DEER IN THE URBAN ENVIRONMENT

Issues Analysis and Management Plan

For the City of Golden Valley

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TABLE OF CONTENTS

PART I - ISSUES ANALYSIS

1.0 Introduction

White-tailed deer (Odocoileus virginianus) are probably the best known and most widely distributed large, non-human mammal, not only in Minnesota but in North America as well. They can be found throughout the Twin Cities metropolitan area, where they are viewed as both a valuable natural resource and a nuisance. The mix of wetlands, woodlands and open space found throughout the Twin Cities metropolitan area creates habitat attractive to the white-tailed deer. As communities have expanded and natural habitats have diminished, deer populations in some communities have increased rapidly. The abundance of ornamental plants, garden plants and other food sources, along with the lack of predators and diminished hunting, has allowed the deer to adapt and thrive in the suburban environment. The increasing human and deer populations have also resulted in more conflicts. Increases in car/deer collisions, property damage, browsing of ornamental plants, health issue concerns and ecological damage due to the over-browsing of native plants all can contribute to the point where deer populations can be considered overabundant.

2.0 Issue Indicators

Increases in deer population over the past 15-20 years, combined with the development of remaining lands, have led to increased contact between deer and citizens. Many people enjoy these encounters. However, when the frequency of these encounters approach or exceed human tolerance levels, or the numbers of deer exceed the environment's ability to sustain them, there are indicators to determine if there is a deer overabundance situation.

2.1 Impacts to Native Habitat - Imbalance in Ecosystems

From seed and seedling to mature tree, no forest or residential plant is exempt from animal damage. Various insects cause major damage. Squirrels cut conifer cones and cache them by the hundreds, storing them for two years or more. Birds and small mammals continually consume seeds of species. Seedlings of all types are subject to clipping and bark removal by rabbits; stem and root girdling by voles, mice, shrews and gophers; as well as trampling and browsing by deer. Sapling and pole-sized trees are subject to browsing by deer and defoliation by a variety of insects. Some trees are even damaged by sapsuckers, drilling their distinctive holes in the bark, oftentimes severely damaging or killing these trees. Mature trees and shrubs are susceptible to attack from insect feeders and fungi[1]. All animals and plants contribute to the system dynamics of an ecosystem.

[1]Spurr, Stephen H. and Burton V. Barnes.1980. Forest Ecology. pp. 352-353.

Deer, the largest animals impacting our metro area wooded lands, tend to create an imbalance to small ecosystems when populations of deer enlarge. Extensive browsing and grazing by overabundant deer populations can cause changes to the structure and content of their preferred habitat areas, as well as the habitat of other woodland wildlife species. Essentially, deer concentrate feeding on their favored plants first. When deer populations are low, these plants can survive and reproduce normally. However, when deer numbers are high in an area, the pressure/stress on favored plants is also high, which typically results in lower productivity and survival of the plant species. Deer then move to other less palatable plants to feed within the same habitat or move to other areas in search of alternatives. The result of this feeding selection process over long periods of time is an overall change in the habitat structure and composition.

There is a wealth of documentation on the effects that high deer densities have on the regeneration of forests[2]. Conover summarizes four separate studies by others that demonstrated how the reduction of high deer density resulted in increased plant production, regeneration and/or plant diversity. Others have concluded through related studies that selective browsing by deer can lead to long-term changes in forest canopy composition[3] as well as understory composition[4]. For example, with high deer densities, those forest species that are less tolerant to heavy browsing/grazing, such as pin cherry and oak, will be less common in the future composition of the forest. On the other hand, the more tolerant or the less preferred species, such as maple or common buckthorn will become dominant.

Research suggests that localized deer abundance and landscape changes have altered plant-deer relationships enough that grazing can lead to extirpation of native plant species[5]. For example, in their study, at lower deer densities (13-26 deer per square mile) short-term deer grazing had little effect on a species of trillium (a woodland wildflower), however, at densities greater than 65 deer per square mile, trillium was prevented from recovery.

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[2]Waller, D. M. and W. S. Alverson. 1997. White-Tailed Deer: A Keystone Herbivore. Wildlife Society Bulletin 25(2):217-226.

Augustine, D. and L. Frelich. Effects of White-Tailed Deer on Populations of an Understory Forb in Fragmented Deciduous Forests. Conservation Biology. Vol. 12, No. 5, pp. 995-1004. October 1998.

Augustine D.J./P. A. Jordan. 1998. Predictors of White-Tailed Deer Grazing Intensity in Fragmented Deciduous Forests.

Conover, M. R. 2001. Effect of Hunting and Trapping on Wildlife Damage. Wildlife Society Bulletin 29(2):521-532.
Tilghman, N. G. 1989. Impacts of White-Tailed Deer on Forest Regeneration in Northwestern Pennsylvania. Journal of Wildlife Management 53(3):524-532.

Hough, A. F. 1965. A Twenty-Year Record of Understory Vegetational Change in a Virgin Pennsylvania Forest. Ecology Vol. 46, No.3.

[3]Tilghman, N. G. 1989. Impacts of White-Tailed Deer on Forest Regeneration in Northwestern Pennsylvania. Journal of Wildlife Management 53(3):524-532.

[4]Augustine, D. and L. Frelich. Effects of White-Tailed Deer on Populations of an Understory Forb in Fragmented Deciduous Forests. Conservation Biology. Vol. 12, No. 5, pp. 995-1004. October 1998.

[5]Augustine, D. and L. Frelich. Effects of White-Tailed Deer on Populations of an Understory Forb in Fragmented Deciduous Forests. Conservation Biology. Vol. 12, No. 5, pp. 995-1004. October 1998.

As a result, changes in plant composition and structure of the understory habitat due to deer overgrazing may have broader impacts than on the plant community alone. One researcher[6] found that songbird species richness (number of species) was reduced in the intermediate canopy of woodlands that had deer densities greater than 20 deer per square mile. The deer density threshold for the various songbird species studied was in the range of 20 to 38 deer per square mile. Other research[7] has also documented changes in wildlife use associated with high deer densities. Studies were cited that documented changes in abundance of red-backed voles (decreased) and white-footed mice (increased) due to vegetation changes resulting from deer grazing.

Thus, an overpopulation of deer may alter the forest community[8] and the associated mammal and bird communities in a deciduous forest ecosystem[9]. This alteration of the vegetation and wildlife community may occur gradually. Many people may not recognize that a change has occurred.

2.2 Plant and Landscape Damage to Residential Areas

A consequence of habitat changes due to over-browsing is movement of deer in search of alternative food sources into non-traditional habitat, such as lawns and gardens. Deer depredation of landscaping, especially ornamentals, is a commonly received complaint with respect to deer. Although deer are not the only wildlife species contributing to such damage, they can be a significant factor.

Preventive techniques, such as fencing and repellents, may be effective in reducing damage under some conditions. Additionally, restrictions on backyard feeding of deer also aids in minimizing landscaping depredation by deer. The effectiveness of fencing is relative to fence height, deer density and habitat availability. The use of repellents requires commitment by affected residents. A certain vigilance is required to maintain the effectiveness of repellents. They must be reapplied periodically based on weather conditions and the growth rate of the vegetation. It should also be noted that repellents might not work for all vegetation types. Given the cost, some repellents may be effective for relatively small landscaped areas, such as an average Golden Valley residential lot. However, effectiveness is related to a number of factors, including deer density and the availability and condition of habitat.

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[6]DeCalista, D. S. 1994. Effect of White-Tailed Deer on Songbirds within Managed Forests in Pennsylvania. Journal of Wildlife Management 58:711-718.

[7]Warren, R. J. 1991. Ecological Justification for Controlling Deer Populations in Eastern National Parks. Transactions of the 56th North American Wildlife and Natural Resources Conference.

[8]Augustine, D. and L. Frelich. Effects of White-Tailed Deer on Populations of an Understory Forb in Fragmented Deciduous Forests. Conservation Biology. Vol. 12, No. 5, pp. 995-1004. October 1998.

[9]Warren, R. J. 1991. Ecological Justification for Controlling Deer Populations in Eastern National Parks. Transactions of the 56th North American Wildlife and Natural Resources Conference.

Backyard feeding of deer by well-intentioned residents can result in increased depredation of landscaping on nearby properties. Deer are attracted to easy food sources and become conditioned to visiting bird, squirrel and other animal feeding areas for food. When feeding stops or is intermittent, deer adapt to other food sources in the area. Many communities, including Golden Valley, have adopted feeding bans. The purpose of the feeding ban is to discourage residents from placing corn or other grains in amounts and locations that would attract deer to the area. Deer are opportunistic foragers, meaning they don't do all their eating in one place. However, they can also be very routine in their travel and eating patterns. What this means with regard to residential feeding areas is that deer will generally have a travel pattern they will use for foraging and will eat vegetation along the way; they won't just limit their feeding to feeding sites left by residents. It may also explain why one neighborhood can have a high number of deer damage complaints, while others may rarely see deer.

2.3 Public Safety

The number of car/deer crashes may correlate with deer population density as well as other factors such as the time of year, weather conditions and habitat condition. Car/deer crashes are a concern, and may increase as deer populations increase and traffic volumes increase. Without an effective deer management program in place, a significant means of urban deer mortality is via car/deer crashes. The areas of greatest concern are on the high-speed and high-volume corridors because crashes with deer on these roadways have the greatest potential for significant damage and personal injury. However, significant damage can also occur on slower city streets.

Residents may also be concerned that deer may present a risk to personal safety if surprised or startled by a homeowner in their backyard or along a trail. In some areas where deer are being fed illegally, deer may appear tame or may not flee at the sight or presence of people.

2.4 Public Health Issues

Lyme disease - Another public safety concern identified by residents is Lyme disease. Lyme disease is caused by bacteria that can be carried by black-legged ticks (*Ixodes scapularis*). The black-legged tick is carried by a variety of warm-blooded animals, including white-tailed deer, mice, birds, woodchucks, dogs and other animals. It is believed that the adult black-legged tick will feed on a larger host such as a deer or a dog before dropping off and laying eggs on the ground. The nymph stage is thought to feed on smaller animals such as rodents and birds. The nymph stage is very small, about the size of a pinhead. The bacteria can be transferred to humans when bitten by an infected black-legged tick.

The Minnesota Department of Health (MDH) has tracked the number of reported cases of Lyme disease in Minnesota since 1982. The number of reported cases has increased in recent years; however, it is unknown whether this is due to increased incidence or just increased reporting. Most reported cases in the metro area have been from Anoka and Washington Counties. It has also been noted by the MDH that even though the metro area has a higher rate of reported cases than other parts of the state, the majority of metro cases reported exposure from areas outside the metro area[10].

Although Lyme disease needs to be taken seriously as a health issue, there have been no direct links made between deer population densities and the potential risk for Lyme disease.

3.0 Habitat Requirements

The white-tailed deer requires suitable food, water, shelter and space to ensure its survival. Deer are herbivores and are very adaptable to changing foraging conditions. Suburban areas may provide high-quality food in the form of gardens, ornamental and native plantings and fertilized lawns, while the nearby woodlands offer a daytime refuge.[11] Water requirements are met through direct drinking and through consumption of succulent vegetation. Cover is needed to provide shelter from the elements and concealment from perceived predators. A mixture of upland woods, brush lands, wetlands, grassy openings and agricultural land creates ideal deer habitat.

When deer populations increase, they can change the habitat in which they live. As deer graze and browse in their preferred habitat areas, their preferred forage plant species can become stressed to the point of lower production. As a result, deer may move to other plant species to supplement their diets. As the deer populations increase, fewer species are available and deer seek out preferred alternatives such as ornamental shrubs and garden plantings.

3.1 Assessing Impacts on Habitat

Though deer are present in many areas or habitats which exist in the city, such as neighborhoods, business and industrial parks, and school grounds, the term "preferred habitat," for the purposes of this report, is defined as areas that have been observed holding concentrations of deer primarily during daylight hours, and are predominantly wooded areas with scattered brush and wetlands that serve as primary winter cover. Deer will be often be found in areas outside of those identified as preferred habitat, especially when populations are high and during seasonal migrations; however the preferred habitat areas act as their primary cover. Deer will move from these areas regularly throughout the winter

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[10]Minnesota Department of Health; www.health.state.mn.us/divs/dpc/adps/lyme/statemap.htm; May 2000.

[11]Swihart, R. K., P.M. Picone, A. J. DeNicola and L. Cornicelli. 1995. Ecology of Urban and Suburban White-Tailed Deer. pp. 35-44 in J.B. McAninch, ed., Urban Deer: a Manageable Resource? 1994 Symposium of the North Central Section. St. Louis, MO.: The Wildlife Society.

to feed, especially when residents provide corn and birdseed. Does will also disperse from these areas in spring and summer to find fresh forage and give birth to their young. Bucks become especially active in the fall and may move between the concentration areas for mating.

4.0 Population Densities

There are a number of factors that directly influence the size and carrying capacity of most wildlife populations. The size of the population at any given time is dependent on the number of individuals added through births and immigration (recruitment) and loss through deaths and emigration. If recruitment occurs faster than loss, the population will increase, with all other factors staying the same. Another factor is the average survival of each individual. Increased survival can result in increases in population size. The fertility rate, as well as weather, nutrition and sex ratios, may increase or decrease population size.

4.1 Fertility and Population Growth in the Urban Environment

When comparing urban deer populations to those in rural areas, the survival rates of urban deer are comparable to the survival rates of rural deer in un-hunted herds[12]. Without countering the reduced death rates with some sort of population control, the population may continue to grow. The rate of that growth will be specific to the population dynamics, food availability, mobility of the herd and the management practices of surrounding areas. The effect of immigration and emigration will be dependent on the densities and habitat availability in adjacent communities.

Left unchecked, and with adequate habitat, deer populations have the ability to grow dramatically. A study of deer in the City of Minnetonka has shown that the pregnancy rate of adult does and doe fawns is 93% and 80%, respectively. These adult does typically produced twins and sometimes triplets, and yearlings produced single fawns. However, fawn survival rates were not studied. Deer densities can reach a point where significant habitat changes can occur.

4.2 Carrying Capacity

The quantity and quality of food resources as well as winter cover are limiting factors to the number of deer a given area can support. The number of deer that a given parcel can support in good physical condition over an extended period of time is called the "Biological Carrying Capacity" (BCC). When deer populations increase to where the BCC is exceeded, habitat quality and herd physical condition declines.

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[12]Swihart, R. K., P.M. Picone, A. J. DeNicola and L. Cornicelli. 1995. Ecology of Urban and Suburban White-Tailed Deer. pp. 35-44 in J.B. McAninch, ed., Urban Deer: a Manageable Resource? 1994 Symposium of the North Central Section. St. Louis, MO.: The Wildlife Society.

When deer are living in and around urban areas, another aspect of carrying capacity occurs. Due to deer/human encounters, there becomes a function of the sensitivity of people to the presence of deer. This number of deer that can co-exist compatibly with local human populations is defined as the "Cultural Carrying Capacity" (CCC). CCC is much more difficult to measure because different individuals have different sensitivities to the deer population. It is important to note that relatively low deer densities can sometimes exceed the CCC; as well as high deer densities being acceptable and not reaching the CCC. For instance, an airport would generally have a CCC of zero deer. Thus, each community must develop their own CCC to meet their individual goals.

4.3 Determining Population Counts

The management of urban white-tailed deer populations requires information on deer abundance, birth/death rates and changes over time. Birth and death rates may be estimated using information collected from car/deer crashes regarding the deer's sex, age and reproductive status. If deer removal programs are implemented, this data can also be collected from the deer that have been trapped or harvested for removal.

Aerial surveys performed for Golden Valley by the Three Rivers Park District (formerly Hennepin Parks) are used to estimate the current abundance of urban deer. The counts represent a minimum population size, given that aerial counts consistently underestimate true population size. Dense vegetation, bad weather conditions, observer fatigue and animal movement are some of the factors that can affect the accuracy of the counts.

4.4 Aerial Surveys

Three Rivers Park District conducts aerial surveys, using a helicopter, during the winter when there is snow cover. The District concentrates their flights over preferred habitat areas, and circles each area where deer are observed until all suspected deer in the area are confirmed and counted. This method may result in double counting of some deer in areas where the concentrations are high (20 plus) due to animal and aircraft movement. However, it is not expected that this adds a significant number to the total count, and may compensate for the deer that are missed due to heavy cover. The total number of deer counted in a survey is considered by the District as the minimum number of deer in the study area at that specific time.

4.5 Projecting Future Population Growth

A component of any deer management program is establishing population projections. These projections are made by applying certain assumptions and known statistics to established deer counts. Some of the assumptions and known factors used in making projections include the following:

- Assumption - Deer counts represent the minimum known population.
- Assumption - Deer counts do not identify gender, and therefore the ratio of males to females for all age classes in the population is 1:1.
- Known Factor - Fertility rates are based upon climate and habitat conditions, and may be different from year to year.
- Known Factor - Deer killed by vehicles can be tracked through established reporting systems, and can be factored into a population projection.

Though not completely accurate, estimates of population growth are necessary components of a deer management plan. The goal in establishing projections is a conservative population growth projection that may be lower or higher than what may actually occur.

4.6 Determining Population Density Objectives

The first step in determining population objectives within an urban area is to determine what areas of the city are supporting deer populations and review those areas in terms of their BCCs. For our management purposes, those areas that can provide adequate food, water, shelter and space to sustain a healthy population are then identified as "preferred habitat." Although residential lots and groomed areas in open spaces and parklands may provide some food base, these areas do not supply all components of the habitat requirement and should not be considered preferred habitat.

4.7 Deer Management Units (DMUs)

Based on a number of factors, large areas are divided into smaller areas which are sometimes known as "deer management units" (DMUs). The key factors in establishing DMU boundaries are natural or artificial barriers/deterrents to deer movements, preferred habitat locations and density of deer observations. Concentrations of deer and other specific conditions may vary widely between and within DMUs, and focused research and discussion based on those specific conditions must be done.

4.8 Deer Habitat and Density within Deer Management Units (DMUs)

With preferred habitat areas identified and aerial counts completed, a current deer density can be calculated for each DMU and for the urban area as a whole. The density can then be compared to the number and location of car/deer crashes that have occurred and the number and location of deer nuisance complaints that have been received. Consideration can also be given to data on deer abundance, preferred habitat, crash data and residential attitude toward deer (see *Appendices B* and *C* for data).

It is important to note that the desired density of deer proposed for a DMU may need to be initially less on land that is over-browsed as opposed to habitat in good condition. Therefore it may be desirable to set the target population goals lower initially for specific DMUs, and allow for habitat recuperation before establishing an ideal population level.

An urban deer population of 15 to 20 deer per square mile of habitat has been a common goal for suburban communities in Minnesota, according to the MnDNR[13]. In establishing desired deer densities, a number of factors must be considered and weighted in terms of the conditions that exist within each DMU.

Each management unit's density goal is dependent on several factors, including current and historic deer densities in each area, the cultural carrying capacity, the number of complaints, the number of car/deer crashes, browse observations and scope, and the determined biological and cultural ecologies of preferred and existing habitats.

5.0 Deer Population Management Options

There are a variety of options that can be used for controlling deer populations. Not all options can be implemented in every area due to certain physical and sociological parameters. For example, the option of re-introduction of timber wolves or mountain lions is not feasible in an urban area due to a lack of appropriate habitat for these predators.

Many population control methods focus on increasing the mortality rate or decreasing the fertility rate. Culling methods (removal of individuals from the population) that focus on removal of female deer accomplish both a population reduction through increased mortality, as well as future decreases in fertility by removing productive females. Contraceptive methods focus only on the fertility rate by limiting the reproductive capability of individual females within the population. Therefore, culling methods can provide immediate population reduction results while contraception methods take much longer to effectively reduce population sizes[14].

It is prudent to use a combination of several options depending on the situation, or to prioritize options, so that if the first option does not achieve the density goal, another option can be implemented to supplement the initial results. A comprehensive approach to managing deer populations, such as Golden Valley should employ, will include public education regarding deer ecology, deterrents to minimize conflicts with deer, monitoring of the deer population for changes and trends, regulating the feeding of deer within the city limits and methods to control the size of the deer herd.

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[13]Lueth, Bryan K. and John J. Moriarty. State-Wide Perspectives of How Other Communities are Handling the Deer Population. Presentations. City of Golden Valley, Minnesota. Deer Task Force Meeting. May 15, 2006.

[14]Hobbs, N. T., D. C. Bowden and D. L. Baker. 2000. Effects of Fertility Control on Populations of Ungulates: General, Stage-Structured Models. Journal of Wildlife Management. 64(2):473-491.

5.1 Public Education

A comprehensive public education program can help to control the urban deer population, and can be delivered through news articles, cable programming, the City's website, neighborhood newsletters or workshops.

Residents, especially in problem areas, should be informed of the impact deer feeding has on the deer and on adjacent parcels. They should also be informed about the current feeding ban. Residents should be made aware of methods that can be used to protect their property from deer damage, including repellents, fencing and unpalatable plants. Information will be provided to the general public to help them to understand needs and goals. Density trends, crash rates, complaints, compliments and habitat impacts should all be communicated to the general public.

Signage installed along roadway segments where car/deer crashes are concentrated warn motorists of the potential for deer crossings. Unfortunately, where deer have irregular movement patterns, such as heavily populated urban environments, road signs may prove ineffectual. However, cities, states and counties should work together to post signs on roadways in their individual jurisdictions where deer movement patterns are identifiable.

5.2 Deterrents

Deterrents offer options for residents to help minimize conflicts with deer and deer damage. Deterrents can include things such as fences, repellents, noisemakers and other devices that are intended to keep deer out of landscaped areas and gardens. Deterrents work best in problem areas where deer densities are low to moderate; they direct deer away from areas that will clash with human uses. Effective deterrents may change deer movement patterns. If deer are unable to access one area, they will move to another area to find enough food.

Reflectors for public roadways are another form of deterrent that may minimize the potential of conflicts between deer and vehicles. According to Department of Natural Resources research at Madelia, deer reflectors have had mixed results. Their understanding of reflector effectiveness is that they are generally effective initially (first year), but they become virtually ineffective after that, probably due to habituation by the deer and maintenance issues (very expensive, and time consuming to maintain because they have to be regularly repositioned and cleaned).

The Minnesota Department of Transportation (MnDOT) has developed a program at three rural locations to evaluate a new deer alert system that includes motion sensors and an amber beacon mounted on top of the traditional deer crossing caution signs. The system is designed to provide drivers a visual warning when it detects deer or other large animals approaching the roadway. If the system is proven to be effective in reducing the number of car/deer crashes, it could be tried in other locations.

Deterrents can be effective treating some of the symptoms of deer populations. They may not, however, address all of the problems associated with too many deer (e.g., impact on natural areas). Therefore, a comprehensive plan must also include options for managing deer numbers or density.

5.3 Population Control Strategies

A number of options related to population control are available and utilized around the country. Descriptions of these options follow:

- *Allow nature to take its course* - This option takes no action to reduce local deer numbers. This option depends on car collisions, poaching, emigration and natural mortality to control population size.
- *Trap and transfer* - This option is generally labor intensive and expensive due to efforts needed to trap and then relocate/release deer in a new area. Research has shown that many captured deer are released in sites that appear to be ideal, only to die a short time later due to stress-related issues. Use of trap and transfer is not approved by the MnDNR for use in the state.
- *Birth control/contraception* - The intent of fertility control agents is to reduce the reproductive output so that it is equal to or less than the mortality rate. In urban deer populations, the mortality rates are generally very low, requiring that 70 to 90 percent of the does be treated to effectively reduce population growth[15]. This option is logistically unfeasible due to the fact that each doe to be treated would need to be captured and have the vaccine administered annually. Additionally, a significant amount of population data is necessary to effectively manage long-term population growth using contraceptives[16]. Use of immunocontraceptives has not been approved by the MnDNR for use in the state.
- *Trap and dispatch* - Trapping and then killing deer has been used by a number of cities, and appears to be an effective method of population control in fully developed areas. However, it may not be as efficient as sharp-shooting, as trapping is more labor intensive and can be more expensive. The trap and dispatch option can be most effective in areas where other options cannot feasibly be employed or where individual deer are identified as the problem.
- *Sharp-shooting* - Sharp-shooting is an effective method of population control in areas where hunting is not feasible. Safety is a primary consideration. This method can be implemented through City staff, a private contractor or through volunteers trained under the program.

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[15]Rudolph, B.A., W.F. Porter and H. B. Underwood. 2000. Evaluating Immunocontraception for Managing Suburban White-Tailed Deer in Irondoquoit, New York. Journal of Wildlife Management 64(2):463- 473.

[16]Hobbs, N. T., D. C. Bowden and D. L. Baker. 2000. Effects of Fertility Control on Populations of Ungulates: General, Stage-Structured Models. Journal of Wildlife Management. 64(2):473-491.

- *Introduce natural predators* - This option is intended to restore natural deer predators to an area to cause a reduction in the population due to predator mortality.
- *Increase size of habitat* - This option adds additional deer habitat to an area to decrease the overall deer density. Without corresponding population controls, however, this method would be effective only short-term and that effectiveness would be dependent on the amount of additional habitat added.
- *Provide supplemental feeding* - This option is intended to deter deer from sensitive feeding areas to other less sensitive areas through provision of designated feeding stations.
- *Archery deer hunt* - This option is successfully used by Three Rivers Park District. The number of hunters is regulated and the hunt takes place during regular firearms season.
- *Install deer-proof fencing around natural areas* - Deer could be fenced out of natural areas to allow for natural regeneration of the forest community. Deer-proof fencing is expensive, especially in large-scale applications, and requires regular monitoring and maintenance to keep deer on their intended side. Yearly maintenance costs would vary depending on the amount of vandalism, damage from falling trees or branches, erosion and other factors that could allow deer access. This option does not address the issues of population size and growth (deer density) outside of the natural areas.

6.0 Summary of Conditions

It is well documented that deer populations in urban areas tend to have higher BCCs than CCCs; generally because deer have adapted well to the suburban residential landscape. However, it is also well documented that deer population growth in areas without natural predators may fluctuate over a relatively short period of time, resulting in changes to habitat.

When deer occur in high numbers in suburban areas, they are very visible and may cause unwelcome damage to landscaping, gardens and motor vehicles. The Golden Valley 2001-2005 data shows that car/deer collisions occur in areas throughout the city, indicating that deer regularly move from one area of preferred habitat to other areas of preferred habitat. The Golden Valley 2004-2006 data on feedback about deer received from residents shows that complaints are higher in areas near preferred habitat and/or the areas with the highest deer densities. (See *Appendix B* for data maps.)

There are a number of options available for urban deer population management. However, not all options can be applied to all situations, nor are they all appropriate in all situations. Therefore, each problem area must be assessed against the available options and choices made for the most appropriate options.

Deer management is a long-term commitment. Since humans have displaced the deer's natural predators with the urban environment, the burden is on humans to manage their population densities. This occurs to some extent, by default, via car/deer crashes. However, in the interest of public safety and habitat preservation, other means of deer population management may be considered and implemented.

7.0 Recommendations - Based on Issues Analysis

Numerous cities and agencies within the metropolitan area have established Deer Management Programs to assist in dealing with the issues related to the growing urban deer population. These programs start by identifying goals and objectives and summarizing issues. Management strategies or options are then tailored to fit the specific needs of the each area and their residents.

Based on the information collected regarding the various management strategies, City regulations, safety considerations and citizen discussions, the attached Deer Management Program has been established for the City of Golden Valley. In order for this program to be effective, it is recommended that the City continue to work on an ongoing basis with Golden Valley residents, neighboring communities, the MnDNR and other units of state and local government to provide a coordinated application of the principles contained in the plan.

PART II - DEER MANAGEMENT PROGRAM

8.0 Establishment of a Deer Management Plan

A number of issues have been identified which are of specific concern to Golden Valley. Goals and objectives have been designed to meet the specific needs of the residents, flora and fauna of Golden Valley. These goals and objectives form the framework for an operational management program to be implemented by the City in cooperation with the MnDNR and surrounding governmental units.

8.1 Issues to be Addressed

- Woodland plant communities are adversely impacted as a result of deer populations in excess of their BCC.
- Depredation of gardens and landscaping plants is increasing as native habitat decreases and deer populations increase.
- Blatant feeding causes higher deer concentrations where feeding occurs, which can develop into depredation or public safety problems.
- Increased car/deer crashes are a public safety concern.
- Data collection needs to be refined and monitored to more effectively manage the population.
- There is an ongoing need and desire for concerted and cooperative efforts between neighboring communities.

8.2 Goals and Objectives

The following goals and objectives have been established as an integral part of the Deer Management Plan. Program activities will be designed to manage the white-tailed deer populations in such a way as to:

- Minimize adverse impacts on vegetation in both natural and cultivated areas of the city.
- Minimize the number of car/deer crashes, which are a danger to both humans and deer.
- Monitor and control the deer population to ensure that the habitat available is capable of sustaining a healthy deer population.
- Sustain breeding populations within biologically and/or socially desired limits for each DMU.
- Educate residents as to the value of deer and deer habitat as a resource, as well as ways to minimize nuisance problems through plantings, repellents and fencing.
- Reduce the number of deer depredation complaints.
- Form cooperative agreements and share resources with neighboring communities.

9.0 Plan Components

This plan is intended to implement a comprehensive approach to managing deer populations. Components of the plan include: public education regarding deer ecology and deterrents to minimize conflicts with deer; monitoring of the deer population for changes and trends; regulating the feeding of deer within the city limits; methods to control the size of the deer herd; and ordinances of the city regarding animal control and fencing. Citizen participation in the planning and implementation of program activities will be encouraged. Details of the plan components are as follows.

9.1 Citizen Participation

Citizen participation is an important component, and the City is committed to encouraging involvement and input from residents. A citizen's group may act in an advisory capacity to provide input regarding deer management.

9.2 Education

An ongoing, comprehensive public education program will be emphasized and conducted by the City.

- Residents will have access to information regarding the impact of deer feeding on deer and on adjacent parcels. Communication may take place via news articles, cable programming, the City's website, neighborhood newsletters or workshops.

- Residents will have access to information about available methods to protect their property from deer damage, including repellents, fencing and unpalatable plants. Information may be communicated via news articles, cable programming, the City's website, utility billing inserts, neighborhood newsletters or workshops.
- Residents will have access to information about deer management program objectives and goals (density trends, crash rates, complaints, habitat impacts, etc.).

9.3 Enforcement and Compliance

Ongoing enforcement efforts will create an atmosphere for an interest in compliance with the various rules and ordinances of the City of Golden Valley.

- The Golden Valley Public Safety Department will enforce the City's feeding ban, Ordinance No. 111, 2nd Series, Section 10.34, of the Golden Valley City Code.
- Ordinances of the City, regarding animal control, fencing and vegetation, will be periodically reviewed and enforced.

9.4 Monitoring

Deer populations, densities and other factors concerning the urban deer population will be monitored by the City.

- The City will be responsible for overall coordination and management of the program.
- The City will use aerial surveys to document annual population size.
- The Deer Monitoring Report Form will be made available to residents to aid in monitoring deer in the city.
- The Deer Monitoring Report Form will also be made available to City employees for use when comments are received from the public in other contexts, such as neighborhood meetings or when dealing with residents on unrelated issues.
- The Golden Valley Public Safety Department will coordinate crash data with other agencies to improve data tracking.
- Public comments will be recorded.

9.5 Establishment and Analysis of Deer Management Units (DMUs)

Part I of this document introduced the concept of DMUs as a means to identify areas of study to consider natural or artificial barriers/deterrents to deer movements, preferred habitat locations and density of deer observations. The division of large areas into smaller DMUs allows for focused research and discussion based on specific conditions within identified areas.

The City of Golden Valley recognizes that natural communities exist as assemblages of plants and animals living together in a common environment. We also recognize that the ecological principles of animal and plant establishment, competition, succession and growth are basic and vital to managing healthy ecological communities.

Appendix A contains the results of recent research and analysis from the City's Natural Resources Inventory, and will be revised periodically by the City to reflect conditions present in each DMU and changes to the environment as they occur.

9.6 Determining Deer Density Objectives

Using the preferred habitat areas identified in the Natural Resources Inventory[17], and the MnDNR's recommended BCC ranges[18], the deer density range for each DMU was established. Deer density goals are included as *Appendix B* of this document, and will be revised by the City periodically based on conditions in each DMU.

9.7 Deer Population Control

In order to ensure the natural functioning of both plant and animal communities, a component to address deer population size and growth is part of the overall Deer Management Program.

Factors affecting the mortality rate are natural death, poaching, car/train collisions and emigration to other communities. These controllers may not effectively limit population growth and serve as a component to address the concerns, goals or objectives of the overall program. As population size increases, the natural death rate also increases due to a variety of factors, possibly including starvation and disease. Therefore, consistent with the stated objectives of the Deer Management Program, the City will take action to control the size of the deer population when determined necessary to minimize adverse effects from deer.

- In order to ensure the natural functioning of both plant and animal communities, density thresholds will be set for each DMU.
- Deer counts are assumed to be the minimum number of deer in the city and the population is assumed to be larger than the counts being used. Therefore, targeted removal may initially be larger than what is needed to reach the density goal.

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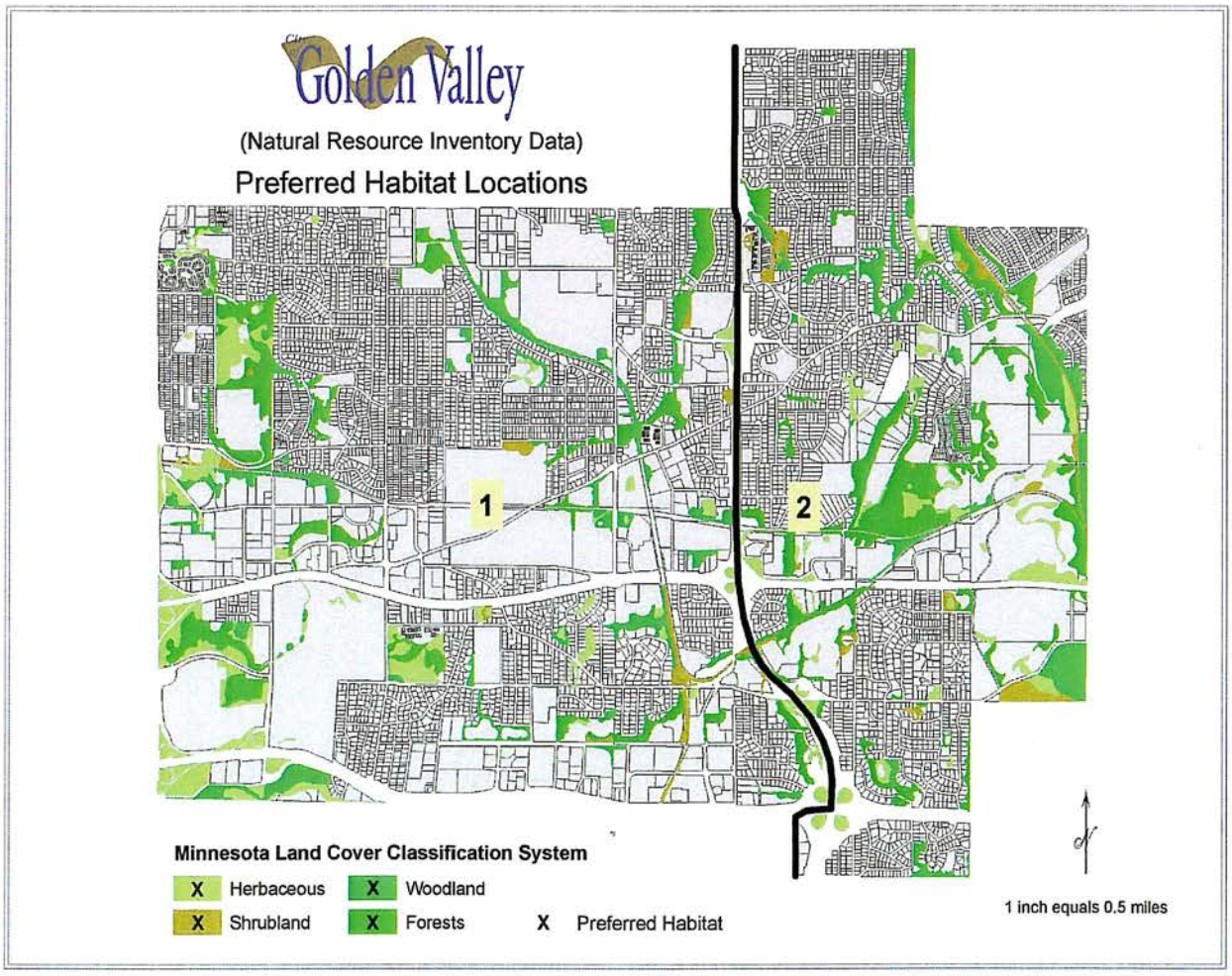
[17]Short Elliott Hendrickson, Inc. Natural Resources Inventory. City of Golden Valley, Minnesota. April 2003.

[18]Lueth, Bryan K. and John J. Moriarty. State-Wide Perspectives of How Other Communities are Handling the Deer Population. Presentations. City of Golden Valley, Minnesota. Deer Task Force Meeting. May 15, 2006.

- Deer movements will likely change as a result of annual management, which may result in deer moving into or out of the city, or moving to new locations within the city. Through annual reviews, the program will be adjusted to respond to the changes and movements of the deer population.
- In the fall, the City will provide annual reviews of the Program. The review will include details of action taken by the City and the aerial count data from the previous winter season. As a result of this review, the City, with input from the Environmental Commission and Open Space & Recreation Commission, may propose population goal changes. Any population goal changes proposed will then be submitted to the City Manager for approval.
- The following methods of population management may be used, dependent upon conditions present in individual DMUs.
    - *Sharp-shooting* - This method is identified as the most effective, humane and unobtrusive method to reduce the deer population to the recommended density goals. Qualified individuals would be used to select sites, bait and remove deer. All sites selected for baiting and removal operations will be reviewed and approved by the Public Safety Department and City staff prior to implementation. Deer culled via sharp-shooting become the property of the State. The bulk of these deer are accepted by local food shelves or other charitable organizations and processed for human consumption.
    - *Trap and dispatch* - This method is to be used in areas where sharp-shooting would not be a viable option for removing deer where deemed unsafe due to proximity to buildings or other activities. Clover, or other similar, traps would be used with bait to lure deer to the trap. Effort will be made to locate traps away from disturbances from dogs or humans to minimize stress to the captured deer. The deer removed by this method would be donated to food shelves for human consumption.

Appendix A
Description and Analysis of Deer Management Units (DMUs)

The City of Golden Valley recognizes that natural communities exist as assemblages of plants and animals living together in a common environment. It is also recognized that the ecological principles of animal and plant establishment, competition, succession and growth are basic and vital to managing healthy ecological communities. In order to understand and analyze these communities, we have identified boundaries of larger ecosystems as Deer Management Units (DMUs). The boundaries of the City's two DMUs, and their habitats, are as identified below:



Deer Management Unit No. 1

This management unit is composed of several natural areas and two golf courses. The preferred habitat includes the General Mills Nature Preserve, the General Mills James Ford Bell (JFB) Nature Preserve, the Western Avenue Natural Area, the Pennsylvania Woods Natural Area and the Laurel Avenue Greenbelt. Each of the preferred habitats consists of a combination of wetlands, wooded uplands and upland prairie.

In addition, this management unit is segmented by several vegetated corridors. The corridors include Bassett Creek and its supporting floodplain areas and two wooded railroad corridors. The management unit includes many other green corridors with park-related trail connections that serve as significant wildlife connections.

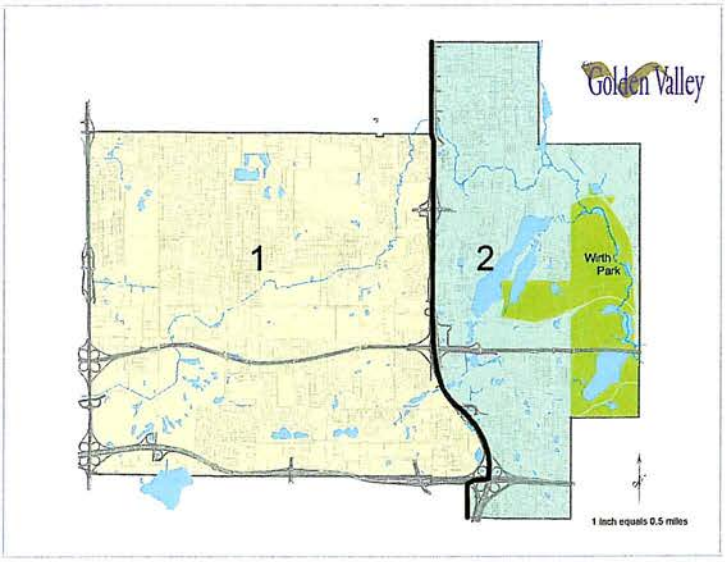
The physical boundaries of this management unit are Trunk Highway 169 on the west, I-394 on the south, Trunk Highway 100 on the east and Medicine Lake Road on the north.

Deer Management Unit No. 2

This management unit is composed of several parks and wooded floodplain areas. The preferred habitat includes the South Rice Lake Nature Area, the Briarwood Bird Sanctuary and Wirth Park. Each of the preferred habitats consists of wooded uplands, forests, wetlands and herbaceous floodplain areas.

In addition, this management unit is segmented by vegetated corridors consisting of three railroad rights-of-way and Bassett Creek. Significant portions of this management unit lie directly adjacent to noteworthy preferred habitat areas. These natural habitat areas include Walter Sochacki Park nature area in Robbinsdale and a preferred habitat area in St. Louis Park known as the Twin Lakes area.

The physical boundaries of this management unit are Trunk Highway 100 on the west, the City of Minneapolis on the east, the cities of Robbinsdale and Crystal on the north and St. Louis Park on the south.



Appendix B
Deer Density Objectives, Goals and Data Maps

Using the preferred habitat areas identified in the Natural Resources Inventory, and the MnDNR's recommended BCC ranges, the deer density range for each DMU was established. Deer density goals are included here, and will be revised by the City periodically based on conditions in each DMU.

Deer Habitat and Density in Golden Valley - March 2006				
DMU	**DMU (in square miles)**	**Preferred Habitat (in square miles) *(A)**	**2006 Three Rivers Flyover Count *(B)**	**Current # Deer (per square mile of preferred habitat) *(C)**
1	6.19	.84	33	39.3
2	5.19	1.07	79**	73.83
Totals	11.38	1.91	112	58.64

*B/A=C (the Three Rivers Park District flyover count, divided by preferred habitat in square miles, equals the current number of deer per square mile of preferred habitat)

**The surveyed total number of deer in DMU #2 includes deer surveyed in preferred habitat areas connected to Robbinsdale's Sochacki Park nature area in the northeast portion of Golden Valley, and the Twin Lake area in the St. Louis Park neighborhood at the south end of DMU #2.

The following table illustrates the maximum deer removal goals for 2006-2007. Financial considerations may limit the actual number of deer removed.

Maximum Deer Removal Required Per Deer Management Unit - 2006-2007							
DMU	**2006 Three Rivers Flyover Count**	***Projected Deer Count March 2007**	**Preferred Habitat (in square miles) (D)**	**Minimum BCC Goal (E)**	**Maximum BCC Goal (F)**	**Maximum Total Deer to Remove per 2005-2006 Data**	**Maximum Total Deer to Remove projected for 2006-2007**
1	33	39	0.84	13	17	20	26
2	79	94	1.07	16	22	63	78
Totals	112	133	1.91	29	39	83	104

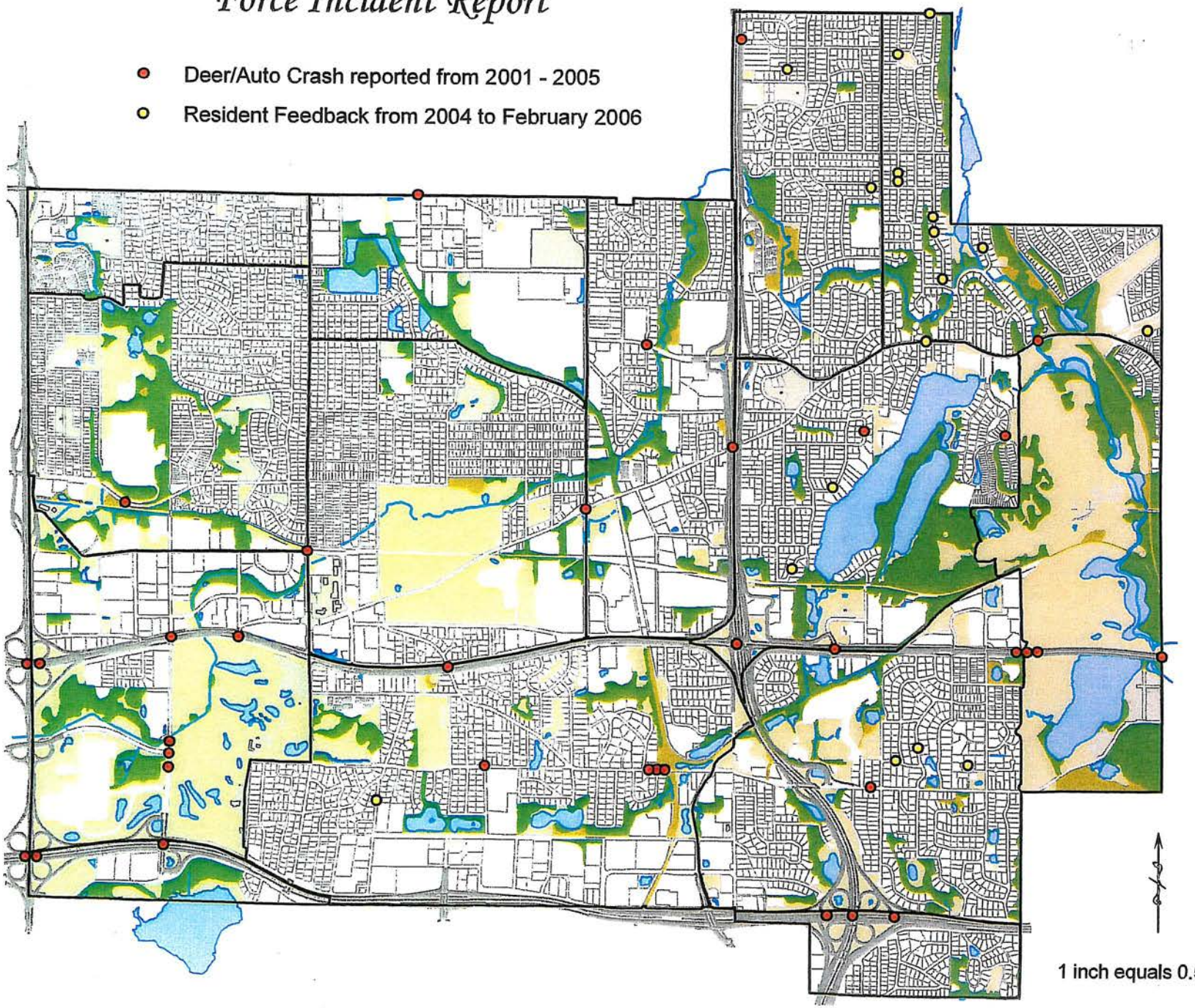
*Based upon MnDNR calculations for urban deer (20% increase)

Utilizing MnDNR range of 15 (minimum) to 20 (maximum) deer per square mile as a common goal for Minnesota suburban communities; Dx15=E and Dx20=F

The contents of Appendix B will be updated periodically by the City to reflect conditions present in DMUs.

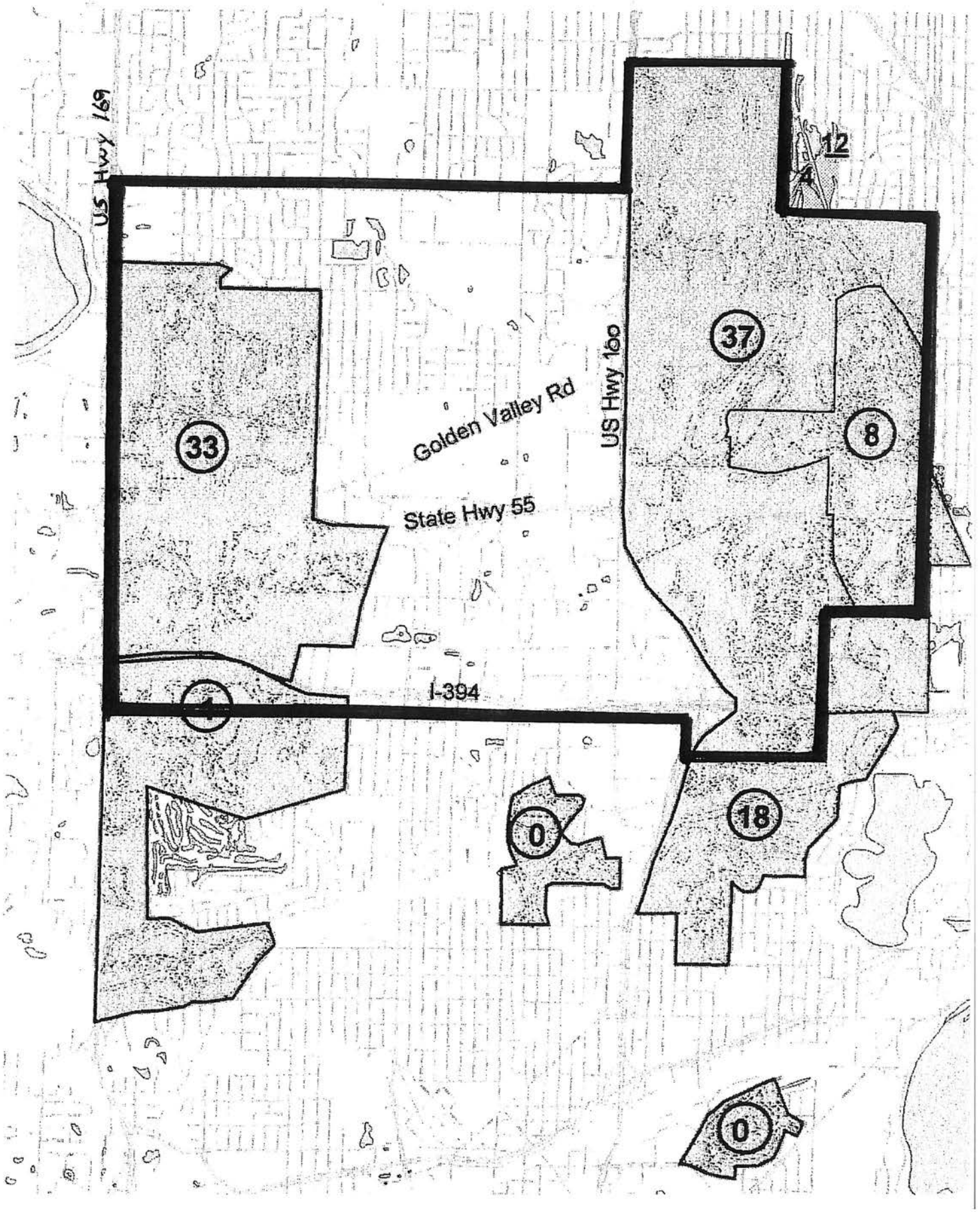
City of Golden Valley Deer Task Force Incident Report

- Deer/Auto Crash reported from 2001 - 2005
- Resident Feedback from 2004 to February 2006

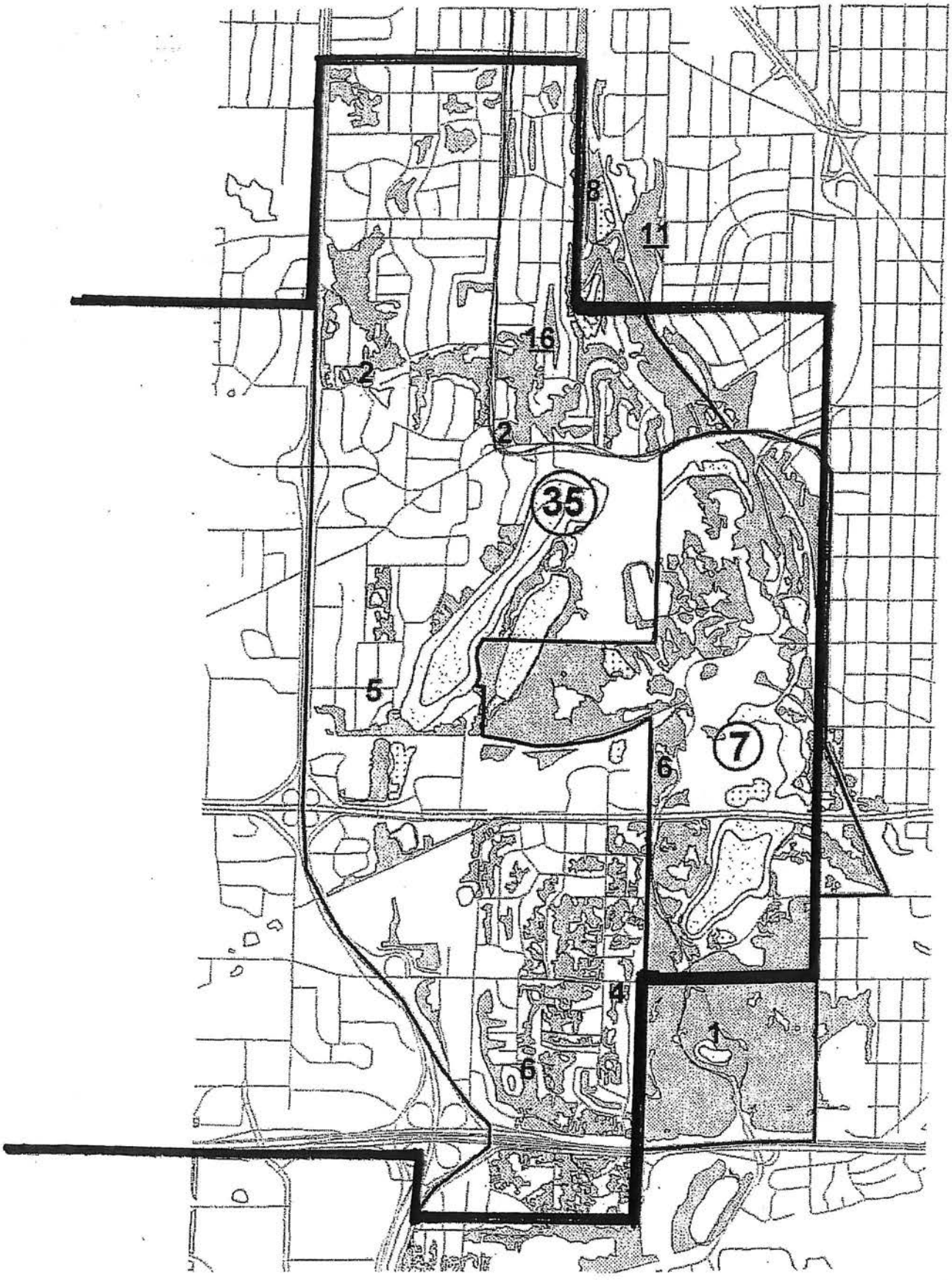


1 inch equals 0.5 miles

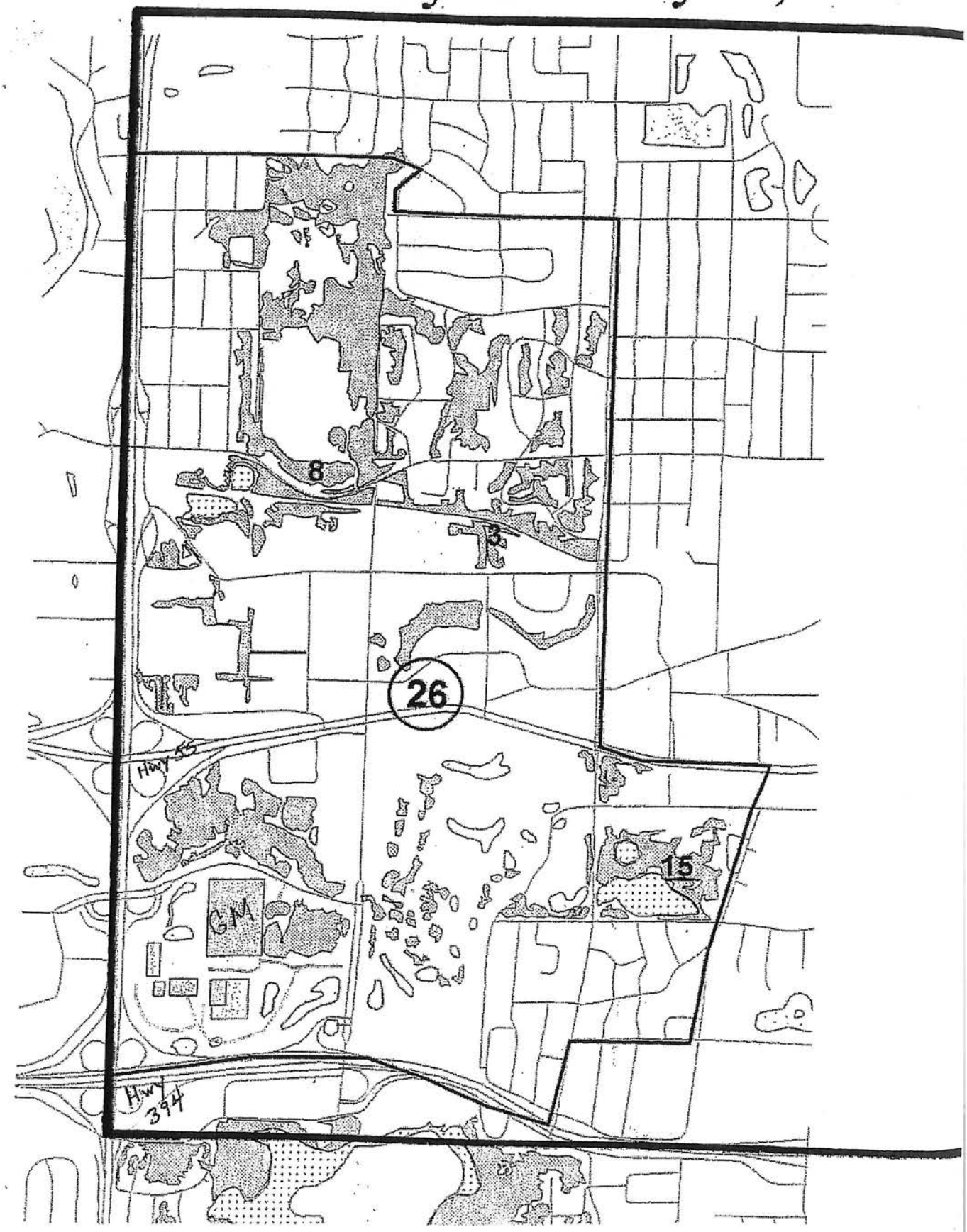
Golden Valley, St. Louis Park and Theodore Wirth Park
Summary of Aerial Deer Survey March 20, 2006



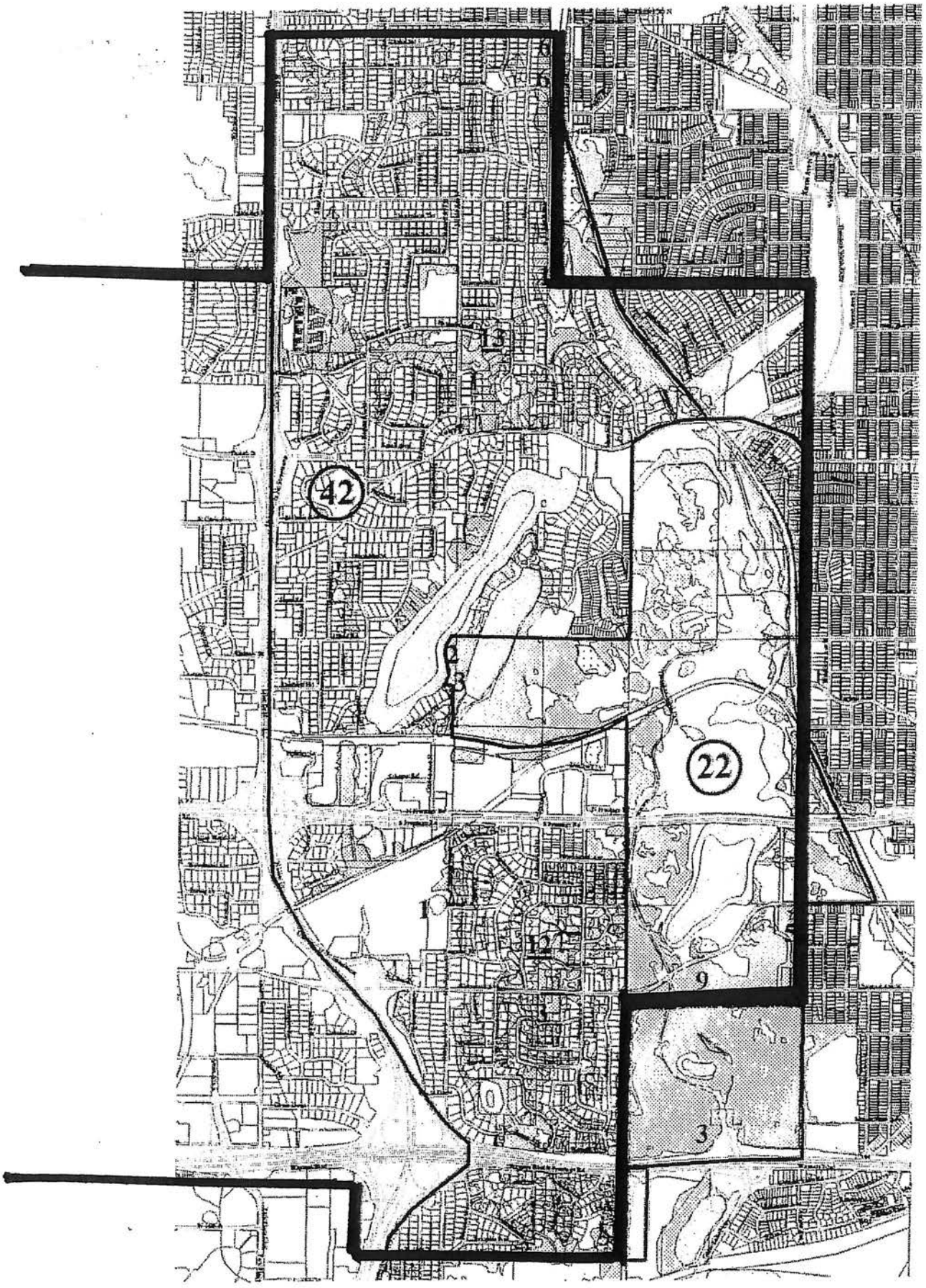
East Golden Valley and Theodore Wirth Park
Aerial Deer Survey - February 23, 2005



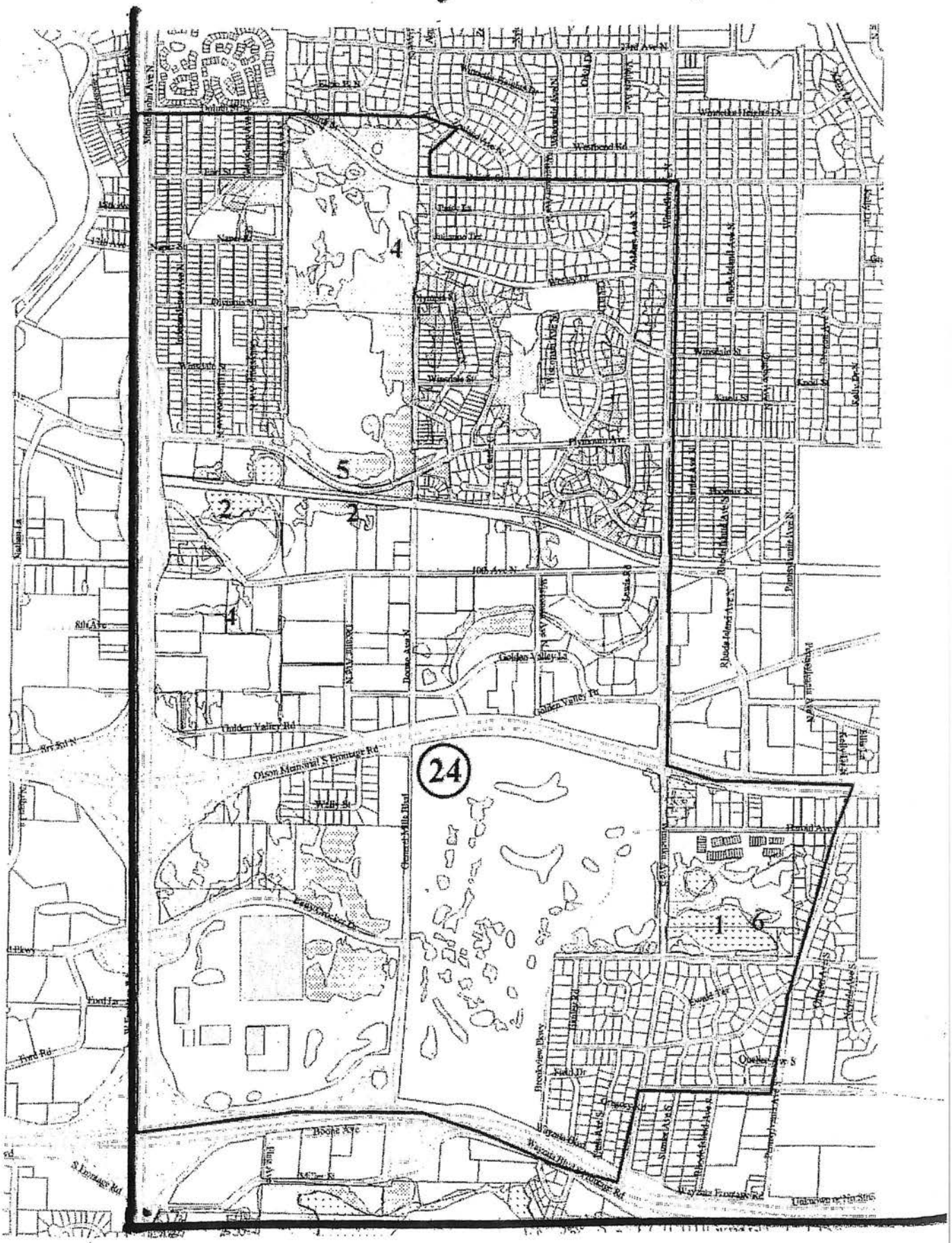
West Golden Valley Area
Aerial Deer Survey - February 23, 2005

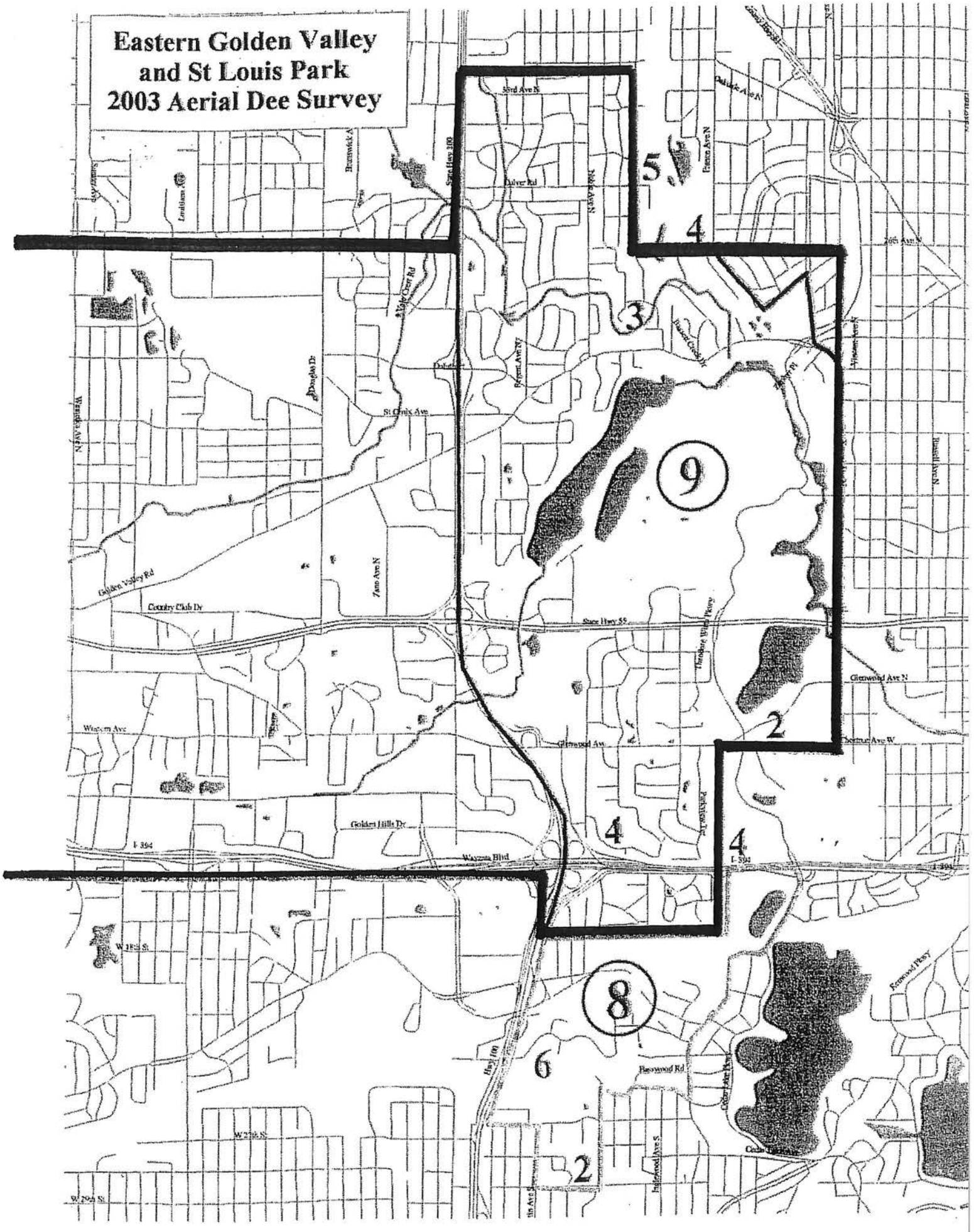


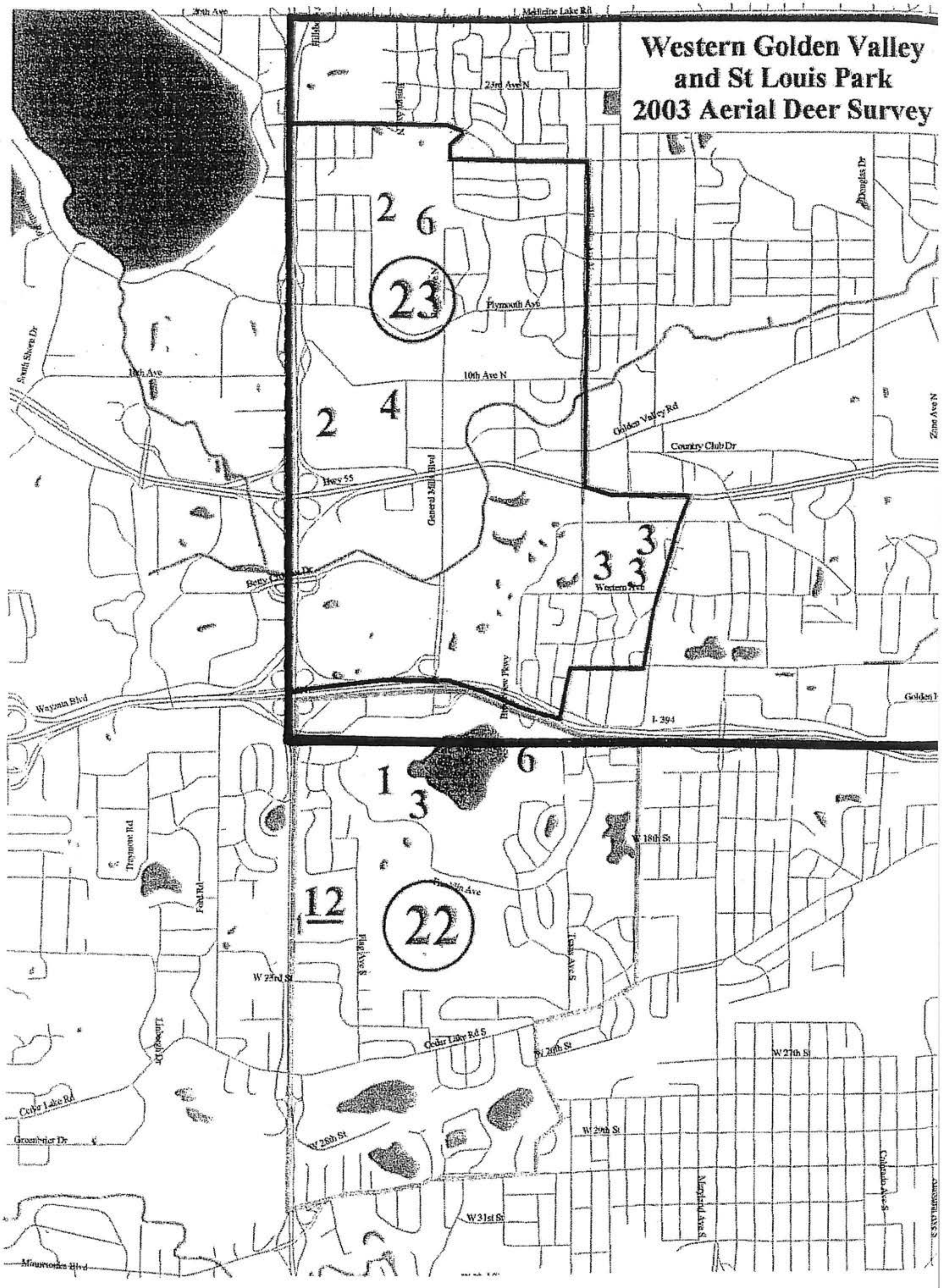
East Golden Valley and Theodore Wirth Pa
Aerial Deer Survey - February 6, 2004



West Golden Valley
Aerial Deer Survey - February 6, 2004




Eastern Golden Valley
and St Louis Park
2003 Aerial Dee Survey
5
4
3
9
2
4
4
8
6
2
Golden Valley Rd
Country Club Dr
St Croix Ave
Douglas Dr
Zane Ave N
Lake Crest Rd
Duluth Ave N
Regent Ave N
Duluth Ave N
Fenton Ave N
Dover Rd
Glenwood Ave
Glenwood Ave N
Winnetka Ave
Golden Hills Dr
Wayzata Blvd
Theodore Wirth Pkwy
Parkview Ln
Russell Ave N
Xerxes Ave S
Ridgewood Rd
Cedar Lake Rd
Kenwood Pkwy
Bryant Ave S
Inglewood Ave S
Hwy 100
Louisiana Ave
Brunswick Ave
Lilac Way
Oakdale Ave N
Douglas Ave
Boone Ave N
Boone Ave W
Hillsboro Ave
Duluth Ave N
Glenwood Ave N
Oakdale Ave N
Fenton Ave N
Dover Rd
Regent Ave N
Duluth Ave N
Douglas Dr
St Croix Ave
Golden Valley Rd
Country Club Dr
Zane Ave N
Lake Crest Rd
Winnetka Ave N
Louisiana Ave
Brunswick Ave
Hwy 100
Theodore Wirth Pkwy
Glenwood Ave
Glenwood Ave N
Boone Ave W
Hillsboro Ave
Russell Ave N
Parkview Ln
Wayzata Blvd
Golden Hills Dr
I-394
I-394
I-394
W 28th St
W 27th St
W 26th St
Ridgewood Rd
Cedar Lake Rd
Kenwood Pkwy
Bryant Ave S
Inglewood Ave S
Xerxes Ave S
Hwy 100


Western Golden Valley
and St Louis Park
2003 Aerial Deer Survey
Medicine Lake Rd
23rd Ave N
Douglas Dr
Plymouth Ave
10th Ave N
Golden Valley Rd
Country Club Dr
Hwy 55
General Mills Blvd
Western Ave
Wayzata Blvd
I-394
Zane Ave N
South Shore Dr
W 18th St
Traymore Rd
W 23rd St
Cedar Lake Rd S
W 26th St
W 27th St
Cedar Lake Rd
Greenbrier Dr
W 28th St
W 29th St
W 31st St
Maryland Ave S
Colorado Ave S
Minnetonka Blvd
2
6
23
2
4
3
3
3
6
1
3
12
22

Appendix C
Public Input Process

The Deer Task Force was formed in March of 2006 at the request of the Golden Valley City Council, after receiving significant input from its residents regarding the deer population. The Task Force set a priority to solicit comments from Golden Valley residents and businesses regarding the city's current deer population. The following communication plan was developed and implemented for receiving citizen input.

Golden Valley *CityNews* Articles
- March/April 2006 "Repelling Deer: Reason and Tips"
- March/April 2006 "City Prohibits Deer Feeding"
- March/April 2006 "Deer Task Force"
- May/June 2006 "Deer Task Force – Information Meeting Notice"

City Website Page Requesting Citizen Input (June - August 4, 2006) - Deer Task Force Comment Form

Deer Management Public Information Meeting
- A public information meeting was held on July 13, 2006 at the Brookview Community Center in Golden Valley.
- A presentation was provided by representatives from the Minnesota Department of Natural Resources and a neighboring community perspective on the management of deer.
- The presentation was followed by an open comment period for attendees.
- The meeting was publicized in the Golden Valley *SunPost*, Golden Valley *CityNews* and the Golden Valley City website.

Local Cable Television Channel 16 - The information meeting seeking public input, held on July 13, 2006, was recorded and played approximately three times daily on cable channel 16 from July 24 through August 3. Residents were directed to the City Website for comments.

Public Input Results (Grand Total Received - 63)

Website or E-Mail Comments - Total Received	34
➢ Pro-Management	27
➢ No Management	4
➢ Neutral/Unknown	3
Comment Cards from Public Meeting - Total Received	14
➢ Pro-Management	13
➢ No Management	0
➢ Neutral/Unknown	1
Verbal Comments at Public Meeting - Total Received	15
➢ Pro-Management	15
➢ No Management	0
➢ Neutral	0

Repelling Deer: Reasons And Tips

According to aerial surveys by the Three Rivers Park District (on behalf of the City of Golden Valley), the number of deer in Golden Valley has more than doubled in the last decade. This increase in numbers can add to traffic hazards, damage to gardens and ornamental vegetation (particularly vegetables and young trees), the potential risk of Lyme and other transmittable diseases, and damage to area ecosystems, some of which is irreparable.

Deer can also create community conflict between those who love deer and those who want them gone. In between are those who recognize, as the Humane Society of the United States recommends, that we must create a balance between human and deer populations.

Deer can create community conflict between those who love them and those who want them gone.

Seeking A Compromise

Currently, three basic methods are used to dissuade deer visits and strive for harmony between humans and deer: fencing or other physical barriers, chemical repellents, and resistant plants.

Deer Feeding Fact

While feeding deer may seem humane, particularly in winter, it has two negative effects: it attracts more deer, and it reduces the deer's natural fear of humans. Both exacerbate the problems associated with increased numbers of deer.

Physical Barriers

Deer-proof fencing is the most permanent method to keep deer out. Fence designs range from high-tensile strand wiring and mesh-woven wire to chain link (electric fencing is NOT allowed in Golden Valley). The most effective fence type depends on the specific needs of the property.

Plastic sleeves or wrapping have successfully protected young trees from deer. Most garden centers also carry two-inch wooden stakes that are four to five feet high which usually deter deer when placed around a tree. Very small trees can be caged for protection until the lowest branches of the trees are higher than the deer can reach.

Repellents

Contact repellents cause plants to taste bad; area repellents cause plants to smell bad. A Connecticut study found repellents more effective on less preferred plants (see below) and determined the effectiveness of several products, including:

- Big Game Repellent (Deer Away), made from rotten egg solids (46% effective)
- Hinder, from ammonium soaps of higher fatty acids (43% effective)
- Thiram, a bitter fungicide commonly used in repellents (43% effective)
- Mesh bags of unwashed human hair, collected from hair styling shops (34% effective)
- Magic Circle, bone tar oil soaked into burlap pieces (18% effective)
- Miller Hot Sauce, containing capsicum (15% effective)

Deer-Resistant Plants

Deer will eat any plant if food is scarce, but many native plants have evolved to deter or survive deer browsing. For information on specific plants on the deer's "least liked" list, visit the University of Minnesota Extension Service at www.extension.umn.edu/projects/yardandgarden/ygbriefs/h462deer-coping.html).

City Prohibits Deer Feeding

In the interest of public health and safety (see article at left), it is against City ordinance to intentionally feed deer in Golden Valley. According to Section 10.34 of the City Code, this includes providing "salt licks and/or one half cubic foot or more of grain, fruit, vegetables, nuts, hay or other edible material either on the ground or at a height of less than five feet above the ground, in a manner that attracts deer." Living food sources, such as trees and other vegetation, are not considered deer feeding.

The ordinance does not apply to the employees or agents of the City, County, State, or Federal government or veterinarians who, in the course of their official duties, have deer in their custody or under their management. For more information about this ordinance, call the City at 763-593-8079.

Deer Task Force

A new City Council Task Force will begin meeting soon to study deer-related issues in Golden Valley, gather community input, and report results. Its primary goals include:

- making recommendations for acceptable numbers of deer and control options, if deemed necessary
- reviewing aerial deer surveys and deer vehicle accidents
- coordinating with the Department of Natural Resources and discussing potential joint efforts with neighboring communities
- reviewing educational materials

The Task Force will be comprised of members from the Environmental and Open Space and Recreation Commissions and four residents representing geographic areas of the community. Golden Valley's Director of Parks and Recreation and the Environmental Coordinator staff the meetings.

The Task Force will report its findings and recommendations to the City Council toward the end 2006. Watch future issues of *CityNews* and the City Web site (www.ci.golden-valley.mn.us) for updates.

Property Maintenance

(continued from page 1)

for single-and two-family homes. Input received at these meetings will help the Council in its upcoming deliberation on a residential property maintenance code. These meetings will also provide residents an opportunity to learn about the state of the community's housing stock and receive information on current rehabilitation resources available to Golden Valley residents.

Adopting A Code

Cities find that property maintenance codes help protect residents from potentially hazardous conditions and help maintain the vitality and integrity of the community's housing stock. For example, when a City adopts maintenance standards for exterior walls, roofs, gutters, decks, doors, and windows, property owners are required to keep these items in a good state of repair. If violations are not corrected in a reasonable time, the City may issue citations.

Enforcement

Property maintenance codes are enforced through proactive inspections.

When a City inspector determines a property is out of compliance according to the City ordinance, he or she will issue a correction order to the responsible party of that property. The compliance order will state a reasonable amount of time for corrections to be made. Non-compliance will result in a fine assessed through an administrative citation (fines will not exceed the maximum penalty for misdemeanor violation by state law).

Questions

If you have questions about the City's multiple-dwelling property maintenance code, contact Property Maintenance Inspector Angela Obert at 763-593-8074. If you have questions about the City's proposed property maintenance code for one- and two-family homes, contact Chief of Fire and Inspections Mark Kuhnly at 763-593-8080.

Golden Valley Named A "Governor's Fit City"

Golden Valley's commitment to its parks, trails (see pages 8-9), and recreation programs has earned it the designation of a "Governor's Fit City," part of a state-wide initiative by Governor Tim Pawlenty to encourage fitness. A "Fit City" provides opportunities for physical activity to people who live, work, and play in the community. This goal is to support and encourage residents to be more physically active and improve the overall health of the community.

Cities achieving a Governor's Fit City designation had to meet several Minnesota Department of Health criteria, such as having a City Council-adopted resolution affirming activity-friendly commitments, having inviting places to walk, sponsoring at least one fitness activity, and developing recreation areas that encourage fitness.

"We're proud Golden Valley was considered a good candidate for the Fit City designation," says Park and Recreation Director Rick Jacobson. "We try to do a great job meeting all of the criteria, and we're continually working to improve." This work includes:

- maintaining and developing walkable routes, recreation areas, parks, playgrounds, and play fields
- maintaining and developing indoor facilities available for cold season activity that are open and accessible to all ages
- partnering with community-wide organizations dedicated to activities that support physical activity
- promoting or sponsoring events or activities

Photo by Lisa Poverud, *Views of the Valley* 2005

"Fit Cities" have inviting places to walk.

"We hope to help build community through people, parks, and programs," adds Jacobson, "and these are things our residents said were important during the *Envision* Golden Valley process."

The governor declared 2005 "The Year of Fitness" in Minnesota and created the "Governor's Fitness Challenge," which allows citizens to track their fitness progress online at www.beactiveminnesota.org. More information about the Governor's Fit City program can be found at www.health.state.mn.us/fitcity/. For more information about Golden Valley's recreation facilities and programs, contact the Park and Recreation Department at 763-512-2345.

Deer Task Force Information Meeting

The Golden Valley Deer Task Force is seeking input from Golden Valley residents and businesses regarding deer management in Golden Valley. An information meeting is scheduled for **July 13, 2006, 7 pm, at Brookview Community Center**, 200 Brookview Parkway.

At the meeting, the Deer Task Force will define its charge, the Minnesota Department of Natural Resources will present the state-wide perspective of how other communities are handling deer populations, and Deer Task Force members will outline the issues and resolutions of neighboring communities. The presentations will be followed by a time for comments from residents/businesses.

The Golden Valley Deer Task Force was appointed by the City Council to study deer-related issues in Golden Valley, gather community input, and report results. It will report its findings to the City Council toward the end of 2006.

Golden Valley

Deer Management Informational Meetings

Thursday, July 13

7 pm
Brookview Community Center Willow Room
200 Brookview Parkway

Deer Task Force

Citizen Comment Form

Department of Natural Resources Information

Minnesota Deer Facts

Deer Hunting

City Seeks Input On Deer Management

The Golden Valley Deer Task Force is seeking input from Golden Valley residents and businesses regarding deer management in Golden Valley. An information meeting is scheduled for July 13, 2006, 7 pm, at Brookview Community Center, 200 Brookview Parkway.

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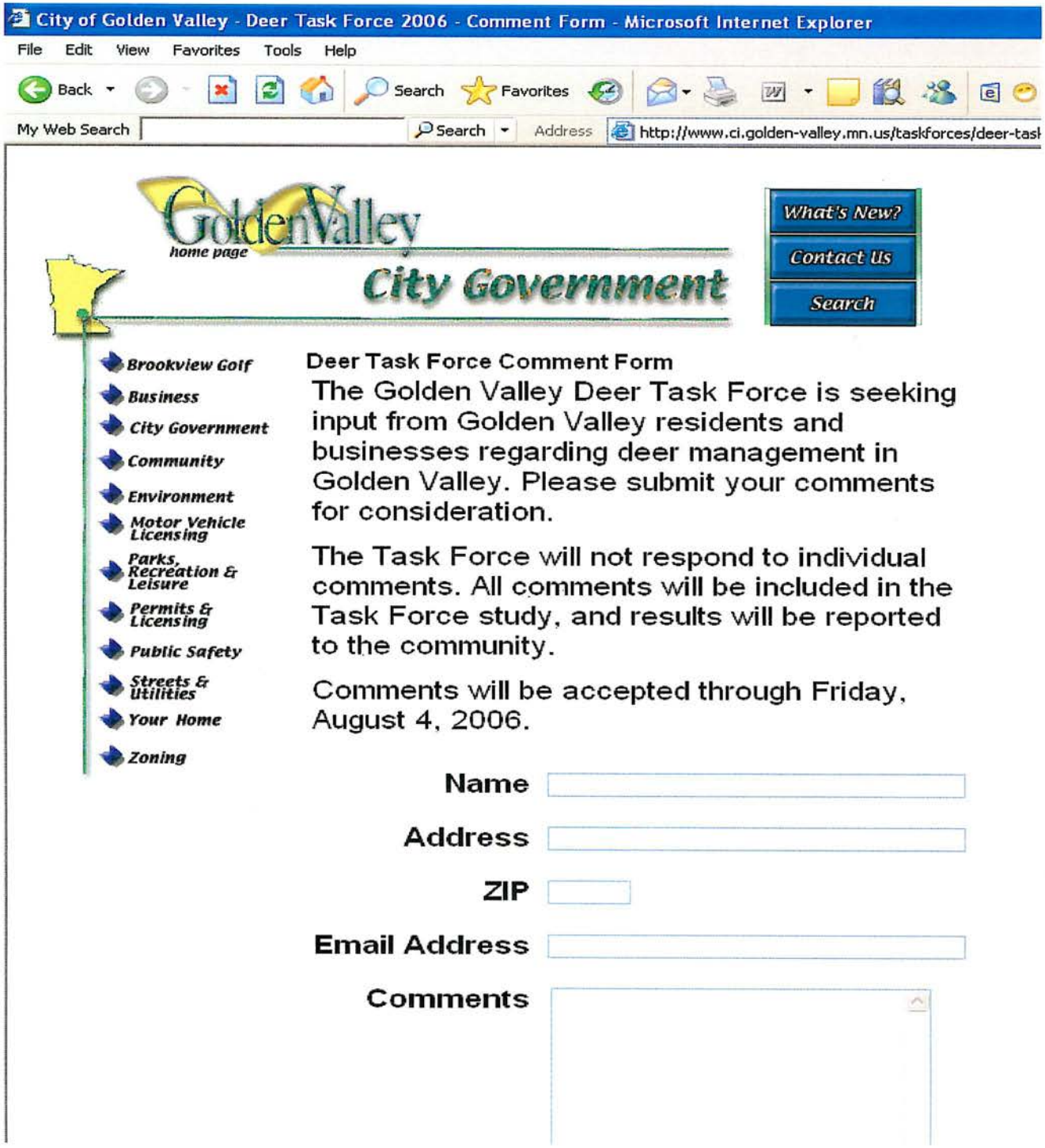
[back to home] [back to What's New]


City of Golden Valley - Deer Task Force 2006 - Comment Form - Microsoft Internet Explorer
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Back Search Favorites
My Web Search Search Address http://www.ci.golden-valley.mn.us/taskforces/deer-task
Golden Valley
home page
City Government
What's New?
Contact Us
Search
Brookview Golf
Business
City Government
Community
Environment
Motor Vehicle Licensing
Parks, Recreation & Leisure
Permits & Licensing
Public Safety
Streets & Utilities
Your Home
Zoning
Deer Task Force Comment Form
The Golden Valley Deer Task Force is seeking input from Golden Valley residents and businesses regarding deer management in Golden Valley. Please submit your comments for consideration.
The Task Force will not respond to individual comments. All comments will be included in the Task Force study, and results will be reported to the community.
Comments will be accepted through Friday, August 4, 2006.
Name
Address
ZIP
Email Address
Comments

Appendix D
References

1. Aerial counts provided by Three Rivers Park District (2003, 2004, 2005 and 2006).
2. Augustine, D. and L. Frelich. Effects of White-Tailed Deer on Populations of an Understory Forb in Fragmented Deciduous Forests. Conservation Biology. Vol. 12, No. 5, pp. 995-1004. October 1998.
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Appendix E
Glossary of Terms

Biological Carrying Capacity (BCC) - the maximum number of deer that a specific parcel can support in good physical condition over an extended period of time.

Cultural Carrying Capacity (CCC) - the maximum number of deer that can co-exist compatibly with the local human population in a specific area.

Deer Count - the minimum number of deer observed within the survey boundaries.

Deer Density - number of deer residing in a square mile area.

Density Threshold - the maximum number of deer that can reside within a square mile area without causing any ecological negative effects.

Deer Management Unit - defined areas of land within the city which sustain healthy deer populations; based upon natural or artificial barriers/deterrents, density of deer observations.

Depredation - negative effects created by deer onto plant materials.

Forest Ecosystem - desired native complex of living organisms and their environment.

Habitat - the area where a plant or animal lives and grows under natural conditions.

Native Plant - a plant species that occurred historically in a particular area and was not introduced by humans either accidentally or intentionally.

Ornamental Plant - a plant species that did not occur historically in a particular area and which was introduced by humans either intentionally or accidentally.

Preferred Habitat - areas that have been observed holding concentrations of deer and provide adequate food, water, shelter and space to sustain a healthy deer population.

Appendix F
Deer Monitoring Report Form

The purpose for this Deer Monitoring Report Form is to provide an opportunity for Golden Valley residents to document and share their observations of deer activity in their neighborhoods. This documentation will be used to supplement other monitoring data collected by the City. Residents may submit a single report of any type or may choose to submit frequent observation reports that document local movements of deer. All information submitted will be processed by the City as part of the overall monitoring effort.

This form can be used for multiple report types, which are described below. The types of reports anticipated include: general (positive/aesthetic) observations, depredation reports and accident/carcass location reports. The information that should be included with each type of report is described below.

- General Observation: A general observation report is dedicated to animal observations within the City of Golden Valley. Information that will be helpful for this report are the location, the positive or negative experience evoked from the animal, time of day, number of animals, sex and activity of the animal. Was the activity or anything else unusual? This report form can be used to document weekly, monthly or seasonal movements of animals through an individual property, neighborhood, etc.
- Depredation Report: Depredation reports are to record property damage that has resulted from animal feeding or frequent activity. The most important information to include in this type of report is the number of animals that have been observed causing the damage; movement patterns of animals causing damage; frequency that animals are active in the area of impact; time of day damage occurs; and type of damage that is incurred. Landowners can submit multiple reports documenting seasonal, or more frequent, damage. Pictures can be submitted along with report as documentation.
- Accident/Carcass Location Report: The location of an animal/car accident, the location of a carcass along the roadside or the location of a near miss due to an animal crossing a road can be reported using this form. The information that is important to include is location, time of day the incident or observation occurred, and age and sex of the animal, if known. If the incident was reported to the Golden Valley Public Safety Department, please include a police report number. The primary use for this report type is to document accident incidents that may not otherwise be reported through the City, County or State records.
- Other: If a resident wishes to submit a report on animal activity that does not fit into one of the categories listed above, they may provide a description of their comments or concerns in the spaces provided after checking this box.

Submit forms via mail, fax, e-mail or by telephone to: Al Lundstrom, Environmental Coordinator, City of Golden Valley, 7800 Golden Valley Road, Golden Valley, MN 55427; 763.593.8046; 763.593.3988 (fax); alundstrom@ci.golden-valley.mn.us.

City of Golden Valley

City of Golden Valley
Deer Monitoring Report Form

Date of Observation _____

Name _____

Address

Home Phone _____

Work Phone _____

E-Mail _____

Location _____

Type of Report
- ☐ Depredation Report (# of animals, frequency, location)
- ☐ General Observation (movement, time, gender, positive experience)
- ☐ Accident/Carcass Location
- ☐ Other

Description of Report _____

_____

_____

Site Visit ☐ No ☐ Yes Date: _____

Damage Sustained (if any) _____

_____

_____

Est. $ Amount of Damage _____

Mitigation Efforts Fencing; please specify

_____

Repellents; please specify

_____

Other; please specify

_____

Education Materials Provided ☐ Yes ☐ No _____

Other Comments _____

_____

Report Taken By _____