

2013 White-tailed Deer Management Report



City of Rockville Recreation and Parks Department 2013 White-tailed Deer Management Report

I. OVERVIEW

This report contains annual data requested by the White-tailed Deer Task force and the Mayor and Council in 2012. It is consistent with the goals and objectives in the City's White-tailed Deer Management Plan. The data is used to make recommendations and track the impacts of white-tailed deer. This report is also a supplement of information provided to the County as part of the City of Rockville's participation in the Montgomery County Deer Management Work Group (MCDMWG).

II. PURPOSE

This report provides relevant and specific information in regards to the City of Rockville's white-tailed deer population and subsequent impacts to public health and safety, impacts to the public parks, the environment and private property.

This report represents white-tailed deer population data gathered by the Parks and Open Space Division of the Recreation and Parks Department in 2013. Deer vehicle incident information was gathered by the City of Rockville's Neighborhood Services, Animal Control Division, and is interpreted and compiled by the Parks and Open Space Division.

All annual population data collection methods and preliminary data analysis is reviewed by City park staff and the Montgomery County Deer Work Group (MCDMWG). A final draft of this report is completed after input by the MCDMWG and is sent to the Recreation and Parks Advisory Board and the Director of Recreation and Parks for final comment. This report summarizes data collected over the past year and provides recommendations regarding the white-tailed deer issues. After it is finalized in May, the report is then presented to the Mayor and Council for their review and comment.

III. HEALTH & SAFETY

a) 2013 Deer Vehicle Incident Reports

Deer vehicle incidents (dead deer found in the right-of-way) continue to be tracked by addresses through the Neighborhood Services, Animal Control Division. When specific

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address locations are not given the closest point to the given intersection or general location is determined and used for mapping purposes.

2013 Information

- The total number of dead deer reported in 2013 was 143 (**See Table 1**).
- **Table 1** also includes dead deer reported for the years 2008 – 2013.
- **Table 2** gives month specific data during the same 6 year period. That data reflects that the highest probability of having an incident is during the deer rutting season which is temperature driven and falls between October and December when deer begin the mating season and are highly active.
- **The Deer Vehicle Incident Map** (*see Attachment A*) depicts the specific locations of a deer vehicle incident over the past year. The map is color coded to show multiple incidents in the same location.

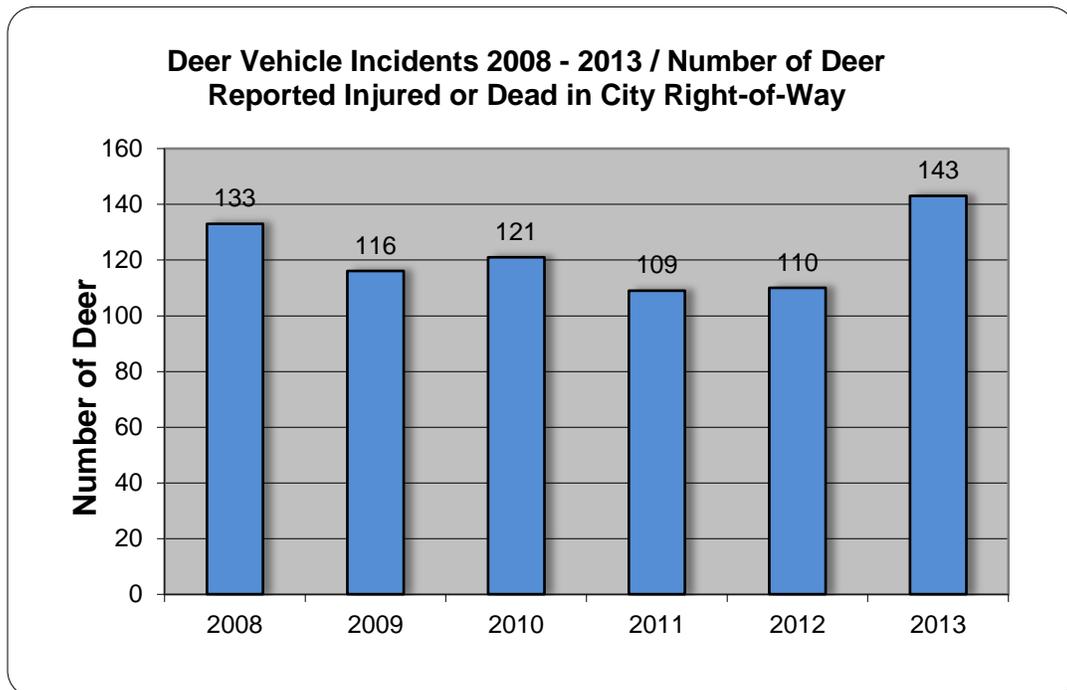


Table 1

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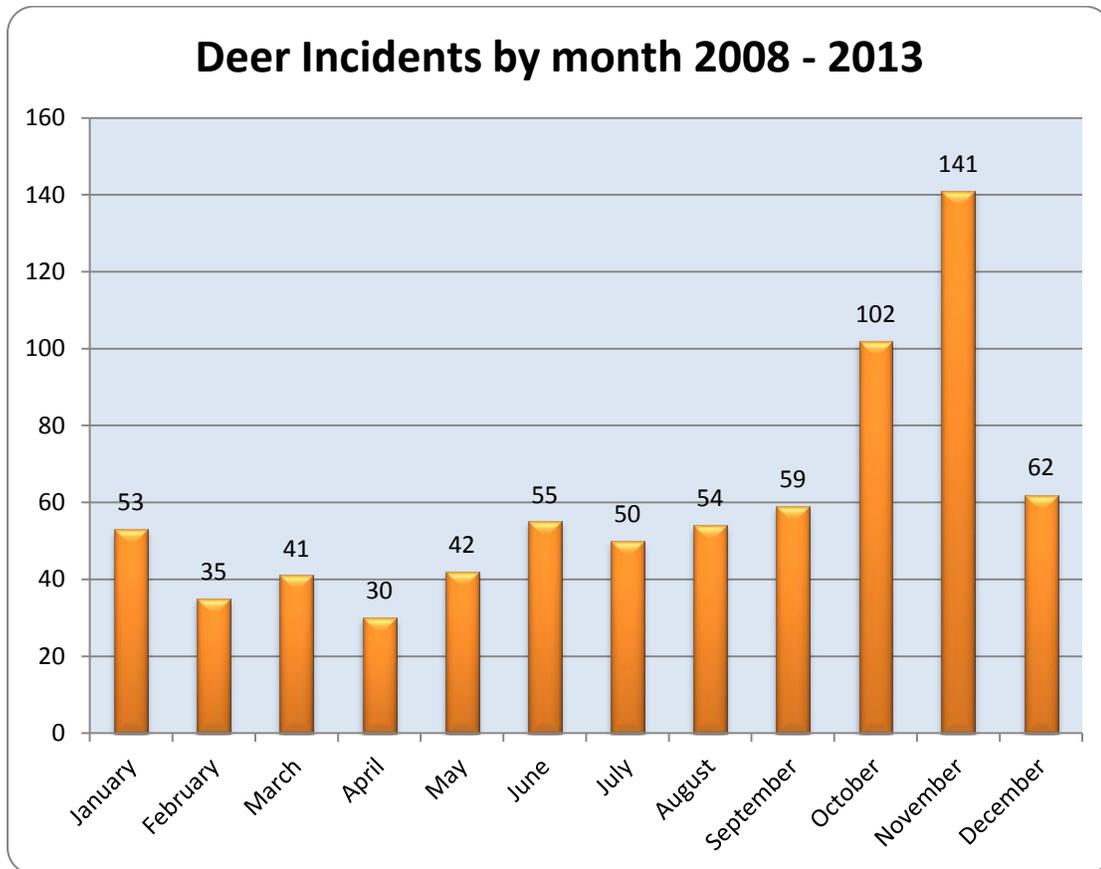


Table 2

b) Digital Roadside Deer Warning Sign

In 2013 a portable digital warning sign was placed at six (6) roadside locations within the City of Rockville for a period of approximately one week. The 5' x 7' LED display sign scrolled the message: "Watch for Deer." These six locations (see below) were chosen for their previous high rates of deer incidents. The sign was positioned during the months of October and November, months that account for approximately 34 % of all incidents (*See Table 2*).

- East Bound West Gude Drive @ Piccard
- East Bound Rte. 28 between Baltimore Rd. and East Gude Drive
- East Bound Baltimore Road between Twinbrook Parkway and Edmonston Drive
- South Bound Hurley Ave. near Wootton Mill Park
- East Bound Wootton Parkway @ Tower Oaks Blvd.
- West Bound Wootton Parkway @ Wootton Oaks

Because the precise relationship of the sign to the drivers response (if any), and the location of a probable incident in the same approximate location during the same time is unknown, it is difficult to draw a conclusion of the sign's impact. However, several deer were found dead on the roadway in close proximity (less than a mile) of where the sign

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was placed during this time period.

Given the information above combined with extensive research that has shown that fixed deer crossing / warning signs have little or no impact in reducing deer vehicle accidents, further use of the use of digital sign to warn drivers about deer will not be used.

c) Lyme Disease

The City of Rockville does not research nor participate in gathering Lyme disease data exclusive to Rockville. The following data is incorporated into this report from the FY2013 Montgomery County Deer Management Work Group Report:

Lyme disease is a bacterial illness transmitted through the bite of the Black-legged tick. Early symptoms range from flu-like headache, fever, and general fatigue to joint and muscle pain. A circular rash may occur in 70-90% of individuals. If left untreated, the disease can become chronic and debilitating.

Lyme disease continues to be a growing concern in the county. While Lyme disease is often linked to deer management in the mind of the public because it is transferred through the bite of the so-called deer tick (the new accepted name is the black-legged tick), it is widely accepted that reducing deer numbers cannot effectively control the spread of the disease. Black-legged ticks feed on many species of mammals and birds and most often pick up the disease by feeding on infected mice and chipmunks, not deer. For these reasons, Lyme disease is best viewed as a public health issue. The Montgomery County Department of Health and Human Services (HHS) tracks cases of Lyme disease and provides education for the public and health professionals. In 2010, medical providers and labs reported 1125 positive lab slips. The number of cases of Lyme disease reported was 298 (confirmed and probable), and 136 "suspect". In 2011, there were 1476 lab reports and the number of cases was 297 (confirmed and probable) and 87 "suspect". The number of positive labs reports for Lyme disease sent to MCDHHS Disease Control Program continues to increase. The increase in lab tests being done is an indication that the medical community is more aware of the symptoms of Lyme disease and labs are being ordered more often to assist in diagnosis. Due to budget cuts, we are unable to investigate all positive lab slips that are reported to Disease Control.

Education to the medical community is key to increasing diagnosis and early treatment for Lyme disease. When caught early, Lyme disease is usually easily treated with antibiotics. The disease, however, can be difficult to diagnose because many tests are unreliable and the symptoms resemble those of other ailments including the flu and arthritis. Some in the medical community feel that when left untreated, Lyme disease can become chronic resulting in long-lasting and debilitating health problems. This most often results when it is not diagnosed and treatment is delayed for an extended period of time. The increased education efforts directed at the public and doctors should help ensure that the disease is detected and treated more quickly. Additional efforts by the department of Health and Human Services to address Lyme disease include:

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- *Presentations in the community.*
- *Distribution of literature on Lyme disease prevention.*
- *Counseling of individual patients on prevention.*
- *Surveillance on positive lab slips to identify true cases.*
- *Referrals to physicians for diagnosis and treatment.*
- *Education of community physicians on Lyme disease diagnosis and treatment.*
- *Montgomery County promotes personal protection from ticks and awareness of the symptoms of the illness as the best defense against Lyme disease. General information is available at: The Montgomery County Department of Health and Human Services - www.montgomerycountymd.gov/lymedisease or 240-777-1755.*
- *The Centers for Disease Control – www.cdc.gov.*
- *The Lyme Disease Foundation - www.lyme.org; 24 hour information line at 800-886-5963.*
- *The National Capital Lyme and Tick-Borne Disease Association have information and offers local support groups - www.natcaplyme.org or (703) 821-8833. The American Lyme Disease Foundation, www.aldf.com/fourPoster.shtml - has information on a product to help reduce the number of ticks in an area called the four poster feeder.*

*Additional information from The CDC reports that Lyme disease was the most commonly reported vectorborne illness in the United States in 2012; it was the 7th most common Nationally Notifiable disease. However this disease does **not** occur nationwide and is concentrated heavily in the northeast and upper Midwest. In 2012, 95% of Lyme disease cases were reported from 13 states; Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Vermont, Virginia, and Wisconsin.*

IV. POPULATION DATA

In 2011 the White-tailed Deer Task Force recommended recurring yearly population surveys to determine current densities and trends specific to the Rockville urban forests. Population surveys are conducted by means of “game camera surveys” a method developed at Mississippi State University, using photographic survey data and a formula based on the number of unique bucks photographed over a 5 to 10 day period. (See Attachment B, Mississippi State Deer Camera Survey Procedures).

Calculations are then used to estimate deer population in a 100 acre size plot and per square mile. However, some limitations are assumed when surveying areas less than one square mile.

In 2013, population estimates were established using game camera surveys for the following two areas in the Watts Branch Stream Valley:

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- **Area 1 - Rockmead Park Deer Survey Location - Adjacent to Fallsmead Elementary School** (For corresponding map see Attachment C).

Area 1 - Rockmead Park Deer Population Estimate August 2013		
1	Buck Photos	61
2	Individual Bucks Identified	4
3	Doe Photos	282
4	Fawn Photos	73
5	Unique Bucks / Total Bucks	0.07
6	Total Individual Bucks	4
	80% of Deer Photographed factor $1 / .8 = 1.25$ applied to deer photographed totals above (3, 4, 5) = 7, 8, 9, below	
7	Bucks	5
8	Does	*25 - 29
9	Fawns	6
10	Total Population (7 + 8 + 9)	*36 - 40
11	Deer per 100 acres	36
12	Deer per acre	0.36
13	Deer per square mile	**186 - 230

*Estimated population range

**This is a projected number based on this specific 100 acre radius. It reflects the potential of deer in a similar environment but is not an actual account of deer per square mile in the surrounding area.

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- Area 2 - Lower Watts Branch Deer Survey Location - Between Scott Drive and Wootton Parkway adjacent to Wootton High School (For corresponding map see Attachment C).

Area 2 - Upper Watts Branch Deer Population Estimate August 2013		
1	Buck Photos	75
2	Individual Bucks Identified	2
3	Doe Photos	186
4	Fawn Photos	66
5	Unique Bucks / Total Bucks	0.03
6	Total Bucks	2
	80% of Deer Photographed factor $1 / .8 = 1.25$ applied to deer photographed totals above (3, 4, 5) = 7, 8, 9, below	
7	Bucks	2.5
8	Does	7
9	Fawns	2.5
10	Total Population (7 + 8 + 9)	*10 - 12
11	Deer per 100 acres	12
12	Deer per acre	0.12
13	Deer per square mile	**62 - 77

*Estimated population range

**This is a projected number based on this specific 100 acre radius. It reflects the potential of deer in a similar environment but is not an actual account of deer per square mile in the surrounding area.

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Bushnell

09-06-2013 20:37:25



Bushnell

08-31-2013 06:36:09

Photos taken from the 2013 Deer Population Survey

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Bushnell

09-06-2013 19:21:06



Bushnell

09-01-2013 06:36:31

Photos taken from the 2013 Deer Population Survey

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V. POPULATION IMPACTS

a) Natural Resources

Population estimates continue to indicate a population in Rockville much higher than what is recommended by the Department of Natural Resources (DNR). The DNR recommends a population of 25 – 30 deer per square mile in urban forests such as Rockville's (per the 2012 WTDTF report). An over abundance of deer can have a profound impact on native vegetation and habitat for other wildlife. Studies have shown that where deer populations are highest, the park understory of shrubs and wildflowers are severely reduced and rare plants have declined and/ or disappeared in many parks due to deer feeding habits. Other studies have shown that these impacts to the plant community impact other species, especially forest birds and small mammals, both of which decline as food and cover is heavily reduced by deer browsing.

b) Private Property

Impacts to private property, especially to landscapes and gardens, continue to be an issue for City residents. Several residents contacted the City in 2013 to inquire about management techniques being implemented by the City to curb the deer and/or to reduce the deer population. Others have sought advice regarding deer resistant plants and deterrents. The City continues to monitor the situation and through the MCDMWG, plans to offer residents workshops regarding deer deterrent methods.

VI. POPULATION CONTROL MEASURES

Managing Deer Populations with Birth Control Methods

The City continues to monitor methods for controlling deer populations including the use of deer birth control products. In 2009 the Environmental Protection Agency (EPA) approved GonaCon™ is an immunocontraceptive vaccine that limits the release of sex hormones causing deer to remain in a non-reproductive state as long as a sufficient vaccine level is present in the body. While this long awaited approval represents a step forward in deer contraceptives, GonaCon™ has significant limitations to its wide-scale use in free roaming deer populations. It must be hand-injected requiring that each animal be captured and sedated. The application must be re-administered every 2 to 5 years in order for it to be effective. The option can be both costly to the jurisdiction administering the vaccine and very traumatic to the deer. Surgical sterilization programs are being conducted in Baltimore, MD (Loch Raven area) and the City of Fairfax, VA, <http://www.fairfaxva.gov/Home/ShowDocument?id=2599>.

Currently, the City does not prescribe to lethal measures of population control, however, Montgomery County does host numerous managed hunts and sharp shooting operations that are in close proximity to the City limits.

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VII. MANAGEMENT INITIATIVES

Participation in the Montgomery County Deer Management Work Group (MCDMWG)

City staff represented Rockville at several MCDWG meetings in 2012 and participated in deer camera surveys conducted by Maryland National Capital Park and Planning Commission (MNCPPC). The MCDMWG meets annually and includes professionals from the Maryland National Capital Park and Planning Commission, Maryland Department of National Resources, National Park Service, Montgomery County Police Department, Montgomery Soil Conservation District, and the Washington Suburban Sanitary Commission.

This group coordinates and develops deer management actions throughout Montgomery County. The group of experts will annually review management techniques for the City. The MCDWG replaces the WTDTF. Any management techniques proposed for Rockville would be included in the Montgomery County Annual Report. This will ensure that Rockville is using techniques that are consistent with other activities within the County and are based on the best available science. The City will benefit from the years of experience and expertise of this group.

VIII. 2014 GOALS

The following goals are set for 2014:

1. The City will continue to educate and provide public information via an annual report, Rockville Channel 11 and the City's web page via resources from the MCDMWG.
2. Coordinate a deer education workshop for Rockville homeowner's through DNR.
3. Continue to evaluate and respond to residents requests regarding deer management.
4. Additional game camera surveys proposed in Potomac Woods Park, Cabin John Forest Preserve, Redgate Golf Course, and Montrose Woods Park.
5. Continue to participate in the MCDMWG and provide further information to Rockville residents through this valuable network of deer biologists, stake holders and research information.