

# 2015 White-tailed Deer Management Report

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## City of Rockville Recreation and Parks Department 2015 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 future 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 Facilities Division of the Recreation and Parks Department in 2015. 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 Facilities Division.

All annual population data collection methods and preliminary data analysis is reviewed by Parks and Facilities staff and the Montgomery County Deer Work Group (MCDMWG). Following input by the Parks and Facilities staff and MCDMWG, this report 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. The report is then presented to the Mayor and Council for their review and comment.

### **III. HEALTH & SAFETY**

#### **a) 2015 Deer Vehicle Incident Reports**

Deer vehicle incidents (dead deer found in the right-of-way) continue to be tracked by

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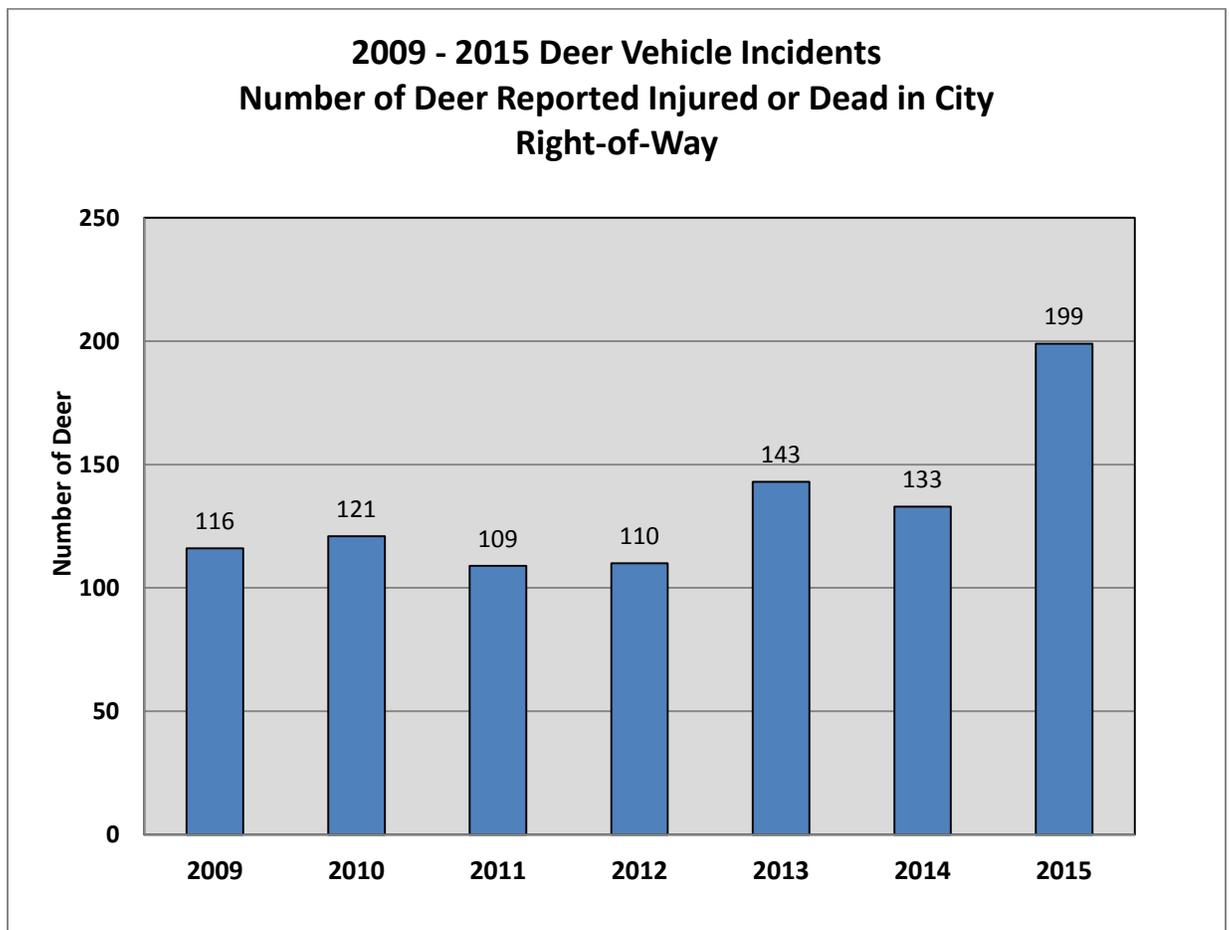
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addresses through the Neighborhood Services, Animal Control Division. When specific address locations are not possible to determine, the closest intersection is identified and used for mapping purposes.

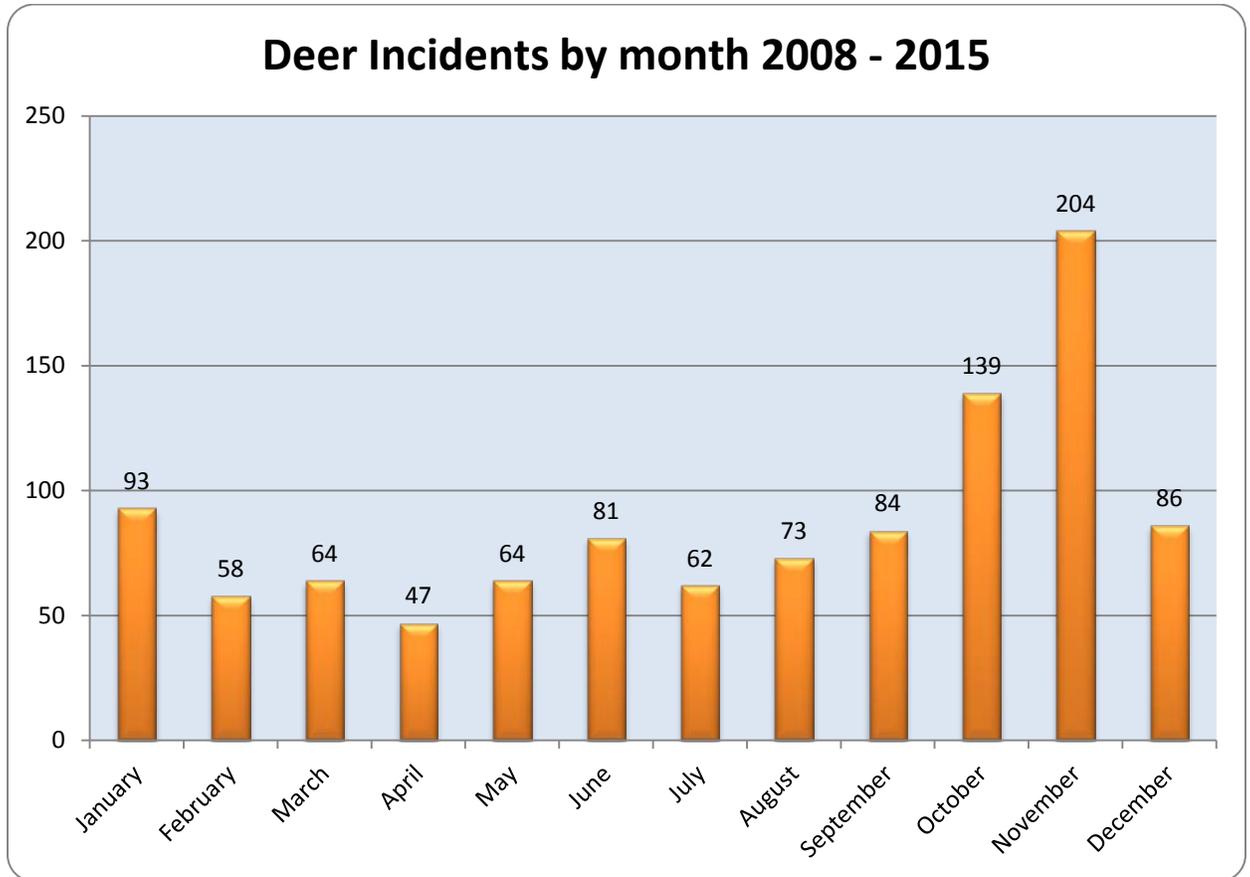
## 2015 Information

- The total number of deer vehicle incidents reported in 2015 was 199 (See **Table 1**), a 33% increase over 2014.
- **Table 1** also includes deer vehicle incidents reported for the years 2009 – 2015.
- **Table 2** gives month specific data during the same 7 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.

**Table 1**



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**Table 2**

## b) **Digital Roadside Deer Warning Sign**

In 2013, a portable digital warning sign was placed in six (6) roadside locations within the City of Rockville for a period of approximately one week. Deer Vehicle Collision Data and sign locations established that the warning signs had little or no impact in reducing deer vehicle accidents. This is typical in deer warning sign studies. Because of this, further use of the use of digital sign to warn drivers about deer was not used in 2015 and this practice will not continue.

## 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 FY2015 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.*

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*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 lab 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 diagnoses 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:*

- *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](http://www.montgomerycountymd.gov/lymedisease) or 240-777-1755.*
- *The Centers for Disease Control – [www.cdc.gov](http://www.cdc.gov).*
- *The Lyme Disease Foundation - [www.lyme.org](http://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](http://www.natcaplyme.org) or (703) 821-8833. The American Lyme Disease Foundation, [www.aldf.com/fourPoster.shtml](http://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.*

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*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 2012, the Mayor and Council 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 2015, a population estimate was completed in Montrose Woods Park and Fallsgrove Park using game camera surveys.

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Fallsgrove Park Deer Population Estimate September 2015		
1	Buck Photos	148
2	Individual Bucks Identified	6
3	Doe Photos	115
4	Fawn Photos	20
5	Unique Bucks / Total Bucks	0.04
6	Total Bucks	6
	80% of Deer Photographed factor $1 / .8 = 1.25$ applied to deer photographed totals above (3, 4, 5) = 7, 8, 9, below	
7	<b>Bucks</b>	<b>7.5</b>
8	<b>Does</b>	<b>5.8</b>
9	<b>Fawns</b>	<b>1.01</b>
10	<b>Total Population (7+8+9)</b>	<b>14.3</b>
11	Deer per 100 acres	14.3
12	*Deer per acre	.014
13	<b>*Deer per square mile</b>	<b>91.8</b>

\*This estimated population range 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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<b>Montrose Woods Park Deer Population September and October 2015</b>		
1	Buck Photos	39
2	Individual Bucks Identified	3
3	Doe Photos	163
4	Fawn Photos	21
5	Unique Bucks / Total Bucks	0.08
6	Total Bucks	6
	80% of Deer Photographed factor $1 / .8 = 1.25$ applied to deer photographed totals above (3, 4, 5) = 7, 8, 9, below	
7	<b>Bucks</b>	7.5
8	<b>Does</b>	15.7
9	<b>Fawns</b>	2.0
10	<b>Total Population (7 + 8 + 9)</b>	25.1
11	Deer per 100 acres	25.2
12	*Deer per acre	0.25
<b>13</b>	<b>*Deer per square mile</b>	<b>161.2</b>

\*This estimated population range 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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Photos taken from the 2015 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 overabundance 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 2015 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 continue offering 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™, 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 2015. The City's deer camera surveys and annual deer report were reviewed 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. 2016 GOALS

The following goals are set for 2016:

1. 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. Conduct additional game camera surveys in Woottons Mill Park and the John Hayes Forest Preserve @ Civic Center Park.
5. Continue to participate in the MCDMWG and distribute/publish/disseminate further information to Rockville residents through this valuable network of deer biologists, stake holders and research information.