



# Calvert County Deer Work Group Report



**Prepared by the Department of General Services  
Natural Resources Division**

**Approved by the  
Calvert County Board of County Commissioners  
April 16, 2013**

## **Background**

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In response to numerous vehicle/deer collisions and crop damage in Calvert County, 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.

The work group included representatives from Calvert County Natural Resources Division, the American Chestnut Land Trust, Maryland Association of Bowhunters, Maryland Department of Natural Resources, Farmers and Hunters Feeding the Hungry, Calvert County Sheriff's Department, and Calvert County Farm Bureau, in addition to community representatives. Four meetings of the workgroup were held.

The work group received presentations from Maryland Department of Natural Resources, representatives of the community of Accokeek, and the University of Maryland Extension Service. A representative of White Buffalo, currently involved in a whitetail deer capture/sterilization program in Loch Raven Reservoir, Md., was contacted and invited to make a presentation. However, the decision was made to not expend the funding they requested.

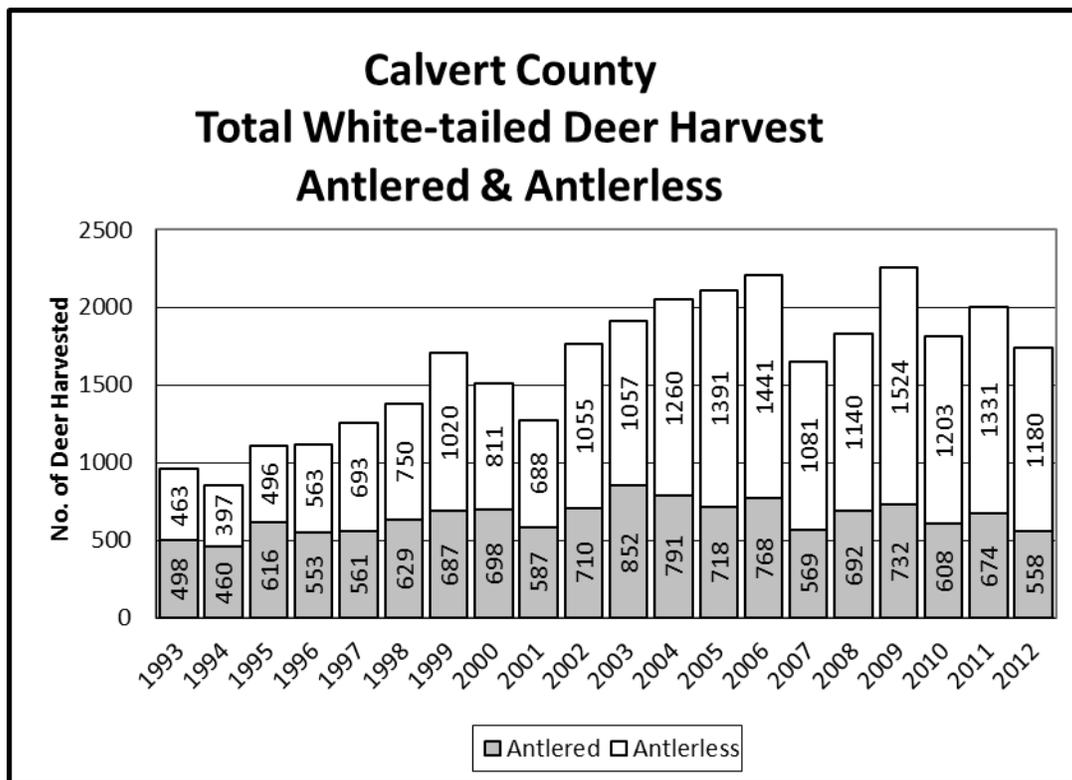
### **Work Group Participants**

V. Wilson Freeland, Department Head  
Karyn Molines, Division Chief  
Dwight Williams, former Division Chief  
Bob Arscott  
Paul Blayney  
Todd Dove  
Bryan Dowell  
David Graham  
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## Discussion

### Deer Population Status

While an estimate of deer populations in Calvert County has not been determined recently, it has been found that in southern Maryland they can reach levels of 170 deer per square mile locations where they are protected from hunting. The recorded deer harvest in 2011-2012 in Calvert County was 558 antlered and 1180 antlerless deer. Calvert County is 213 square miles; the 1738 harvested deer reflect a population of at least 8 harvested deer per square mile.



### Impacts of Deer Overabundance

The problems with deer population range from nuisance to deadly. The problems caused by deer could be differentiated into three categories:

- Health and Safety Concerns
- Economic Impacts
- Ecological Effects

#### Health and Safety Concerns

Tens of thousands of dollars are lost each year due to vehicle/deer collisions and vector-borne disease in Calvert County. In 2012, there was one death in Calvert County attributed to a vehicle collision with a deer. According to the Maryland Department of

Natural Resources, in 2011, 399 deer were killed in Calvert County due to vehicle conditions. Statewide, an average of 30,000 vehicle/deer collisions in the past five years resulted in \$78 million in damages.

Deer are one of the mammal vectors of transmitting several diseases to humans, dogs, cats and other pets via ticks. Calvert County Department of Health reports infectious diseases associated with deer populations. In 2012, there were 53 confirmed cases of Lyme disease. Between 2008 and 2012, 213 cases of Lyme disease and 25 cases of Spotted Fever Rickettsiosis were reported. A single case of babesiosis was reported in Calvert County in 2012.

### **Economic Impacts**

Deer damage personal property such as gardens and landscaping. One estimate, from Clemson University, found that deer were responsible for over \$250 million in damage to suburban landscape plantings and gardens. Agricultural crop damage by deer in Maryland was approximately \$7 million in 2009. If deer damage is severe enough, land cannot be farmed economically and may be removed from production, and possibly sold for development.

Forest landowners also suffer economically from deer overabundance. Deer frequently feed on oak seedlings, as well as acorns, decreasing the regeneration of these economically valuable trees. American beech is less palatable to deer; therefore, deer overabundance results in a forest where less marketable species are more likely to survive to maturity.

Hunting can have a positive impact on the economy. The 2006 U.S. Fish and Wildlife Service's National Survey of Fishing, Hunting and Wildlife-associated Recreation report states that in Maryland, a total of 161,000 hunters, age 16 and older spent an annual total of \$210 million on equipment and trip-related expenditures. This amount of money definitely has an economic impact on the state of Maryland as well as an impact on many lives.

### **Ecological Effects**

Overabundance of deer damages the forest health by over-browsing the herbaceous and shrub layer, and reducing the number of tree seedlings required for forest regeneration. As deer density increases, the number of songbirds in an area decreases.

### **Non-Lethal Population Control**

Deer sterilization/birth control has, so far, only been shown to be effective on captured or fenced deer populations. Such programs are not practical in settings where immigration of individuals and herds into the area is likely. To effectively impact the population, the deer population must first be reduced to a recommended level of approximately 20 deer per square mile.

Contraceptives have to be administered every year or two to be effective. The cost of deer sterilization/birth control is estimated at \$1,000 to \$1,500 per animal per treatment. This option may be feasible in a small number of communities or individual lots.

## **Natural Predators**

While coyotes are found in Calvert County, the National Park Service has determined that the introduction of coyotes and/or bobcats will not control the expansion of deer numbers. Dogs contained in areas by buried electric fences and dog runs established around gardens or fields have been shown to ward off deer.

## **Recommendations**

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### **Hunting Opportunities**

Hunting has been found to be the most economical and practical method to regulate deer population. Each year approximately 6,000 lbs. of venison are donated to local food pantries through the Farmers and Hunters Feeding the Hungry Program. The county could encourage and support the program in Calvert County.

Farmers may receive a Maryland Department of Natural Resources deer management permits (formerly called crop damage permits), which entitles farmers to reduce the number of deer impacting their operations. These permits allow farmers to harvest deer over an expanded period of time outside of normal hunting seasons. The county could provide information to local farmers and foresters on how to maximize deer reduction through deer management permits.

Hunting could be incorporated into both public and private lands by two means. First, managed deer hunting programs could be implemented on suitable properties, with oversight by both county and state agencies. Expanding recreational hunting opportunities for youth, disabled or mobility-impaired, and out-of-county hunters could provide an economic benefit to the county.

In addition to Flag Ponds Nature Park, where a very limited deer hunting program has been in place for a number of years, Calvert County owns the Hughes Tree Farm, Biscoe Gray Heritage Farm, land located on Tobacco Road, land on Rt. 765, and close to 1,000 acres of land associated with Solid Waste & Water locations where deer hunting opportunities could be implemented.

Large landowners, including community associations with open space areas, are vital partners in managing deer. There are strong laws protecting landowners who allow hunters access to their property. The establishment of hunt clubs, with strict rules and mandated levels of effort, is another way for large landowners or communities to address deer population control through responsible hunters. The county could work with the Extension Service to provide examples of hunting lease agreements that landowners and community associations to encourage hunting on their property.

### **Non-lethal Options to Reduce Impact from Deer Overabundance**

Non-lethal options could be implemented which could reduce the impact of deer; but would not reduce their populations. These strategies can be effective in reducing the damage to landscaping within residential communities, crop damage in specific agricultural settings, and possible transmission of disease through decreased proximity of deer to humans, livestock and pets. The county could work with the Extension Service to provide information about the following options.

## **Fencing**

Eight-foot high fixed-knot wire fences are the most effective method; however, many homeowners find them unattractive. A less expensive alternative is black plastic mesh fencing: it is light-weight and blends into the background. The mesh can easily be repaired and patched when damaged. Many homeowners have had good success with lightweight plastic bird netting for protecting individual shrubs, and this material is nearly invisible at a distance.

Electric fences can exclude deer if they are properly built and maintained, and they cost about 50% less than woven wire fence. Use of polytape and poly wire (a plastic filament material interwoven with wire) as fencing is an affordable choice; both are very flexible and easy to use. Deer must be trained to avoid the fence, therefore baiting the fence with aluminum foil and peanut butter entices the deer to touch the wire, getting a shock that will cause them to avoid the area.

The county could provide plans and specifications of fencing styles and installation that have been found to be effective to restrict deer movement into an area.

## **Repellents**

Commercial repellents with active ingredients such as eggs, fish, garlic, pepper, ammonium soaps, have a limited effectiveness in reducing deer damage. Some repellents cannot be used on edible plants. The effectiveness of the repellents varies depending on available food sources, population size, time of year, and frequency of application. The county could develop and distribute a list of products that reduce deer browse.

## **Vehicle Collisions**

Some products advertised to prevent deer-vehicle collisions such as roadside reflectors, car whistles, and motion-activated alarms. Most are not effective and provide a false sense of security. Increased driver awareness and defensive driving will help reduce collisions. The county could undertake an advertising campaign, especially in the fall rut, to promote safe driving habits to prevent deer collisions.

## **Vegetation Management**

Deer have preferences for certain species of trees and shrubs; avoid planting those susceptible to deer browse, and species that are less favorable to deer. The selection of plants should be done early in the landscape planning process, accepting the fact that deer will likely be present in the area. For forest owners, management techniques which provide a balance of native food sources can be incorporated into the Forest Stewardship Plan. The county could develop and distribute a list of plants that are less susceptible to deer browse.

## **Education Initiatives**

Various media and products could be used in a comprehensive education initiative. Press releases could be sent on relevant topics; brochures could be developed; information could be posted in the website, and staff or volunteers could hold presentations and workshops on the topic.

## Data Collection

The Workgroup realized that there was a lack of data on many of the questions about deer populations in the county. Efforts could be made to collect and compile data on the following:

- Population estimates
- Disease reports from Health Department
- Incidents of deer/vehicle collision reports from police and fire departments
- Deer carcass reports from state and county road crews
- Value of the losses in agricultural or timber due to deer damage
- Economic benefit of recreational hunting
- Impact of deer on residential areas

## Resources and References

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