territory?

Bow hunting, which is what's being proposed, poses challenges as well. Arrows do not kill deer instantly; crippling rates are high even when the most modern bow hunting methods are used. Bow hunters must follow the blood trail and find the wounded deer as she succumbs to injury, blood loss, shock, or even infection. Suffering may last hours, or even days. What if a crippled deer comes onto my private property? Or worse, a stray arrow? As a mother of four, I don't want my children to have to bear witness to such a sight or to not be able to play safely in our yard. I have to wonder, just how many complaints were received? Were they from residents? What was the nature of the complaints? And most important, were any attempts made to address these complaints in a non-lethal manner?

We shouldn't be focusing on how many deer there are, as there will always be some, and it only takes one deer to eat an unprotected hosta, angering a gardener who then complains that there are "too many" deer. Instead, we should be helping the gardener learn which varieties of plants deer avoid or what barriers will effectively exclude deer. The hunt should be cancelled, and [City] should adopt a comprehensive, practical, effective, science-based, humane deer management plan focused on resolving conflicts with deer. A template for such a plan exists and is ready-to-adopt. Let's adopt it!



### Sample resolution

Resolution No.\_\_\_\_\_

A Resolution Approving a Deer Conflict Management Plan

WHEREAS the City of \_\_\_\_\_ has a duty and responsibility to protect their health, safety and welfare of its residents; and

WHEREAS it is recognized that deer are a natural part of the landscape and the ecology of the region, despite human encroachment upon their habitat; and

WHEREAS deer provide great pleasure to residents and are beneficial to the community as a whole, and

WHEREAS deer may create conflicts due to their browsing activities and movements and certain human activities may serve to unintentionally create or exacerbate such deer-human conflicts; and

WHEREAS due to the varied interests of persons and organizations regarding actions that can be taken in the management of deer, a written management plan is desirable to ensure that the varied interests are evaluated and considered when seeking to address conflicts with deer, and;

WHEREAS the purpose of the Deer Conflict Management & Coexistence Plan is to provide effective long term solutions to deer conflicts, including education, habitat modification, hazing, exclusion, repellent methods, and tolerance, to resolve and reduce human-deer conflicts within the City in a humane, ecologically sound, and effective manner; and

WHEREAS deer-related conflicts can be resolved through public education about deer-resistant gardening, defensive driving, tick-borne disease prevention, and feeding bans along with effective roadway signage and maintenance practices, among other recommended actions; and

WHEREAS the City is directed to prioritize nonlethal methods, including education and methods list within the Deer Management Plan, as primary methods in deer management; and ,

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF \_\_\_\_\_\_ that the Deer Conflict Management Plan attached hereto and incorporated herein by reference, is hereby approved. The resolution shall be effective immediately.

Adopted and approved this \_\_\_\_\_ day of \_\_\_\_\_

Attest \_\_\_\_\_



### Deer in the garden

When your backyard serves as an unintentional buffet for deer



PHOTO BY: MATTHEW JONAS/THE HUMANE SOCIETY OF THE UNITED STATES

Much to the displeasure of gardeners, deer enjoy browsing on many of the ornamental plants (such as tulips, roses, and hostas) commonly and widely used in urban and suburban landscaping. The best way to prevent deer damage to gardens is to replace plants attractive to deer with more deer-resistant native species and to protect highly desirable plants with repellents or fencing.

### Solutions

### Repellents

A variety of repellent products, used singly (or better yet) in combination, can create a very effective multi-sensory deterrent to repel deer. Commercial repellents work by creating unpleasant tastes or odors, gastrointestinal discomfort, or a sense of pain (hot pepper or peppermint) when the active ingredient comes in contact with the eyes, nose, or mucous membranes of the deer. Some of the more effective repellents contain a sulphurous odor (e.g., rotten eggs), believed to induce fear by giving off smells that deer associate with rotten meat or a predator. Predator urine should not be used, as it is not only ineffective for repelling deer, but is also collected from Inhumane fur farms, which raise wild animals for their pelts.

Tips for applying repellents:

- All repellents work best if applied before the deer's feeding pattern becomes established. Apply repellents before bud-break and as new growth appears, to prevent a browsing habit from forming.
- Reapply repellents after heavy rains and at least every two weeks
- Deer may become accustomed to the same repellent, so alternate repellents to keep the deer confused and warier.

### Scare devices

There are various scare-based products on the market, such as a motion-sensing "Scarecrow" sprinkler device that is hooked up to a hose and blasts any animal moving within a set range with a strong burst of water. Other devices pose a mild electric shock or emit deer distress calls. Although deer may acclimate to scare devices over time, if moved around and put on an alternating schedule, the deterrent effect will last longer.

- The <u>Scarecrow Motion-Activated</u> <u>Sprinkler</u> attaches to a garden hose. When a deer comes into its adjustable, motion-detecting range, a sharp burst of water is sprayed at the animal. The combination of physical sensation and a startle effect provide effective aversive conditioning.
- The <u>Havahart Spray-Away Elite</u> <u>Motion Detector</u> is similar in action to the Scarecrow, yet is hose-free and solar powered. This device uses infra-red technology to detect animal movement.
- The <u>Havahart 5250 Electronic</u>
   <u>Deer Repellent</u> consists of 3 stakelike devices and a scent lure. Deer are attracted to the lure and then receive a mild electric shock when they reach it.
- The <u>Deer Shield Electronic Deer</u> <u>Guard</u> is a device which emits varied digital recordings of alarmed and territorial deer, thereby using their own form of communication to inspire deer to go elsewhere.

### **Physical Barriers**

Where deer browsing is a serious problem, the only completely effective way to protect crops or plants is with fencing. Determining the best type of fencing depends on how large an area you need to protect and for how long, so check with your local garden store or local Cooperative Extension agents before buying anything. The eight-foot-high woven wire fence stands out as the most effective deer barrier and it lasts more than 20 years, but electric fencing, netting or temporary enclosures are also options.

#### **Electric fences**

Electric fences can work very well for deterring deer, yet these provide more of a "psychological barrier" than a physical one. They can be constructed in a variety of configurations and are powered by high-voltage, low-amperage chargers that provide timed pulses of short duration. Some contain scent attractants (to ensure brief contact with electrified material) or are moveable polytape "fences," which consist of nylon material with electric fibers running through them.

### Netting, chicken wire and hardware cloth (wire mesh)

 Prevent buck rubs by wrapping trees with any commercial product sold for that purpose, or by placing cylinders of hardware cloth or corrugated plastic sleeves around the trunks. To prevent browsing on young saplings, use small-scale, temporary fencing enclosures or individual tree "shelters" until they reach a height of four to five feet. You can drape mesh netting over low-growing plants or vegetables.

### **Alternative plantings**

Take a look at is what is attracting the deer and where it is planted. Replace hard-hit flowers and other plants with more deer-resistant species. There are many deer-resistant annual and perennial flowers, ornamentals and tree species to choose from. A deer's taste buds vary geographically and seasonally and are affected by what alternative plants are available. Nurseries, deer-resistant gardening specialty lists, and <u>local Cooperative Extension Service</u> offices can be excellent sources of information for what types of flowers and ornamentals deer usually avoid in an area.



PHOTO BY: NKBIMAGES/iSTOCKPHOTO.COM

### A final word

Deer are curious and motivated by their need to eat, so they may test and retest the barriers and deterrents you use. You can stay a step ahead of them by changing what you apply so they don't get accustomed to any one strategy. With a little ingenuity and diligence, you will find it really is possible to live in deer country—and have your flowers and vegetables too.

Find out more information visit *humanesociety.org/deer* 





### Deer/vehicle collisions

Safe driving means giving wildlife a break



PHOTO BY: KATHY MILANI/THE HUMANE SOCIETY OF THE UNITED STATES

Each year, there are roughly 1.5 million deer/vehicle collisions on U.S. roadways. Fortunately, there are many humane and effective ways to reduce the number of collisions involving deer, ranging from increasing individual awareness and caution, to implementing new technology and structures.

#### **Factors at play**

Deer/vehicle collisions are frequently attributed to increasing deer populations, while failing to consider the impact of humans on the landscape. We have created more roadways with more people driving on them, disrupted migration routes by roadways and given rise to ever-shrinking wildlife habitat. Additionally, frequent mowing of roadsides (which creates succulent plant growth), along with road-salt use in the winter, attract deer to roads.

In reality, many factors contribute to deer-vehicle collisions, such as traffic volume, driver speed and distraction, extent to which roads bisect habitat, development patterns, extent of visual barriers, and speed limit. Road design, road condition and driving speeds are the factors that most strongly influence the number of deer/vehicle collisions.

### **SOLUTIONS**

#### Drive with deer in mind

- BE VIGILANT: When you drive, make a habit of watching from side to side, especially in areas of low visibility or where roadside 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.
- BE AWARE OF SEASONS: In the fall (Nov –Dec), bucks are on the move due to rutting and hunting seasons. In spring (May- June), fawns are following their mothers. Be extra careful driving at these peak times of year.
- 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 your high beams to see farther ahead. Slow down and watch for the eye-shine of deer near the road edges.
- DRIVE STRAIGHT: Do not swerve to avoid wildlife but stay in your lane, brake firmly, and blow your horn. Animals are easily confused. If you swerve, you may collide with another car, telephone pole, fence or other roadside object. Also deer may run into the vehicle rather than away from it.

### **SOLUTIONS**

#### **Making roads safer**

- Install devices that warn deer of oncoming cars:
  - Streiter Lite® reflectors, which reflect headlights to create an optical illusion of a fence and alert deer to oncoming vehicles, have been reported to reduce deer/vehicle collisions by 60 to 100 percent.
  - Deer Deter devices alert deer to oncoming vehicles by combining a strobe light effect with ultrasonic high-pitched sounds. (Learn more at http://deerdeter.com)
- Enforce speed limits in areas with deer. The lower the speed, the fewer collisions with deer.
- Erect fences. One of the most successful techniques for alleviating deer/vehicle collisions is to use fencing to prevent deer from crossing roads. Fences must be at least 8 feet high to deter deer from jumping over.
- Install wildlife overpasses or underpasses to help deer and other wildlife safely cross busy roads and intersections.
- Place movable, changeable message boards at accident hotspots to alert drivers to pending roadway dangers, and to broadcast seasonal tips such as when fawns are likely to be crossing the road behind their mothers, or during the November "rut" when bucks are on the move and likely to be crossing roadways in pursuit of does).
- Mount motion-activated flashing lights on deer-crossing signs or posts to warn motorists about the presence of deer.



PHOTO BY: PASCAL L MARIUS/iSTOCK

### How to help injured animals

#### Do not put your own safety at

risk. Unless you can move the animal from the road in absolute safety, do not attempt to do so. Use your hazard lights or emergency road flares to warn oncoming traffic of the injured animal. Never attempt to handle a large animal like a deer, or one that could give a serious bite, like a raccoon.

#### Call someone with the proper training and equipment. When you

need assistance, call the nonemergency number of the local police department (program the phone number into your cell phone right now so you have it when you need it) and describe the animal's location. Emphasize that the injured animal is a traffic hazard to help ensure that someone will come quickly. Stay in the area until help arrives.

Use heavy gloves to protect yourself or avoid direct handling if you try to rescue a small animal yourself. Remember that the animal doesn't know you are trying to help and may bite or scratch in self-defense. An old towel is helpful if you need to move an injured animal.

### Gently coax or place the animal into

a cardboard box and transport him/her to an animal shelter, <u>wildlife</u> <u>rehabilitator</u> or a receptive veterinarian. If there is a delay, keep the animal in a dark, warm, quiet place to minimize fear and stress.

### If you accidentally kill an animal, try

to move the animal off the road—but only if you can do so in complete safety. Otherwise, report the location of the animal's body to the local police department, and it will arrange for removal. This will prevent scavengers from being attracted onto the road and eliminate a potential traffic hazard.

Find out more information visit humanesociety.org/deer.





PHOTO BY: SAMUME/ISTOCK.COM

### Lyme disease

Every year, 300,000 people in the United States contract Lyme disease. The Black-legged tick, the culprit in the spread of the disease bacterium, was originally called a "deer tick," a misnomer that has perpetuated the false belief that deer alone are responsible for Lyme disease. In truth, Lyme disease has a complex ecology in which multiple hosts and varying landscapes affect both its presence and its impact on people.

There are many reasons why killing deer doesn't reduce the population of Lyme-disease causing ticks:

- The Black-legged tick has well over 100 hosts, including all mammals, lizards, and many popular songbirds. The tick distributes itself widely through the movements of all these hosts.
- Studies have shown that the removal of one host isn't enough to suppress the Lyme-disease causing tick (Ostfeld, 2011, Jordan et al, 2007). Even when a high proportion of deer are removed from a location, the ticks switch to other hosts or congregate in higher densities on the remaining deer.
- Deer removal programs may also put the public more at risk by creating disease "hot spots" (S. Perkins et al, 2006; Ostfeld, 2011). That is, mature ticks that normally latch onto large hosts (i.e., deer) are more likely to end up on people and dogs after deer populations have been reduced.

- New scientific research shows that Lyme disease incidence, and human health risks, are affected more by the abundance of the larval tick's host (whitefooted mice and chipmunks) and the food resource those small hosts rely on (acorns) than by the abundance of deer.
- Another reason deer hunts don't help reduce the disease is timing. The regular hunting season occurs in November to January when many of the ticks have already dropped off the deer to lay eggs, so killing some deer has little impact on the tick's reproductive cycle.

There's good reason why the Centers for Disease Control (CDC) and health authorities don't recommend hunting to control Lyme disease - because it hasn't been shown to work.



### Solutions

### AVOIDING LYME DISEASE:

Until an effective vaccine is available for this disease, the most important thing people can do is to practice vigilance in finding and <u>removing ticks</u> before infection can occur.

- Check your body thoroughly for ticks immediately after removing clothing and placing everything in the washer. Do the same for your child until he is old enough to do so for himself. This is the single most important way to find ticks before they engorge themselves and are able to transmit the disease. According to the CDC it generally takes about 36-48 hours before the tick has had enough time to transmit the Lyme disease bacterium— thus if a tick is found within 24 hours of attaching to a person, it is unlikely it could have transmitted enough of the bacterium to cause Lyme disease, but the site of the bite should be monitored early signs of infection.
- Steer clear of overgrown fields or wooded areas with tall grass or plants especially in May, June, and July, when the ticks that transmit Lyme disease are most active.
   Stay on wide well-maintained trails instead.
- Wear light-colored clothing to make ticks easier to see. Expose as little skin as possible by tucking pant legs into socks, wearing long sleeves, and tucking in shirttails. This way you can more easily see and remove ticks before they attach themselves to your skin.
- Use insect repellent with DEET (20-30%) on socks and pant legs. Check with your pediatrician about the safest way to protect children from ticks—guidelines can change.
- If you find an embedded tick, remove it with fine-tipped tweezers clamped as close to the



PHOTO BY: JOHN HARRISON

head as possible. Cleanse the area with an antiseptic.

Modify your landscape by clearing out underbrush, rock or wood piles, stone walls, or any crevices that provide nesting or cover areas for small rodents. Keeping the grass low-cut will also reduce the number of small rodents who host the larval ticks.

### PRACTICAL SOLUTIONS:

#### 4-Poster bait box system

This device uses deer to kill ticks. It contains a corn bait to attract deer, and to eat the corn, the deer must rub up against applicator rollers which apply a chemical (10% permethrin) to their necks and shoulders, killing 95%-98% of the adult ticks. This device has been tested by the USDA in a 5 state, 7-year research program and has proven effective in reducing tick numbers (McGraw and McBride, 1991). A study done at the Goddard Flight Center also found that by using the 4-Poster system, adult ticks were completely eliminated by the 2nd year of the study; and all stages were reduced 91-100% by year 3 (Solberg et al, 2003). The advantages granted by this kind of device seem to

outweigh any disadvantages stemming from the supplemental feeding of deer. This device is well suited to a community level approach and may be helpful under certain conditions as part of a comprehensive program, but its use is subject to state and local regulations.

#### **Damminix Tick Tubes**

These devices consist of cardboard tubes filled with permethrin-treated cotton balls which mice use for nesting material. The ticks that feed on mice in the spring and fall are exposed to permethrin and killed. This product is commercially available, though not in every state, and well suited to a property-level approach.

### **REFERENCES:**

- Jordan, RA, TL Schulze, and MB Jahn. 2007. Effects of reduced deer density on the abundance of Ixodes scapularis (Acari: Ixodidae) and Lyme disease incidence in a northern New Jersey endemic area. Journal of Medical Entomology 44: 752-757.
- Ostfeld, Richard. Lyme Disease, the ecology of a complex system. 2011.Oxford University Press.
- Perkins, S.E. and I.Cattadori, V. Tagliapietra, A. Rizzoli, and P. Hudson. 2006. Localized deer absence leads to tick amplification. Ecology 87 (8), pl 1981-1986.



PHOTO BY: KALI PEREIRA/THE HUMANE SOCIETY OF THE UNITED STATES

### Why killing deer isn't the answer

Lethal management does not address the root causes of conflict with deer

### Killing deer doesn't reduce the deer population

Communities experiencing conflicts with deer often turn to lethal management, assuming hunting or organized deer culling will decrease the deer population; however, there are issues with this approach:

- Increased reproduction: Deer are very adaptable, and their productivity is keenly tied to their food resource. When there are fewer deer in an area and abundant food, they will maximize their reproduction – i.e. having twins and triplets in the spring instead of a single fawn. This causes their numbers to rebound quickly after any deer removal. Therefore, even if deer numbers can be lowered, they don't stay at that level.
- Immigration of new deer to area: Deer from the surrounding area may take advantage of any vacated niche. This, combined with a high reproductive rate, can lead to deer numbers bouncing back quickly after any population reduction effort.

- Deer moving to sanctuary areas once hunting or professional culling commences: Deer will move into unhunted "safe" areas within their habitat (or even make long distance movements) in response to hunting or culling activities. Once lethal control has ceased, they move right back into their original territory.
- Increased removal effort: Even if deer numbers are lowered immediately following lethal removal efforts, it then requires more effort by hunters or sharpshooters to take out the same number of deer (since the deer will be scarcer and warier) in subsequent years. Lower deer numbers also make the environment less attractive to hunters, and drive up costs for professional culling.
- Recurring challenge: Getting deer numbers to a low level, and then keeping them at that level, can be extremely difficult and result in the need for perpetual annual hunts or culling activities.



### Killing deer doesn't reduce conflicts with them

Proponents of killing deer may argue incorrectly that it is necessary to protect ornamental trees, shrubs and gardens, prevent deer/car collisions, protect parks and wooded areas from "over browsing" and biodiversity loss, and reduce Lyme disease transmission. However, killing deer will not solve people's conflicts with them.

- Killing deer will not protect gardens and shrubbery. Certain plants like tulips and hostas are irresistible to deer. Even if the deer population could be brought to a very low level, these top-choice flowers would still be eaten by any remaining deer. That's why <u>effective solutions</u> focus on deterring deer and protecting flowers and ornamentals rather than trying to control or remove every deer that may come along and eat them.
- Killing deer will not stop deer/car accidents. Reducing the deer population does not necessarily reduce the number of collisions between cars and deer. In some cases, collision numbers are actually lower in areas with more deer. <u>Many factors contribute to deer-vehicle collisions</u>, such as traffic volume, speed limits, the extent to which roads bisect habits and migration routes and the use of visual barriers.
- Deer kills are not the solution to forest regeneration. It is easy to point the finger at deer and blame them for our forest regeneration woes, yet the reality is that our ecosystem issues are fraught with complexity and subject to human aesthetic preferences which are often not grounded in any sort of biological reality. Arbitrarily killing deer isn't likely to bring back the type of forest people may want to see.
- Deer kills will not reduce the incidence of Lyme disease. The black-legged tick, the tick that spreads Lyme disease, is very adaptable and feeds on many different hosts—almost all mammals, most songbirds and even lizards. Where deer are scarce, the ticks switch to other hosts or congregate in higher numbers on the remaining deer. Deer killing programs have little effect on the tick population—and don't reduce human disease risk.

### What does work

Communities should first do objective public surveys to define and assess the nature, scope and location of particular conflicts so solutions for the root causes of conflicts can be tailored. Using this information, a comprehensive, practical, effective, science-based, long-term management plan using non-lethal methods with an emphasis on data collection and evaluation should be implemented. There will always be deer; they key is to learn to coexist.



PHOTO BY: RICHARD ELLIS/THE HUMANE SOCIETY OF THE UNITED STATES

For more information visit humanesociety.org/deer.

### **Our Promise**

We fight the big fights to end suffering for all animals.

Together with millions of supporters, we take on puppy mills, factory farms, trophy hunts, animal testing and other cruel industries. With our affiliates, we rescue and care for thousands of animals every year through our animal rescue team's work and other hands-on animal care services.

We fight all forms of animal cruelty to achieve the vision behind our name: a humane society. And we can't do it without you.



1255 23rd Street, NW, Suite 450 Washington, DC 20037 humanesociety.org

©2018 THE HSUS. ALL RIGHTS RESERVED.