**Fact Sheet**

**Subject: Solutions for Deer Vehicle Collisions (DVC’s)**

**Background:**

* The Fairfax County Deer Management Plan assumes reducing the deer population will result in fewer DVCs, but in communities where data was collected before and after hunting season contrary results have been obtained.
* A study by the Virginia Department of Transportation assessed hunting pressure, deer density, amount of forest and housing development, presence of crops and corridors, and road metrics for 228 road segments within a county to determine which factors correlated with DVCs.
* The logistic regression indicated deer density was either a non-significant factor or that DVCs were *lower* in areas of higher deer density. It concluded “there is little evidence that increased deer harvest reduced DVCs” (McShea et al. 2008)*.* These data reflect the complexity of deer related problems and the need to ensure the remedy actually addresses the problem.

**Discussion:**

Prevention should be the focus of any program aimed at reducing DVCs. Fortunately, there are highly effective - low cost solutions.

* Fairfax County’s latest DMP relies almost exclusively on bow hunting. Killing deer will not decrease the incidence of DVCs--statistics show the opposite. The time favored by hunters is early morning (rush hour) and records show DVC’s increase 4-5 times during deer hunting season. Deer culling programs generate a succession of removal and replacement in which animals die while the root causes of problems go unaddressed. If attractive habitat remains, deer from surrounding areas will migrate to occupy vacant areas resulting in a perpetual kill cycle.
* **Roadside Warning Reflector Systems.** Strieter-Lite Reflectors have a track record of reducing DVC’s by 78-90%. Fairfax County purchased this system in 1999, with additional purchases in 2000 and 2001. It has also been used successfully in Baltimore County and Harford County, MD, as well as in 23 other states. Reductions of 100% in DVC’s after this system was installed are documented. As an added benefit, reflector-warning systems are eligible for up to 90% federal funding. In addition, TEA-21 (Transportation Equity Act for the 21st Century) provides matching funding for programs to reduce vehicle-caused wildlife mortality. The initial cost is low and thereafter only maintenance expenses are required. Based on several states’ records, the cost per mile to maintain reflectors is approximately $500 while the average cost of a DVC is $2,500.
* **Salt** is the most commonly used highway de-icer. In addition to substantial evidence of stream and water pollution, deterioration of road surfaces, and damage to automobiles, the use of salt on our roads creates a virtually endless mineral block available to deer and other wildlife. According to P. H. Jones in his technical report RR237, Environmental Impact of Road Salting, providing deer with access to salty drinking water actually causes them to lose their fear of humans and animals resulting in increased DVC’s. The solution is remedied by employing a salt substitute to treat roads. (Use of salt is already prohibited in some states.) An informative study on salt alternatives is available from the National Cooperative Highway Research Program (Report #577) in Washington, D.C. Organic and agricultural by-products, sand, abrasives and nitrogen products are just a few alternatives.
* **Mobile billboards** - In recent campaigns throughout the County mobile billboards were deployed and rotated with a warning that deer crossings were expected. Researchers noted immediate reductions in driver speed as they approached the signs. A significant effect was noted both when signs were placed in deer hot spots and subsequently removed. For example, during a seven-day period while the sign was used citizens reported no DVC’s. The next night, after it was removed, a DVC was reported. The County currently has two mobile signs. With a County population over 1.2 million, this effort is token at best. Purchasing, using, and rotating mobile billboards involves minimum cost with maximum results.
* **Fencing** is another proven alternative, which can be used on its own or in combination with elongated bridges, overpasses, underpasses or culverts, to direct deer to alternative areas. According to several studies wildlife fencing, if used correctly, has the documented potential to reduce DVC’s drastically. One study in Banff, Canada, showed fencing systems reduced DVC’s by 80%. Deer fencing is affordable, available, and effective in reducing DVC’s.
* **Vehicle speed** - Data suggests this is correlated with the rate of DVC’s, so stricter enforcement of speed limits in high-speed areas would be helpful. Community education programs on driving more safely to avoid DVCs would further contribute to a reduction of collision risk.
* **Vegetation control** is also effective in steering deer away from roadways. Deer are creatures of habit whose behaviors are highly predictable. Chemicals to eradicate grass, weeds, and other vegetation are already used in several areas of the County, and in these areas deer are rarely sited near the roads. VDOT assistance to expand this program will increase the likelihood of ensuring roads and shoulders do not attract deer.

**Conclusion:**

Society is making strides helping wild animals cope with roads in their habitats. Resources invested in sensible, non-lethal alternatives are a better investment that will provide immediate results and continue to offer value for years. Safer, more humane, and sensible alternatives exist to avoid killing deer in densely settled suburban communities. The County already has many of these resources in inventory and has the ability to partner with VDOT, the Department of Game and Inland Fisheries, the Fairfax County Park Authority, county health agencies, and other agencies. Citizens want more and better alternatives.

**Recommendation:**

The BOS direct the Park Authority and Animal Control to investigate, develop, and promote the humane alternatives provided above to minimize DVCs.

Prepared by: Humane Deer Management (June 2014)