

# Impact of Deer Populations on the Human and Natural Environment

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Presentation to the  
Environmental Commission  
October 28, 2019



# Deer Populations

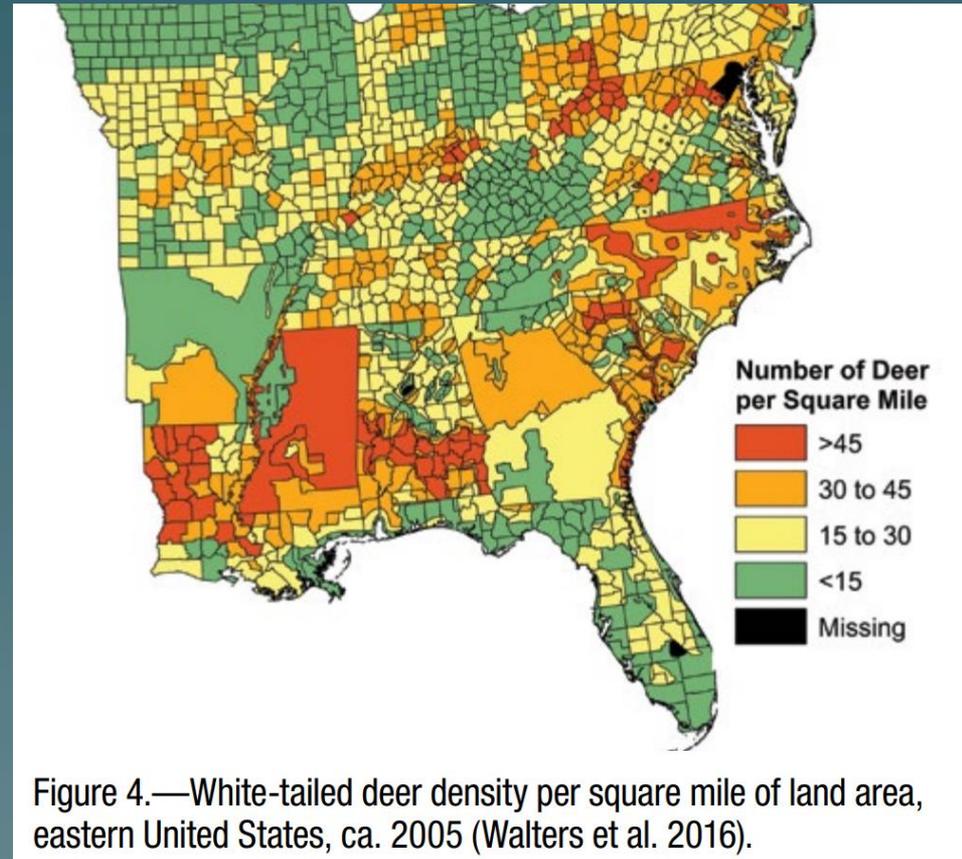
- Population status
- Impacts of overpopulation
- Management strategies



# Deer Population

In Maryland:

- 2018-2019 estimated 207,000
  - Decrease from 2017-2018 of 222,000



# Carrying Capacities

## Biological

- number of individuals of a given species that a specific parcel of habitat can support in good physical condition over an extended period of time

## Cultural

- maximum number of deer that can coexist compatibly with the local human population



# Effects & Impacts

- Human Health
- Economic
- Environmental



# Vehicle Collisions

In 2018

- 11,184 vehicle/deer collisions in Maryland

In 2001

- \$28 million in damages



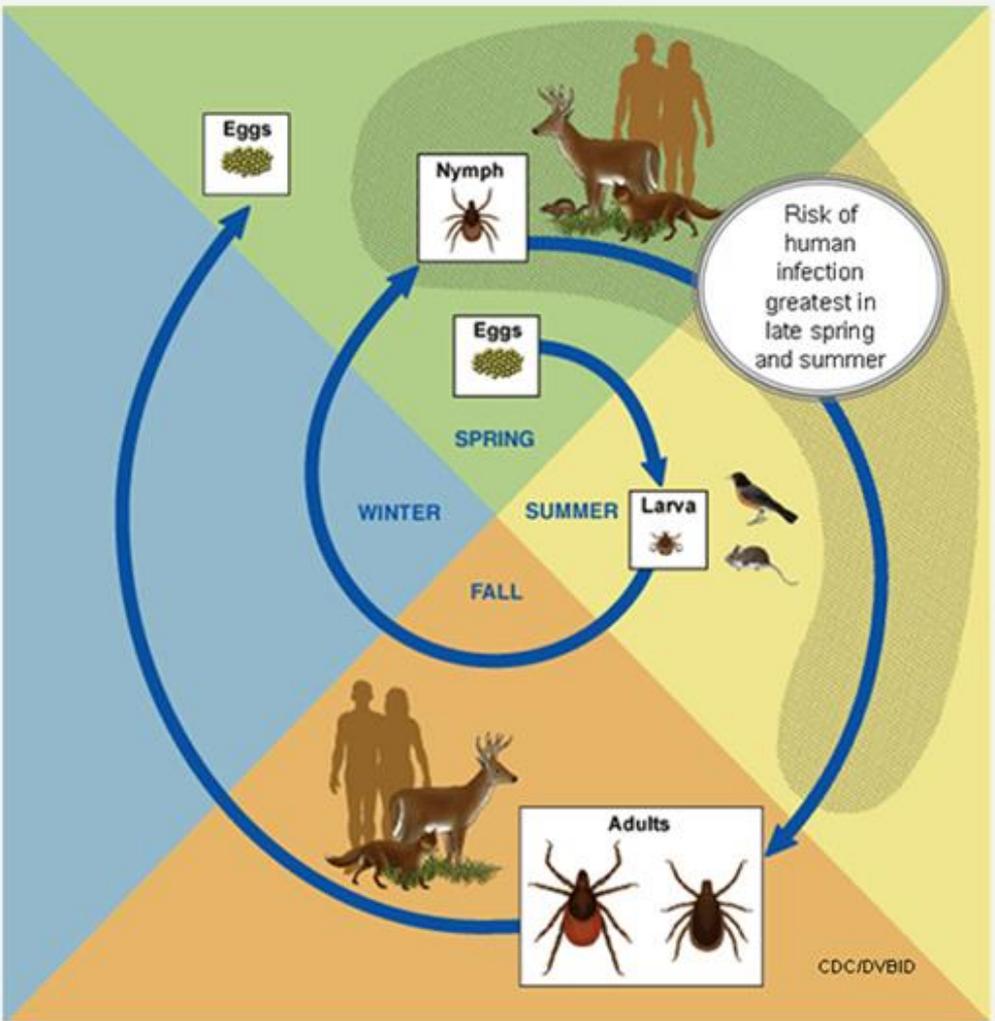
<http://www.ohiodnr.com/Portals/19/oct04/images/deercollision.jpg>



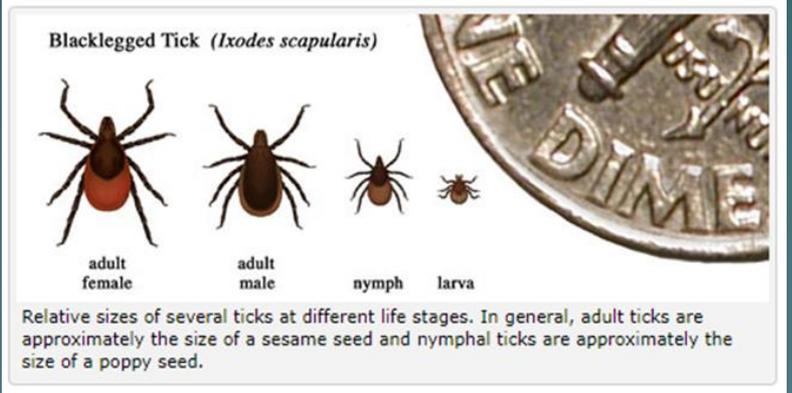
# Tick-Born Diseases

- Lyme disease
- Babesiosis
- Alpha-Gal
- Ehrlichiosis
- Rocky Mountain Spotted Fever
- Anaplasmosis
- Southern Tick-Associated Rash Illness
- Tick-Borne Relapsing Fever
- Tularemia





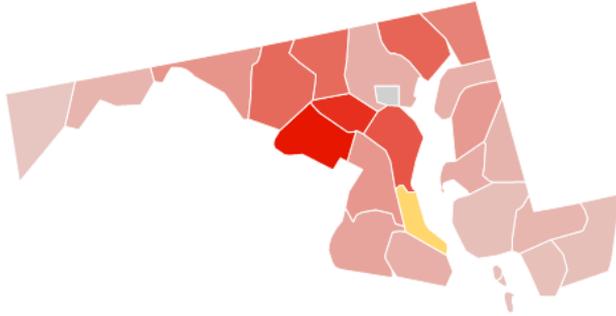
This diagram shows the lifecycle of blacklegged ticks that can transmit Lyme disease.



<http://images.emedicinehealth.com/images/government/ticks.jpg>

<https://www.cdc.gov/lyme/transmission/blacklegged.html>

## Reports of Lyme Disease in Calvert County, Maryland



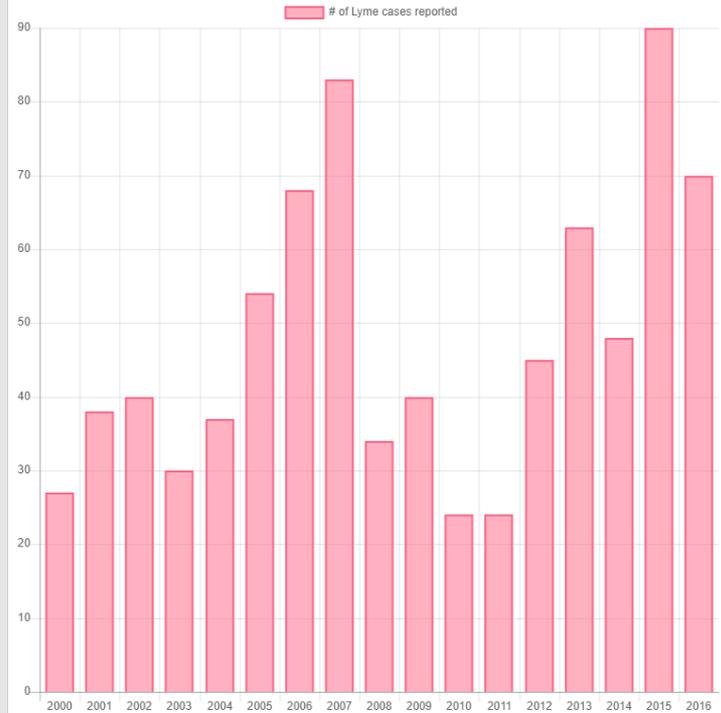
815

Total cases of lyme disease confirmed in Calvert County (2000 to 2016)

### Note:

Due to the fact that the CDC's data only represents confirmed cases, the actual quantity of Lyme disease cases may be far greater. We estimate a total of **8,150** true cases of Lyme disease in Calvert County.

## Yearly Breakdown of Lyme Cases in Calvert County



# Economic Impacts

- Over \$250 million in damage to suburban landscape plantings and gardens
- \$7.6 million in 2009 in agricultural crop damage



# Ecological Effects

## Increased

- Density of Nonnative and Invasive Species

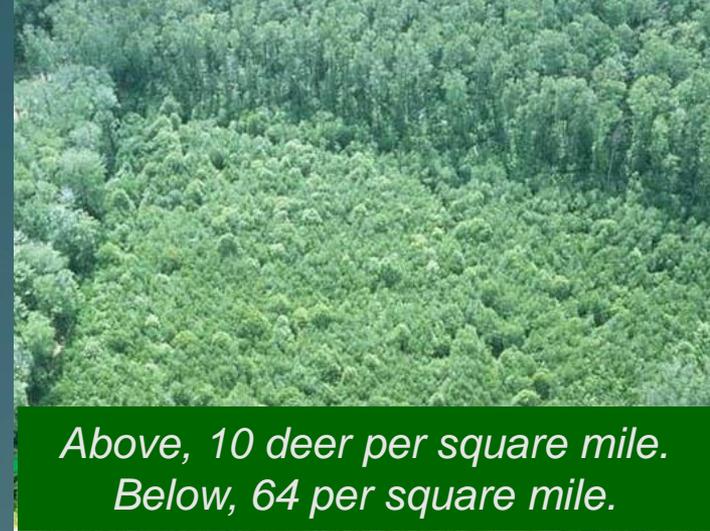
## Decreased

- Plant Diversity
- Wildlife Habitat Quality
- Water Quality
- Forest Regeneration



# Forestry Production

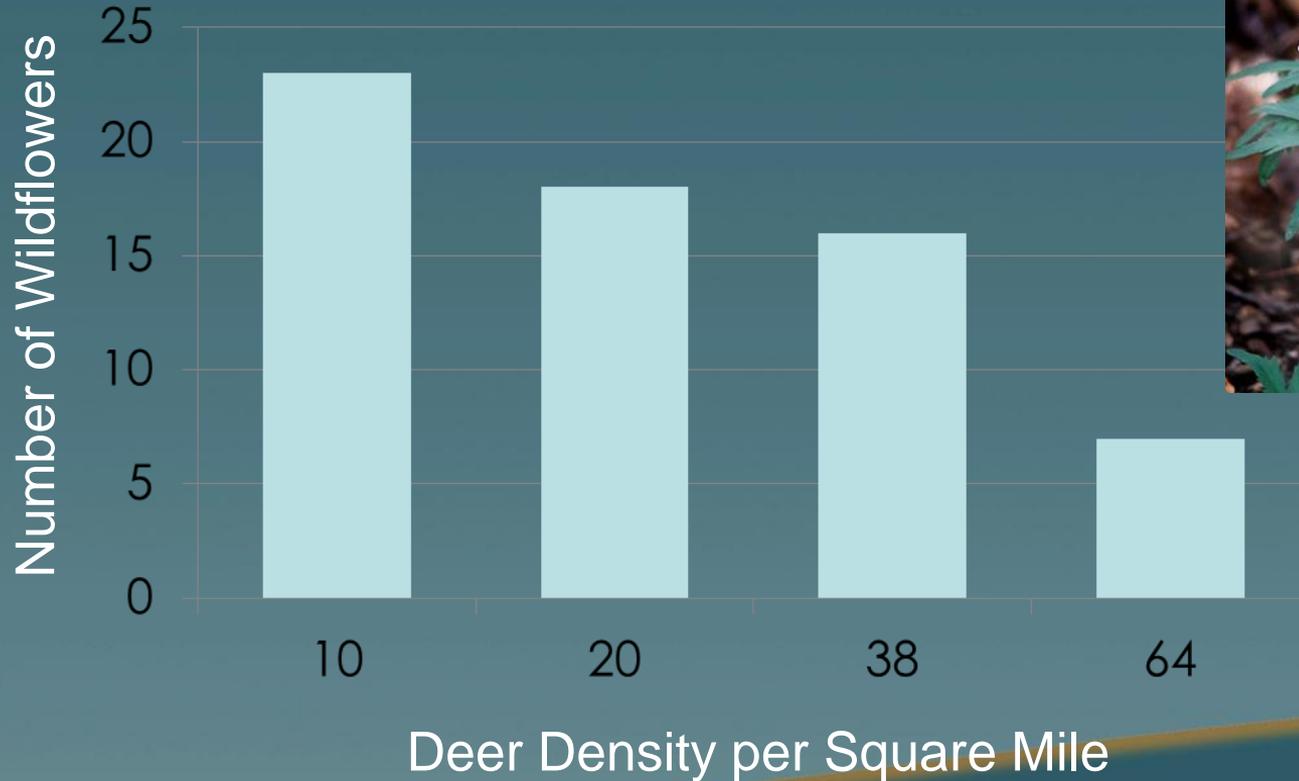
- Reduced regeneration of oak seedlings
- Increase in ash, black cherry & hackberry
- Less marketable species dominate



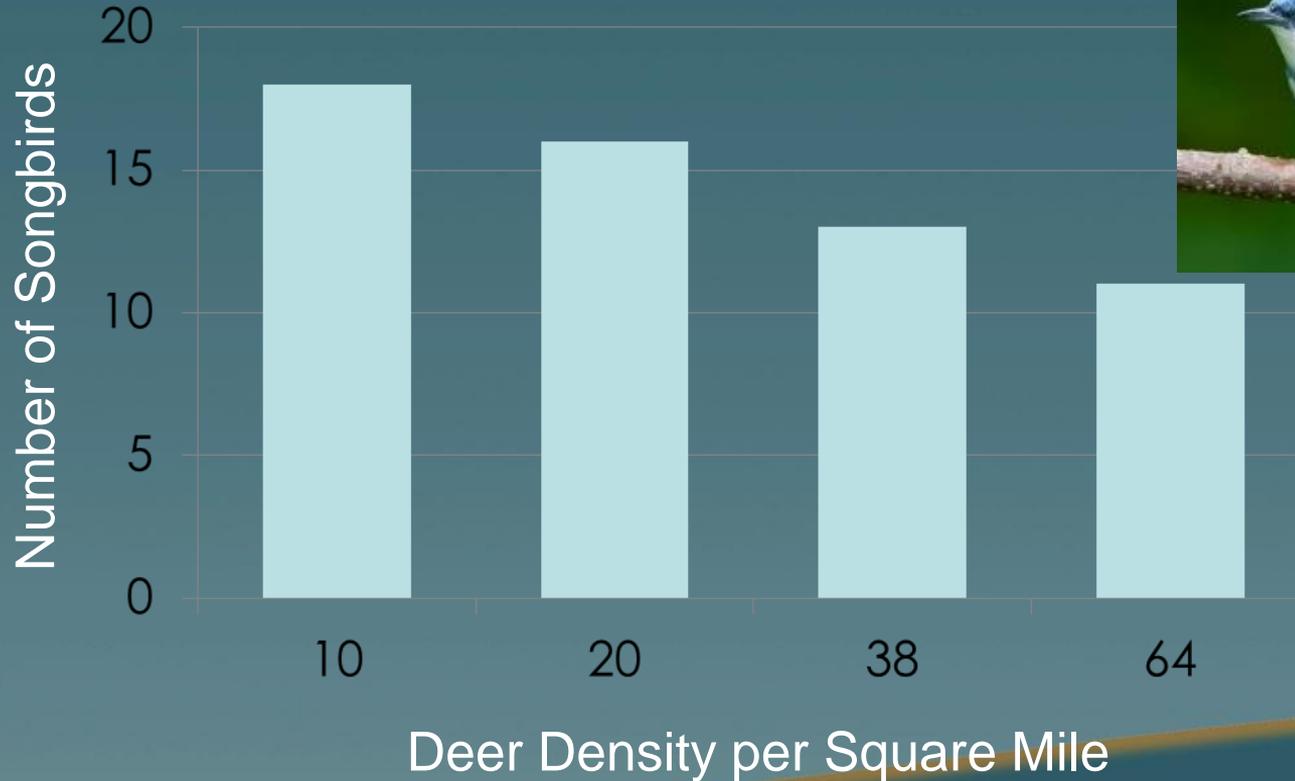
*Above, 10 deer per square mile.  
Below, 64 per square mile.*



# Plant Diversity



# Habitat Quality



# 2013 Deer Work Group Report

The Calvert County Board of County Commissions directed that a work group be formed to make recommendations on options to reduce the impacts from deer overabundance in the county.



# Work Group Recommendations

- Expand Hunting Opportunities
- Encourage Non-Lethal Options
- Develop an Education Campaign



# Population Control

- Natural predators
- Non-lethal
- Hunting



[http://images.nationalgeographic.com/wpf/media-live/photos/000/007/cache/white-tailed-deer\\_756\\_600x450.jpg](http://images.nationalgeographic.com/wpf/media-live/photos/000/007/cache/white-tailed-deer_756_600x450.jpg)



# Natural Predators



[http://dnr.maryland.gov/wildlife/Hunt\\_Trap/images/coyote1.jpg](http://dnr.maryland.gov/wildlife/Hunt_Trap/images/coyote1.jpg)

- Coyotes and bobcats will not control the expansion of deer numbers
- Dogs have been shown to ward off deer



# Non-Lethal Methods

- Fencing
- Repellents
- Vegetation Management
- Contraception?



[http://www.afencecompany.com/commerce/112/images/CAT\\_266.JPG](http://www.afencecompany.com/commerce/112/images/CAT_266.JPG)



# Hunting

- The most economical and practical method to regulate deer population
- In Maryland
  - 161,000 hunters age 16 and older
  - \$210 million spent annually on equipment and trip-related expenditures



# Public Hunting Opportunities

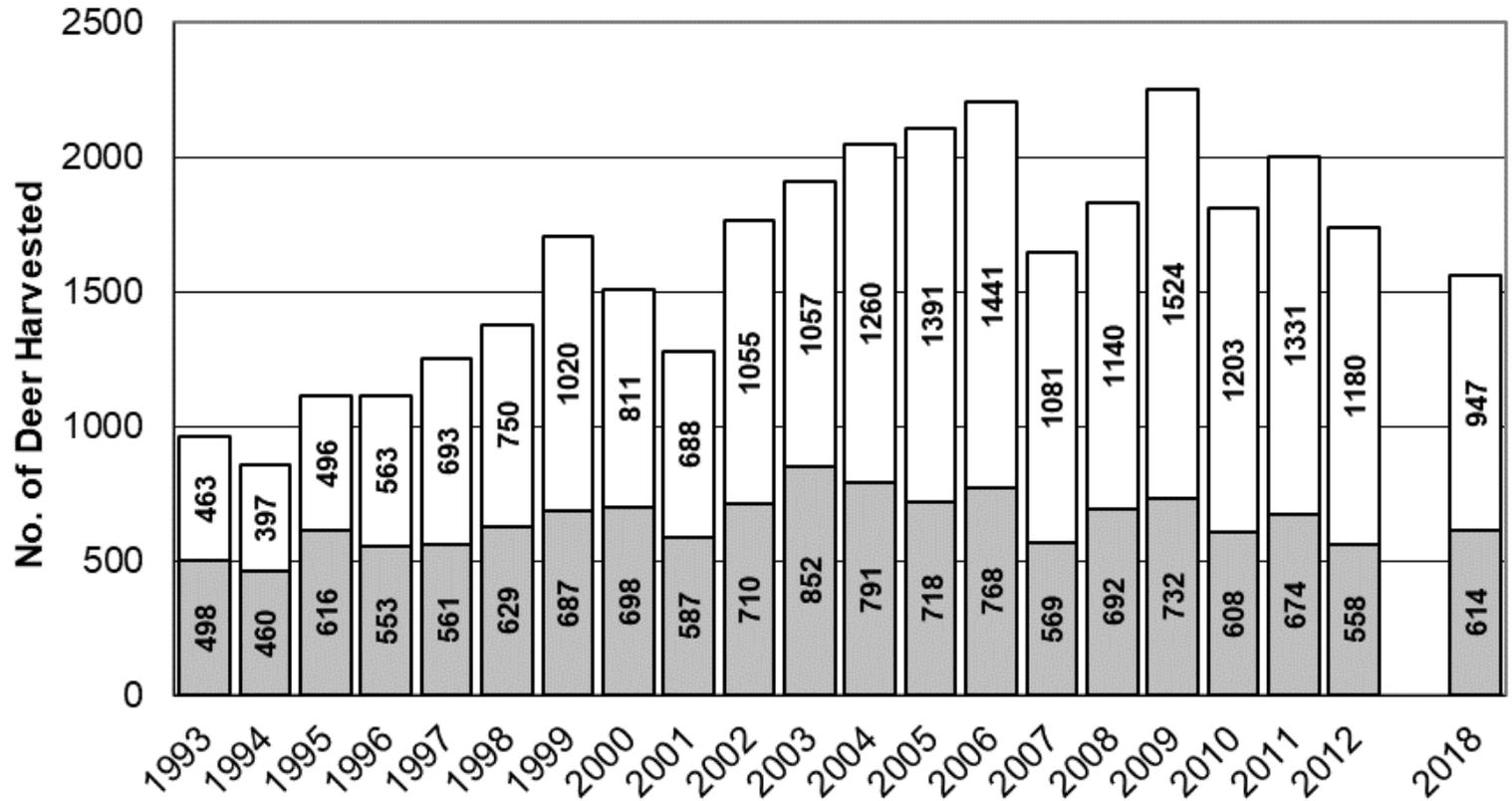
- Biscoe Gray Heritage Farm
- Flag Ponds Nature Park
- Calvert Cliffs
- Hall Creek
- Huntingtown Area
- Parkers Creek WMA

[dnr.maryland.gov/wildlife/Pages/publiclands/wmasouthern.aspx](http://dnr.maryland.gov/wildlife/Pages/publiclands/wmasouthern.aspx)  
[www.calvertparks.org/hunting.html](http://www.calvertparks.org/hunting.html)



# Calvert County

Total White-tailed Deer Harvest - Antlered & Antlerless



# Hunting

- Farmers and Hunters Feeding the Hungry
- Crop Damage Permits
- Private Lands
- Hunt Clubs
- Public Lands



# Venison Donation Programs

- Rowell's Butcher Shop

443-295-7449

995 German Chapel Road  
Prince Frederick



**FARMERS AND HUNTERS FEEDING THE HUNGRY**  
*Giving nutritious meat to those in need!*

[DONATE DEER](#) [GIVE FINANCIALLY](#) [VOLUNTEER](#)

We pay local butcher shops to transform donated deer and livestock into protein-rich meat for food banks and feeding ministries.

The graphic features a background image of a person in a dark jacket. Below the title, there are three small images: hunters with a deer, a girl holding a 'Thank You!' sign, and a girl eating spaghetti. At the bottom, there are three green buttons with white text: 'DONATE DEER', 'GIVE FINANCIALLY', and 'VOLUNTEER'. Below the buttons is a paragraph of text.

# Landowners Liability

## “Public recreation on private land.”

Title 5, Subtitle 11 of the Natural Resources Article of the Maryland Annotated Code

“The purpose of this subtitle is to encourage any owner of land to make land, water, and airspace above the land and water areas available to the public for any recreational and educational purpose by limiting the owner’s liability toward any person who enters on land, water, and airspace above the land and water areas for these purposes.”

<https://extension.umd.edu/learn/publications/landowner-liability-and-recreational-access-eb-357>



# Education

- Press releases
- Brochures
- Web sites
- Workshops
- Presentations



# Questions

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