

Response to Questions on the FY 2008 Advertised Budget Plan

Request By: Supervisor Frey

Question: Please provide options on expanding the Deer Management Program.

Response:

In response to increasing concerns about Fairfax County's overabundance of deer and potential Lyme disease implications, three options are available to expand the County's Deer Management Program: Option 1 – Comprehensive Countywide Expansion (\$833,571, 5/5.0 SYE positions, 4 vehicles); Option 2 – Limited Countywide Expansion (\$501,352, 3/3.0 SYE positions, 3 vehicles); and, Option 3 – Targeted Neighborhood Expansion (\$274,712, 2/2.0 SYE positions, 2 vehicles). Following is background information on the County's deer management issue, current County deer management policies and activities, as well as descriptions and costs for each of the three expansion options.

Background

Studies indicate that as many as 400 deer per square mile have been found in western parts of the County and that as many as 100 deer per square mile can be found in the County's urban sections. The County's Integrated Deer Management Plan indicates a healthy, viable deer population is 15 to 20 deer per square mile. Many experts attribute the increase in deer population over recent decades to: the County's transformation from a largely agrarian and woodland area to a more urbanized area; deer's ability to adapt to urban environments; their high reproductive rate; the absence of predators; the restriction of hunting in populated areas; and, increased nutrition from ornamental plants and fertilized lawns. An overabundance of deer can aggravate a number of problems that have significant costs including:

1. **Road Safety:** An average of 4,000 to 5,000 deer-vehicle collisions occur in the County each year that results in vehicle property damage, possible serious injury to motorists, and some 1,400 deer deaths annually. Three motorists in the County have been killed as a result of collisions with deer and many others have been hurt and hospitalized.
2. **Environmental Damage:** By overbrowsing the County's forests and stream valleys, deer are destroying their natural habitat as well as the habitat of birds, amphibians, and micro-organisms that are necessary to sustain the County's natural environment. In addition to eating plants native to the area, deer also feed on non-native vegetation found in residential areas and parks and often cause considerable damage to residential landscapes and County parks. This overbrowsing has also resulted in the loss of oak seedlings which will have a devastating effect upon the composition of the County's future forests. There are many species of wildlife which depend heavily upon acorns for food.
3. **Deer Health:** With intense competition for food and space, deer are more susceptible to weight loss, starvation, parasites, and other serious diseases. Too many deer living too close together reduce the overall health of the County's deer population.
4. **Lyme Disease:** An overabundance of deer subjects residents to a greater risk for Lyme disease. More deer increase the chance that deer ticks infected with the disease bacteria will come in contact with people. While Lyme disease is easily treatable if caught in time, it can cause serious complications if early symptoms are overlooked. The number of Lyme disease cases reported to

the County's Health Department by testing laboratories rose from 127 cases in 2003 to 236 in 2006.

On December 8, 1998, the Fairfax County Board of Supervisors adopted the Fairfax County Integrated Deer Management Plan to begin addressing problems associated with the overabundance of deer. In accordance with this plan, County staff conducted a series of pilot programs during 1998 and 1999 in order to test and improve methods for reducing the deer population on public lands. A committee of county citizens and local experts in deer management techniques evaluated the County's plan for deer management. This committee endorsed the County's deer management plan, recommended the continued use of deer reduction techniques, and strongly supported community education activities to help residents better understand the safety and environmental issues associated with deer overabundance.

More recently, in January 2007, Supervisor Michael Frey, along with Earl Hodnett (Wildlife Biologist, Animal Services, Police Department), Dr. Gloria Addo-Ayensu (Director, Health Department), and Dr. Jorge Arias (Entomologist, Disease Carrying Insects Program), spoke with over 100 Sully District residents at Deer Park Elementary about the County's Deer Management Program and Tick Surveillance and Outreach efforts. Residents were particularly concerned about the significant number of deer in their neighborhood, as well as the greater risk for contracting Lyme disease. In fact, a number of residents testified regarding the impact of Lyme disease on their families, including some of the 13 people within a one-block radius who say they have been treated for Lyme disease in the past two years.

Current Deer Management Policy and Activities

The County's Wildlife Management Program, located in the Police Department's Animal Services Division, oversees programs to manage the County's wildlife populations such as deer, geese and coyote, and is comprised of only 1/1.0 SYE Wildlife Biologist. With regard to deer management, the very limited staff resources have constrained the program's efforts to effectively manage the overabundance of deer in the County. Successful practices have emerged such as using police sharpshooters and managed hunts to control the herd size, as well as informing the public on how to keep deer away from their property and the importance of deer management. However, the deer herd in the County is growing faster than can be managed by the limited staff and resources; the longer it takes to stabilize and reduce the herd size, the more time and resources will be required to control it later. As mentioned above, an overabundance of deer has implications for road safety, environmental damage, deer health and Lyme disease.

Deer Management and Outreach

With additional staff and resources, the County can implement a wider range of initiatives to more quickly manage the County's deer population and reduce the number from a current average of 100 to 400 deer per square mile to a more optimal density rate of 15 to 20 deer per square mile. These efforts include:

- gathering more data from residents regarding deer damage;
- monitoring trends in herd size and health of selected herds of deer;
- conducting more seminars and workshops on a range of topics related to deer (e.g., plant varieties not favored by deer; deer proofing residential property, safe and humane hunting activities); and,
- using police sharpshooters and coordinating more managed hunts to reduce the number of deer in areas where an overabundance has effected human safety and environmental health (as of March 2007, 64 deer have been killed in six sharpshooting events and 135 killed in managed hunts).

Tick Surveillance for Lyme Disease/Tick Education and Protection

Since FY 2005, the Health Department's Environmental Health Services and Fund 116, Disease Carrying Insects Program (DCIP), have implemented a pilot tick surveillance program to understand the magnitude of tick-borne disease in the County and define the areas of greatest risk. The program involves the collection and identification of tick species in the County to determine their distribution and infection rate with the bacterium that causes Lyme disease (*Borrelia burgdorferi*). Of the 443 adult deer ticks tested in FY 2006 during surveillance efforts, 3 to 6 percent were found to be infected with *Borrelia burgdorferi*; however, the overall infection prevalence in the County ranged from 15 to 22 percent for both adult ticks and nymphs, which is a more accurate representation of the true disease potential. More surveillance work needs to be conducted in order to have sufficient longitudinal data to determine a normal prevalence infection rate for this area.

DCIP has also incorporated tick education and protection into the outreach and education strategy already established for West Nile virus. The goal is to increase the public's knowledge about Lyme disease and other tick-borne diseases, to promote behavior change, and to encourage the community to take an active role in reducing their risk of tick-borne diseases through preventive measures.

The pilot tick surveillance work, as well as the education and protection programs, are currently implemented by DCIP staff without any additional resources. Therefore, activities are carried out only if available staff and resources can be diverted from the West Nile Virus program without compromising that program's efforts or if additional dedicated resources are provided for a tick surveillance and outreach program. A more comprehensive tick surveillance and outreach program would include:

- expanded tick surveillance beginning in April and ending in October;
- participating in a greater number of controlled deer hunts to obtain ticks from County, state and regional parks, as well as wildlife refuges located within Fairfax County;
- more surveillance in areas where tick-borne disease is detected in humans to help determine zones of potential local transmission;
- associating tick surveillance data with risk factors in order to assess how to predict human risk and determine when increased community outreach might be necessary to inform residents how they can effectively protect themselves;
- informing residents on the importance of personal protection and the actions they can take to keep property free from ticks and protect themselves against Lyme disease; and
- implementing a Lyme Disease Protection Program for County staff that work outdoors.

Expansion Options

The following table outlines three possible options for expanding the County's current Deer Management Program and Tick Surveillance and Outreach Program. Please note the options are in addition to the 1/1.0 SYE Assistant Wildlife Biologist already included in the FY 2008 Advertised Budget Plan. It should be noted that the Environmental Quality Advisory Council strongly recommended 2/2.0 SYE Assistant Wildlife Biologist positions for the County's Wildlife Management Programs.

Option 1 provides resources to more comprehensively manage the County's Wildlife Management Programs (e.g., deer, geese and coyotes). More specifically, the \$833,571 in additional funding supports enough staff to bring the deer density in County parks to the more optimal level of 15 to 20 deer per square mile within two years, thus reaching the goals adopted by the Board of Supervisors in 1998 and outlined in the County's Integrated Deer Management Plan. In addition, funding supports improved monitoring of the deer population, more countywide public outreach and education, greater number of managed hunts, as well as the implementation of a comprehensive countywide tick surveillance and outreach program similar to the one for West Nile virus.

Option 2 provides resources to bring the deer density in County parks to the more optimal level within seven years. The \$501,352 in additional funding also supports additional staff to further monitor and manage the deer population, conduct countywide public outreach and education, participate in a greater number of managed hunts, as well as conduct a scaled-down countywide tick surveillance and outreach program.

Option 3 provides resources to stabilize and reduce deer density, but may not be sufficient to bring average deer density levels to the more optimal level of 15 to 20 deer per square mile. Additional funding primarily would support additional staff to respond to a limited number of specific neighborhoods with deer management issues, as well as to conduct targeted neighborhood tick surveillance and outreach programs.

Deer Management Program Expansion Options						
	Option 1 -- Comprehensive Countywide Expansion		Option 2 -- Limited Countywide Expansion		Option 3 -- Targeted Neighborhood Expansion	
Police Department/ Animal Services						
Personnel Services	2/2.0 SYE Asst. Wildlife Biologists	\$125,912	1/1.0 SYE Asst. Wildlife Biologist	\$62,956	1/1.0 SYE Asst. Wildlife Biologist	\$62,596
	1/1.0 SYE Admin. Asst	39,643	1/1.0 SYE Admin. Asst	39,643		
	4 ELT Field Technicians	213,081	2 ELT Field Technicians	106,541		
Operating Expenses	3 vehicles and misc.expenses	176,000	2 vehicles and misc. expenses	120,500	1 vehicle and mis. expenses	95,500
	subtotal	\$554,636	subtotal	\$329,640	subtotal	\$158,096
Health Department/ Fund 116, DCIP						
Personnel Services	1/1.0 SYE Biologist	89,116	1/1.0 SYE Biologist	89,116	1/1.0 SYE Biologist	89,116
	1/1.0 SYE Environmental Specialist	74,675				
	3 ELT Environmental Technician	67,644	2 ELT Environmental Technician	45,096		
Operating Expenses	1 vehicle and misc. expenses	47,500	1 vehicle and misc. expenses	37,500	1 vehicle and misc. expenses	27,500
	subtotal	\$278,935	subtotal	\$171,712	subtotal	\$116,616
	Total	\$833,571	Total	\$501,352	Total	\$274,712

*The Fund 116, DCIP expenditures can be funded from fund balance.