



# Deer Management Program

Revised edition July of 2019



Deer Management Plan  
Delafield, Wisconsin 53018

## CITY OF DELAFIELD DEER MANAGEMENT COMMITTEE

In April of 2018 the City of Delafield Common Council approved the formation of a citizens committee to spearhead the efforts to control the overpopulation of deer.

We implemented a several steps to solve the problem over the next few years.

1. The City and committee works with the Wisconsin Department of Natural Resources (DNR), The Kettle Moraine Southern Forest Unit and the County of Waukesha to fully understand and support their efforts to control the deer population in the area they are responsible for, and which affects the health, safety, and welfare of Delafield residents.

A. Efforts to control the deer herd in State and County Parks are vital to the overall success of this program. The city and this committee continue to work with the key players to encourage public bow hunting and state paid sharpshooting in Lapham Peak.

B. The committee is working with the County of Waukesha Parks Department to investigate controlled bow hunting in Nagawaukee Park, which was identified as a particularly problem area. The aerial survey spotted 30 deer in only a ¼ square mile of Nagawaukee Park. This number is 4 times the number of deer in other parts of the city.

1. The County officials have indicated that they will conduct a browse survey in the summer of 2019 in Nagawaukee Park and may consider allowing controlled bow hunting in the park if warranted.

2. The City will apply in a timely fashion for authorization from the DNR to implement a yearly culling program.

A. The City utilized sharpshooting with center fire rifles for the lethal removal of deer. Bait was used to attract deer to the sites. The Deer Committee determined locations, and all other conditions for the sharpshooting activities. The committee is required to submit to the Common Council yearly goals and financial request for the culling program. Allow this report to serve as the required report to the common council. We would like to request \$9,000 in the next city budget to continue the sharpshooting program and other effort.

3. The Committee encourages the harvesting of deer on specifically identified city lands for wildlife management. Licensed hunters will be allowed to bow & arrow hunt when registered and given a permit at the following locations: city brush drop-off site (off Cushing Park Road), Lois Jensen Park, and Oakwood Park. The public season runs from September 14th, 2019 to January 31st, 2020. Deer stands/blinds will be provided for hunting on the approved city locations. Permanent signage will be erected at the sites to inform all park visitors that active hunting is taking place during this period of time. The 2018-18 Rules and Regulation for Deer Hunting can be found on the City website. Additionally the hunter application and landowner matching program application can be found at the city website.

Results of our 2018-19 effort were that over 100 deer harvested in the City of Delafield. Of those 49 were taken by state approved sharpshooters at a cost of \$7,500. The meat was given to citizens, veterans, homeless and other people that sign up for deer harvested through the sharpshooters. Over 108 hunters signed up to hunt on city property. Those hunters signed through the city website and then were directed to a registration site to sign up for times, location and dates to use the city stands.

We shall refer to the aerial survey later in this report, but even without an aerial survey or browse survey, one only needs to interview a few Delafield homeowners or briefly travel Delafield neighborhoods to realize there is a significant deer overpopulation problem in our City.

*A very conservative estimate could conclude that we had 29 deer per square mile in Delafield. A more realistic estimate would be that we had between 35 and 49 deer per square mile. Our 2018 efforts reduced that number by 9 deer per square mile.*

To prevent irreparable damage to the ecosystems in Delafield and to prevent significant injury and illness to persons or damage to property, be it resolved that the City of Delafield will continue to promote a “Social Carrying Capacity” goal of reducing the Whitetail deer population to 10-19 deer square mile of Deer Range in the City by the year 2023. This plan shall serve as a guide to safely and effectively reduce the herd over the next five years and then maintain a manageable deer herd thereafter.

**THE PROBLEM** - Whitetail deer are very abundant across North America and this is especially true in Wisconsin and Delafield. While they are recognized as a valuable natural resource for their viewing as well as for the hunting opportunities they provide, unfortunately their numbers have reached a point where the deer population conflicts with many of the interest of homeowners and has become unacceptable. The four major problems created by an overpopulation of deer are:

1. Ecosystem damage to plants, shrubs, vegetation, and trees on private and public grounds.
  - a. In parks and other natural areas, deer consume wild plants. Over time, spring wildflower displays diminish. Plants highly prized by deer decline or disappear entirely. In some places, deer are responsible for the disappearance of over half of all plant species—in just a few decades.
  - b. An average deer will eat nearly 500 kg of vegetation each year.
2. Deer are a major cause of car accidents. There are over 1 million deer-vehicle collisions annually in the United States amounting to over 1 billion dollars in repair costs. These collisions can result in human injuries and even death. Waukesha County has consistently been among the top Wisconsin Counties for deer/vehicle accidents
3. Whitetail deer are also a host for ticks that carry Lyme disease as well as other bacterial infections. There is some question as to whether reducing deer numbers will reduce the prevalence of Lyme disease, but it will certainly reduce the tick abundance.
4. Chronic Wasting Disease (CWD) is increasing in Wisconsin and Delafield as well as all of Waukesha County is deemed a contaminated County. There is a much greater chance of this disease spreading as deer densities increase and deer-to-deer contact become more common. As of now, there is no evidence of human health implications with CWD but the U.S. Centers

for Disease Control advises that people do not consume meat from deer that test positive for CWD. Research continues to improve our knowledge of this disease.

## WHAT IS CAUSING THE PROBLEM

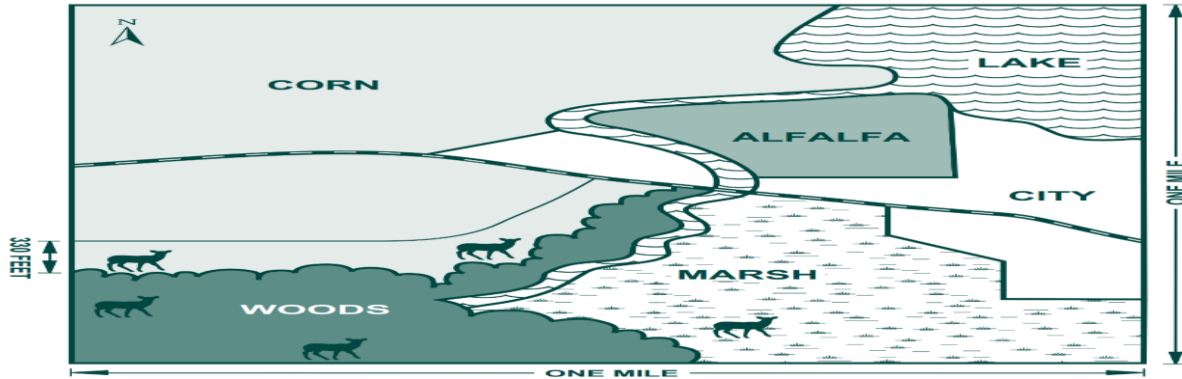
Since 1930 the deer population in Wisconsin has increased 1000%! The large deer population can be attributed to the abundance of food and habitat in the area and the lack of pressure from predators and hunting. They are extremely adaptable in both habitat and diet selection. Although they are considered a forest edge animal, they do well in large forests as well as suburban environments. Delafield provides high quality foods in the form of gardens, ornamental plantings and fertilized lawns while nearby woodlands provide daytime refuge. Delafield has a unique combination of forest land and suburban environments. The lifespan of a deer in hunted areas seldom exceeds four or five years of age but can range from eight to twelve years in un-hunted populations.

A deer's home range is the area that it can find all it requires of life (food, water, shelter). Deer become very familiar with their home range and tend not to leave it. Bucks may extend their range during the rut, but females tend to spend their entire lives in a relatively compact area. This can be beneficial when harvesting deer in a somewhat isolated area such as Lapham Peak, Nagawaukee Park or City owned property. Once deer are removed, it may take many years for new deer to migrate in and increase the population.

Since predation is very limited in a suburban setting, hunting can be the primary cause of mortality if allowed. Safe hunting and other forms of population reduction will help offset the high reproductive rates and help to control an expanding deer population.

## II THE SIZE OF THE PROBLEM (The following information is taken from the WI DNR Deer Management Program)

The factors that come into play when identifying the size of the deer problem are **biological carrying capacity**, which is the maximum number of deer that can survive on the land, and **social carrying capacity**, which is the number of deer that people can tolerate. A recent aerial survey spotted 323 deer in the Delafield area. While that number alone is significant, the deer per inhabitable "deer range" in Delafield is well above the DNR goals. In the past the DNR has established deer management units. Delafield was in Management zone 77c. "Deer Range" is expressed in "deer per square mile of habitat". Recently the WI DNR has shifted the management units to be defined by counties. Each county establishes a volunteer committee to address deer management and hunting goals. Not all land within the boundary of a deer management unit provides a good year-round home for deer. For example, deer don't live in lakes and are not often found in heavily urbanized areas or large uninterrupted agricultural fields (Figure below).



The DNR estimates the number of square miles that provide suitable habitat for deer within a Management Unit. The amount of deer range in a unit is always smaller than the total square mile area in a unit. So, when wildlife managers say there are “23 deer per square mile” in a unit, they are referring to the number of deer per square mile of deer range. The DNR estimates 23 deer per square mile in Waukesha County. (page 15) DNR uses a formula of a percentage of the square miles to be “deer range” and the DNR is managing to a goal of 10-19 deer per square mile. (next figure)

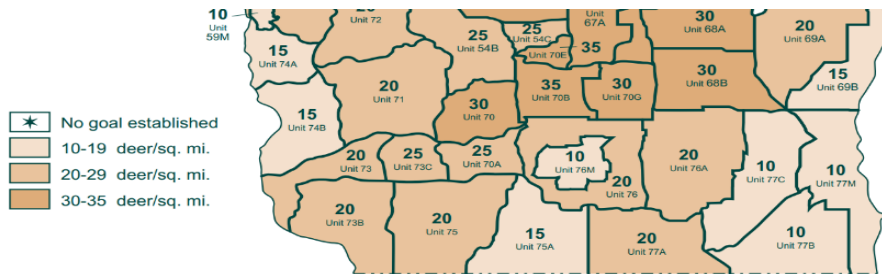


Figure 6. Current overwinter population goals for each deer management unit. These goals range from 10-35 deer per square mile of deer range.

Deer Management Program ■

Local DNR Unit Managers determine how much deer range exists in their units from photographs of the land taken from the air and satellite images. Deer range includes all permanent cover—forest, woodlot, brush-covered land or marsh—at least ten acres or more in size. Because deer often use farm fields adjacent to permanent cover, 330 feet into these fields is also included in calculations of the amount of deer range in a deer management unit. The amount of deer range varies greatly among deer management units—from over 95% in some northern units to less than 30% in some of the highly urbanized and/or agricultural units in the south.

The authors of this report use 70% of the roughly 11 square miles (actual square miles of the City of Delafield) or 7.7 square miles to define our “deer range”.

While the aerial survey counted 323 deer, one must consider the possibility of deer missed in the count or deer counted twice. Several states including Connecticut use a plus or minus factor of 20% in their counts. The person commissioned by the City of Delafield to conduct the count felt a factor of plus or minus 15% would be fair when estimating the deer herd. So, the herd could range from a low of 274 deer to a high of 371. If one used the 20% plus factor, herd could be as large as 387. If one would define the “deer range” in Delafield as 7.7 per square mile and applied that to the low and high deer herd estimates, it would be reasonable to conclude that there are between **35 and 49 deer** per inhabitable deer range in the City of Delafield. In comparison, the DNR estimates the deer herd in the

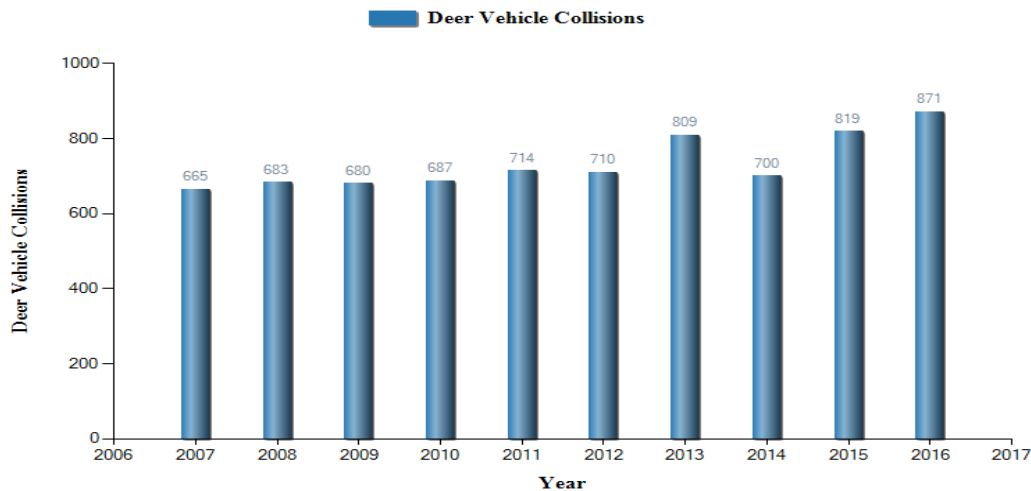
County of Waukesha to be 23 deer per square mile. The Delafield deer herd could be twice as high as the County numbers.

An estimate from the aerial survey showed that prior to the 2018-19 Deer Management efforts we had between 35 and 49 deer per inhabitable range. We believe that we reduced the number by 9 and should work toward a goal of only 10 – 19 deer per deer range by 2023.



### III. THE IMPACT OF THE PROBLEM –

1. The large deer herd does have a major impact on the health, welfare and safety to the citizens of Delafield. There are over 1 million deer-vehicle collisions annually in the United States amounting to over 1 billion dollars in repair costs. The graph below shows the number of reported deer/vehicle collisions in Waukesha County (871) in 2016. In 2013 Waukesha led the state in deer vehicle collisions. The City of Brookfield has reduced their deer herd by 50% since implementing a deer management program and at the same time reduced deer/vehicle accidents in half. Dane County led the way with 1006 collisions in 2016. The large deer herd in Delafield has contributed to a higher than normal accident rate in Waukesha County. An effective deer management program in Delafield can have the same impact as in Brookfield.



2. A large deer herd could contribute to a higher number of deer ticks. Several Delafield residents have complained that they have contracted Lyme Disease and feel the large deer herd contributed to them contracting the disease.
3. As mentioned previously the number of deer that people will accept, regardless of habitat conditions, is called the "Social Carrying Capacity". Quite often, the social carrying capacity is much lower than the biological one. While people enjoy seeing deer in the wild, a significant and vocal number of Delafield residents are frustrated by the damage to landscape and vegetation caused by deer. They want a program to control the deer herd.
4. Chronic Wasting Disease (CWD) is increasing in Wisconsin and Delafield as well as all of Waukesha County is deemed as a contaminated County. There is a much greater chance of this disease spreading as deer densities increase and deer-to-deer contact become more common. Chronic wasting Disease. Chronic wasting disease (CWD) is a transmissible spongiform caused by unusual infectious agents known as prions. To date, CWD has been found mainly in cervids (members of the deer family). CWD is typified by chronic weight loss leading to death. The disease is thought to spread through the exchange of saliva and other fluids. The WI DNR strongly discourages people from feeding of deer as feeding or baiting can lead to opportunities for deer to pass CWD to other members of the herd.

#### IV. SOLUTIONS TO THE PROBLEM-

The first step in the implementation of the program was to seek the endorsement of these written concepts from the City of Delafield Common Council and make necessary changes to the city ordinance 9.03. to allow limited and select hunting in over populated areas controlled by the City of Delafield. (see suggested exception on page 9 in red). The city did change the municipal code to meet the requirements of the state law allowing bow hunting in the city limits.

*9.02(6) "Throwing, shooting or hunting with bow and arrow or crossbow on City property unlawful. It shall be unlawful for a person to throw, shoot or hunt with a bow and arrow or crossbow on or across any City owned or leased property whether posted as such or unposted. **This section shall not apply to the discharge or use of any bow and arrow or crossbow on City property that is specifically approved by the common council for the purpose of nuisance wildlife management.**"*

1. For 2019-20 the Deer Management Committee will encourage the legal bow hunting of deer within the City limits on private property. We are starting a matching program to encourage landowners to allow approved hunter to hunt on their land.
  - A. The State law allows for bow (or Crossbow) hunting within City limits.

*9.03 (3) It shall be unlawful to throw, shoot or hunt with a bow and arrow or cross-bow within 100 yards of a building. This restriction shall not apply if the person hunting has on his/her person the written permission of the building owner to hunt within a specified distance of the building. For purposes of this section, "building" means a permanent structure used for human occupancy and includes a manufactured home as defined in § 101.92(2), Wis. Stats*
  - A. Public Education and Community Cooperation.

The Deer Committee will work with the City administration and City committees to spread the word about the deer management program. We will be sending a post card to all city residents with this information.

#### **City of Delafield Deer Hunters/Landowner Matching Program**

Subject to state law, licensed deer hunters are allowed to bow & arrow hunt on private property within the Delafield City limits (see Delafield's Municipal Code 9.02). We are seeking landowners who would allow pre-approved bow hunters to hunt on their property to help us control the deer overpopulation. For further information, please visit the City of Delafield's website and read the section on Hunter/Landowner Matching program. The applications for both landowners and hunters are available at the site [www.cityofdelafield.com](http://www.cityofdelafield.com) under the Deer Management section. Additionally, licensed hunters will be allowed to bow & arrow hunt when registered and given a permit at the following locations: city brush drop-off site (off Cushing Park Road), Lois Jensen Park, and Oakwood Park. The public season runs from September 14th, 2019 to January 31st, 2020. Deer stands/blinds will be provided for hunting on the approved city locations. Permanent signage will be erected at the sites to inform all park visitors that active hunting is taking place during this period of time. If you harvest a deer please email us at [delafieldjoeb@gmail.com](mailto:delafieldjoeb@gmail.com) so we can keep track of our progress. Thank you.



Delafield Citizens must be educated and encouraged not to feed the deer. Due to the ways that CWD is spread it is illegal to feed deer. Bird feeders should be placed high enough, so deer cannot reach. Additionally, the committee needs to work with the Town of Delafield, Summit, and Nashotah to co-op efforts to educate the public, promote bow hunting.

According to a wildlife biologist, left unchecked a deer population can double every four years. To even reduce the Delafield herd to the 23 deer per range currently estimated in the county, we would have to harvest 179 deer in 2018. We harvested 103 that we know of, yet more deer probably were harvested by private hunters that did not report their harvest to the city officials. The goal to reduce the herd to the 23 per deer range in one year would be impractical. That is assuming that the current herd did not increase in the spring time from normal reproduction. Throughout the state where gun and bow hunting is allowed, the state saw an increase of over 8% in the deer herd. In fact, in 2017 the DNR recommended an increase of 8% in allowable doe tags. The biggest factor influencing the size of the deer herd is not wolves, bears or other predators...it is weather and hunting. The fact that 2017 Wisconsin hunters harvested the smallest number of deer in 25 years, combined with the mild winter and available food could be setting the area up for a huge growth in the deer population. The perfect storm is brewing. The population of deer could double in the next four years.

We must establish a systematic approach to this problem with clearly defined goals and objectives. The following would be reduction goals, assuming an 8% normal reproduction increase. The Deer Management Committee will adjust the numbers as needed.

Year	Herd Size	Bow Hunting City Land	Bow Hunting Private Land	City Contracted Sharpshooting	County, and state park harvest
2018 actual	400	21	33	49	0
2019	345	40	50	50	15
2020	265	20	20	35	15
2021	167	20	20	10	15
2022	110	20	20	0	0
Maintenance thereafter	75		20		

**BOW HUNTING ON CITY LANDS**

Bow or crossbow hunting on specially selected city property should be encouraged and promoted by the Citizens Deer Committee. The Deer Management Committee would work with City Officials and the Parks & Rec Committee to establish safe and legal bow hunting guidelines on City property. Allowing public bow hunting on select city property is the most effective and legal method to control the deer herd without spending significant amounts of city dollars. Strict hunter education and certification standards in addition to regulations governing hunter behavior will be stressed by the

committee. Such standards address some of the more severe criticisms of the humaneness and effectiveness of bow hunting. The committee will develop guidelines to address to issues as you who is allow to hunt in select areas and how one would be awarded “tags” or permission to hunt city lands. Is it safe? YES!

Evidence indicates that urban bow hunts pose very little risk to people. No evidence of injury to humans appears in any of the programs reviewed.

Is it effective? YES!

Bow Hunting for deer has increased to the point that harvesting deer with a bow (51%) has taken over gun harvesting (49%). (See page 14.) It can be very effective, assuming that sufficient numbers of hunters are willing to comply with the additional regulations governing hunting within City limits. However, in areas where culling of large numbers of deer is recommended, bow and arrow hunting alone may be ineffective in reducing the population. Bow hunting can be selective. The hunting season is before the bucks shed their antlers, so gender is fairly easy to determine. Hunting traditions place a high value on killing older bucks—the so-called trophy bucks with large, many-branched antlers. This is of little use if population control is the goal. If bow hunting is to be used as an effective component of a population control plan, hunters must be induced to kill does.

#### **BOW HUNTING ON PRIVATE LANDS-**

Even in a city like Delafield there are still areas available for bow hunting on Private Lands. The Deer Committee would work with private land owners that are not hunters or wish to allow others to hunt their property. The committee would create a sort of Land Owner/Hunter Registry to match potential hunters with available land. Additional this committee would work with the City of Delafield Promotion and Tourism to promote opportunities for hunters to come to Delafield to hunt. The promotion of available hunting opportunities and locations could be promoted at Delafield Days and other community events. A sub-committee of the Deer Committee would be responsible for working with local sporting goods retailers and other corporate sponsors to promote the hunting opportunities in our city.

**SHARPSHOOTING-** Sharpshooting has been used in residential areas and parks to control deer populations and has been the kill method approved by the City Council over the past several years. High-powered rifles are the weapon of choice for sharpshooting. In a professional sharp-shoot, shooting sites are selected based on safety and access to deer. An appropriate site includes an orientation relative to the bait station so that shooting occurs from an elevated location (e.g., a tree stand or from the top of a ridge), which directs the bullet in a downward trajectory. Site preparation, consisting of clearing underbrush and pre-baiting, lasts for several weeks. Is it humane? A high-powered rifle can cause instantaneous death; from this point of view, no method of killing is more humane. Of all weapons for killing at a distance, high-powered rifles are the least likely to inflict an inhumane wound, one that cripples, or kills slowly. The likelihood of such injuries is reduced even more by using trained sharpshooters and a bait station to attract and hold deer for the kill.

**Is it safe?** All evidence indicates that urban sharpshooting poses little risk to people. No evidence of injury to people or property was reported in any of the programs we reviewed.

**Is it effective?** Assuming there is appropriate access, yes. Studies have shown, and DNR advisors concurred, that sharpshooting is more effective at reducing larger numbers of deer than bow and arrow hunting. But with limited city financial resource, sharpshooting allow will not reduce the herd.

**SUMMARY-** To have a meaningful impact on this problem we must continue to combine City Contracted Sharpshooting, State and County Park Deer Harvesting, with private land owner and City property allowed bow hunting to reduce the deer herd. Only through a systematic approach to legal deer reduction methods can we achieve the goals in a reasonable amount of time. The citizen-led committee will work to fine tune and implement the goals established in this report.