CHAPTER VI

ECOLOGICAL RESOURCES

VI. ECOLOGICAL RESOURCES

This chapter summarizes the status of ecological resources and the actions of public agencies and community groups in the management and preservation of these resources.

A. ISSUES AND OVERVIEW

Open space and natural habitat continue to be reduced in Fairfax County, primarily because of development (both residential housing and commercial buildings) and road building. As this resource is reduced, increased emphasis must be placed on protecting, preserving and enhancing the remaining open space and natural habitat in Fairfax County.

Fairfax County contains a total of about 227,750 acres. Of this total, about 28,108 acres (12.3 percent) are in parks and recreation as of January 2004. Another approximately 25,712 acres (11.3 percent) are vacant or in natural uses. This compares to the about 26,700 acres (11.7 percent) that were vacant or in natural uses as of January 2003. However, not all this acreage can be considered as open space that is valuable for natural habitat. First, the park acreage consists of active recreation (ball fields, etc.) as well as passive recreation (stream valley parks, nature centers, etc.) Ball fields, while greatly needed in Fairfax County, do not do much for protecting natural habitat. In a like fashion, much private open space consists of mowed areas and isolated trees (not woodlands). Again, this does little for protecting natural habitat. Both active recreation areas and private open space, however, if properly designed can help the environment by reducing storm water runoff (by allowing storm water to infiltrate into the soil).

Second, while vacant land is often wooded, this land is subject to development. Considering the continuing rapid pace of development in Fairfax County, much of this land will soon become residential space, office space, retail space, etc., and not provide much in the way of protecting natural habitat. In 1980, vacant land accounted for 32.2 percent of the total land in Fairfax County. By 1990, this had dropped to 19.5 percent and the figure was 11.3 percent as of January 2004.

Therefore, Fairfax County needs to undertake stronger efforts in order to protect, preserve and enhance the environmentally sensitive open space in the county. These efforts should include the establishment of a countywide Natural Resource Inventory, followed by a countywide Natural Resource Management Plan. Additionally, the county needs an aggressive program seeking easements on privately owned environmentally sensitive land and, as opportunities arise, to purchase environmentally sensitive land.

Recently, two significant efforts have occurred that should help in the County's preservation and protection of natural resources. First, as reported in the 2004

Annual Report on the Environment, the Fairfax County Board of Supervisors adopted an environmental vision for Fairfax County – *Environmental Excellence for Fairfax County: a 20-Year Vision*. This vision cuts across all activities in Fairfax County and outlines guidelines that hopefully will be followed in future planning and zoning activities in Fairfax County.

Second, as also reported in the 2004 Annual Report on the Environment, the Park Authority approved the Natural Resource Management Plan for park properties. Again, if this plan is implemented, improved preservation and protection of environmentally sensitive land should be the result.

EQAC continues to commend a number of organizations for their activities in protection, preservation and enhancement of environmentally sensitive areas. These organizations include: the Northern Virginia Soil and Water Conservation District, the Virginia Department of Forestry, the Northern Virginia Conservation Trust, Fairfax ReLeaf, the Fairfax County Department of Public Works and Environmental Services and the Fairfax County Park Authority and its staff. EQAC especially commends the Fairfax County Board of Supervisors for its vision and activities in environmental areas.

B. PROGRAMS, PROJECTS AND ANALYSES

1. The Fairfax County Board of Supervisors

In past years, this chapter of the Annual Report mentioned various organizations and programs supporting environmental efforts in Fairfax County. However, the Fairfax County Board of Supervisors, while mentioned many times, did not have a section in this chapter. This changed in the 2005 Annual Report, when a section was included on the board of supervisors. The actions and decisions of the Fairfax County Board of Supervisors do affect the county's natural resources. These actions and decisions include land use planning and zoning, transportation planning, allocation of staff resources, etc. The BOS has enacted a number of policies that do benefit the environment and many of these polices are embedded in county ordinances and the Policy Plan. However, there never has been an overarching vision dealing with the environment. This has now changed. As reported in last year's Annual Report on the Environment, the BOS has now adopted such an overarching vision -- *Environmental Excellence for Fairfax County: a 20-Year Vision*.

This vision is organized into six sections that cut across all areas in the county:

- Growth and Land Use.

- Air Quality and Transportation.
- Water Quality.
- Solid Waste.
- Parks, Trails and Open Space.
- Environmental Stewardship.

Some recommendations in this document that impact ecological resources include:

- Create more community parks for active and passive recreation – open spaces with native vegetation to sustain local wildlife and to create areas for walking, meditating or bird watching.
- Continue to acquire open space before it is too late through direct purchase or conservation easements to create more trails, connect trails and provide passive and active recreation areas.
- Provide adequate resources to maintain and appropriately develop our parks for passive and active recreation.
- Encourage conservation easements for open space and trails either to private organizations, such as the Northern Virginia Conservation Trust and The Potomac Conservancy, or to government agencies like the Fairfax County Park Authority or the Northern Virginia Regional Park Authority.
- Encourage organizations, for example, those that work on stream monitoring and stream valley restoration, to involve schools and residents of all ages in their work.
- Encourage community-based watershed stewardship groups and help them to work with all stakeholders to protect, enhance and improve the natural resources, and hence, the quality of life in their watersheds.
- Establish an aggressive program of community groups to adopt natural areas such as parks, trails and stream valleys.

The complete document can be viewed at:
www.fairfaxcounty.gov/living/environment/eip/environmentalagenda.pdf

This document is very significant in its potential for protection, preservation and restoration of the county's natural resources. EQAC continues to commend the board of supervisors for adopting this vision and for the steps being taken to implement these recommendations.

2. Department of Public Works and Environmental Services

a. Stream Restoration

DPWES was involved in a number of stream restoration projects. Bioengineering techniques are being used were possible. The following projects were in progress or completed in 2006:

- **English Hills:** Stabilization of 175 linear feet of stream bank at 7820 Manor Drive. Construction began in March of 2006 and is 80 percent complete.
- **Hollington Place:** Stabilization of 150 linear feet of stream bank using bioengineering techniques to alleviate erosion at 7926 Hollington Place. A proposal for the final design has been received from the A/E firm and is currently being negotiated.
- **Hunters Branch:** Stream bank stabilization. This project is in the scoping phase.
- **Runnymeade Subdivision:** Stabilization of 1,200 linear feet of stream bank using bioengineering techniques. Construction of this project began in May 2006 and is 30 percent complete.
- **Clarke's Landing:** Stabilization of 280 linear feet of stream bank using bioengineering techniques. Final design has been submitted for review; final community meeting was held on June 12, 2006.
- **Poplar Springs Court:** Restoration of 1,100 linear feet of stream bank using bioengineering techniques. A proposal for preliminary design has been received and is being negotiated.
- **Beach Mill Road:** Stabilization of 200 linear feet of stream bank using bioengineering techniques. Final construction related comments are being addressed and the Virginia Stormwater Management Program and Corps of Engineers permits are being acquired.
- **Bridle Path Lane:** Stabilization of 750 linear feet of stream bank using bioengineering techniques. Survey is complete and design work to commence under task order.
- **Swinks Mill Road:** Stream bank stabilization to provide structural protection at 819 Swinks Mill Road. Construction began in May 2006 and is 15 percent complete.
- **Balmacara Phase II:** Stabilization of 200 linear feet of stream bank to provide structural protection. Design is 90 percent complete.
- **The Colonies at Scott's Run:** Stabilization of 180 linear feet of stream bank. Design is complete, easement plats prepared and forwarded to Land Acquisition Division.
- **Mount Vernon Estates:** Stream restoration using bioengineering techniques. Design work on this project is 95 percent complete.
- **Hope Park Road:** Restoration of 1,000 linear feet of stream bank plus removal of an unauthorized landfill. Survey work is complete and design work is 2 percent complete.
- **Huntley Meadows:** Stream bank stabilization project using bioengineering techniques. This project is 100 percent complete,

with good results, insofar as the stream bank withstood the record flooding of the June 2006 storm event and immerged mostly intact.

- **Kirby Road:** Stabilization of 200 linear feet of stream bank. Design work began in May 2006.

b. Green Roof Technology

There are several vegetated roofs soon to be implemented by Fairfax County, one on an existing structure and two on new buildings. A vegetated roof demonstration project will be installed on part of the Herrity Building parking garage and is currently in the design phase. The Facilities Management Division with support and funding provided by Stormwater Management is managing this project. This demonstration project is intended to provide an easily accessible example of different vegetated roof technologies and methods for educational and research purposes. Government staff and those in the building industry, as well as residents and students of all ages, will benefit from this educational installation. Capital Facilities, also with support and funding provided by Stormwater Management, will be installing vegetated roof pilot projects on two new buildings. These buildings, Fairfax County's Bus Operations Center on West Ox Road and the Wolf Trap Fire Station, are both currently in the design phase.

Vegetated roof implementation will also be encouraged in an upcoming Public Facilities Manual amendment. Vegetated roofs are one of six Low Impact Development techniques currently in the process of being added to the PFM. Lists of suggested plants for both extensive (low-profile) and intensive (deep-profile) type roofs will be included in order to further facilitate design and implementation.

Additionally, Stormwater Management has several vegetated roof monitoring projects in the works. The demonstration roof on the Herrity parking garage will be monitored for several parameters, as will the currently functioning demonstration roof at the Providence District Supervisor's office. Stormwater Management is also giving support to a graduate student who is monitoring the privately owned Yorktowne Square Condominium vegetated roof/conventional roof comparison study site.

3. Fairfax County Park Authority

The Fairfax County Board of Supervisors created the Fairfax County Park Authority in 1950, authorizing the Park Authority Board to make decisions concerning land acquisition, park development and operations. As a result,

Fairfax County has a system of parks that serve a number of uses, including active recreation such as sports, historic sites and buildings and preserving environmentally sensitive areas such as forests and stream valley lands. For current information on the county's parks, visit the FCPA website at www.fairfaxcounty.gov/parks/.

a. Acquisition of Park Land by FCPA

The FCPA added nearly 160 acres in 2005 through a combination of purchases, dedications, transfers and donations. This brings the parkland inventory to a total of 23,677 acres (which equates to 9.4 percent of the land mass of Fairfax County). The largest portion of the added property was a transfer of over 125 acres from the board of supervisors. This transfer does point out the Supervisors' continued support for the land acquisition and stewardship programs of the Park Authority. Since 2002, the board of supervisors has conveyed over 2,750 acres to the Park Authority. Tables VI-1 and VI-2 lists all the properties acquired by the Park Authority in 2005.

Table VI-1. FCPA 2005 Acquisitions (Purchases and Dedications)

Parcel(s)	Acreage	District	Adjacent Park or Stream
PURCHASES			
John & Lynne Bellingham	0.4869	Providence	New urban park (w/Jones purchase)
Hogge Family	6.1	Mason	New neighborhood park
Paul L. Jones, Jr.	0.6225	Providence	New urban park (w/Bellingham purchase)
DEDICATIONS			
Rita Powell & Mark A. Johnson	0.7485	Sully	Cub Run
Dulles Creek Associates, LLC	3.0827	Hunter Mill	Merrybrook Run
Waples Mill Manor, LLC	20.0469	Providence	Waples Mill Park

Source: *Request for Input for Environmental Quality Advisory Council's Annual Report on the Environment, 2006 Report*, Letter from Michael A. Kane, Director, Fairfax County Park Authority, Fairfax County, Virginia, to James P. Zook, Director, Department of Planning and Zoning, Fairfax County, Virginia, July 19, 2006.

Table VI-2. FCPA 2005 Acquisitions (Transfers and Donations)			
Parcel(s)	**Acreage**	**District**	**Adjacent Park or Stream**
TRANSFERS (from BOS)			
	3.1	Dranesville	Dranesville Tavern
	3.69	Dranesville	Sugarland Run
	2.91	Hunter Mill	Symphony Hills Park
	7.37	Lee	Huntley Meadows Park
	14.93	Lee	Accotink Creek
	7.29	Lee	Accotink Creek
	17.2	Mason	Bren Mar Park
	4.44	Mason	Turkeycock Run
	6.74	Mount Vernon	Pohick Creek
	1.51	Mount Vernon	Southgate Park
	1.87	Providence	New South Railroad Park (combined with donations)
	13.9	Springfield	Rocky Run
	12.53	Springfield	Johnny Moore Creek
	0.15	Springfield	Piney Branch
	4.9	Springfield	Accotink Creek
	6.925	Sully	New park (historic Mount Gilead)
	5.0	Sully	Cub Run
	1.5	Sully	Rocky Run
	1.11	Sully	Frog Branch
DONATIONS			
Paul B. & Joan M. Baker	0.0413	Providence	New South Railroad Park
Sandburg Court Homeowners Association	0.0580	Providence	New South Railroad Park
Michel G. Feghali & Jennifer L. North	0.0468	Providence	New South Railroad Park
Neeraj Bhagat & Vandna Bhagat	0.0390	Providence	New South Railroad Park
Helen I. Rave	1.3774	Mason	Manassas Gap Railroad Park
Wedderburn Associates, L.C.	0.6348	Providence	Tysons Woods Park
Young Group & Peter M. O'Meara	0.9313	Dranesville	Pimmit Run SV Trail

Source: *Request for Input for Environmental Quality Advisory Council's Annual Report on the Environment, 2006 Report*, Letter from Michael A. Kane, Director, Fairfax County Park Authority, Fairfax County, Virginia, to James P. Zook, Director, Department of Planning and Zoning, Fairfax County, Virginia, July 19, 2006.

b. Natural Resource Management Plan

In past reports, EQAC recommended that the county board of supervisors develop and implement a countywide Natural Resource Management Plan. EQAC noted that in order to do this, two tasks need to be accomplished first: complete a countywide Baseline Natural Resource Inventory and adopt a unified Natural Resource Conservation Policy.

EQAC's past recommendation on developing a countywide Natural Resource Management Plan has been partially fulfilled by FCPA. On January 14, 2004, the Park Authority Board approved the Natural Resource Management Plan for Park Authority property. The NRMP contains seven elements:

- Natural Resource Management Planning.
- Vegetation.
- Wildlife.
- Water Resources.
- Air Quality.
- Human Impact of Parklands.
- Education.

The complete NRMP can be viewed at:
www.fairfaxcounty.gov/parks/nrmp.htm.

The second year of the implementation of the NRMP was completed June 30, 2006. Some of the highlight of year two included:

- Policy
    - Developed draft policy language on native plants and invasive plants.
    - Developed a draft stormwater features policy to set up criteria for evaluation of proposed stormwater features on parkland.
    - Began to list and document best practices for resource protection and management.
    - Established an inter-division team that reviewed policies and standard operating procedures related to beaver management.
- Partnerships
    - Continued partnerships with Environmental Coordinating Committee, Environmental Quality Advisory Council, Department of Public Works and Environmental Services, Northern Virginia Soil and Water Conservation District, Virginia Department of Forestry, Earth Sangha and others.

- NRMP Program
  - Secured $100,000 for invasives and $160,000 for trail mapping at the FY2005 Carryover in support of the board of supervisors' Environmental Agenda.
  - Continued to develop operations plan including roles and responsibilities for NRMP Section staff.
  - Planned the out-years implementation of the NRMP.
- Resource Assessments and Planning
  - Continued to evaluate resources on land under consideration for acquisition and during master planning and development.
  - Completed draft of the Sully Woodlands Regional Master Plan.
- Resource Management
  - Park Authority staff conducted a burn of the meadows on Pleasant Valley Road in Sully Woodlands on February 2006.
  - Developed plans for reduced mowing and natural meadow establishment.
  - Initiated trail mapping project.
- Invasive Non-native Species
  - Created a pilot volunteer program.
  - Developed brochures and web content on invasives.
- Water Resources
  - Completed a baseline inventory of stormwater features.
  - Continued implementation of Low Impact Development practices – five sites selected to have LID demonstration projects (as funding allows).
- Education
  - Published six stewardship brochures.

While the Park Authority has made a great step forward with the adoption of the NRMP, more resources (people and funds) need to be devoted to the implementation of the plan. Furthermore, inventories of all parks need to be accomplished. The inventory needs to be extended to cover all of Fairfax County so that future planning for acquisition of sensitive lands can take place.

Unfortunately, insufficient staffing and funding are limiting implementation of the NRMP. The Fairfax County Park Authority staff lacks a number of functions and capabilities in regard to the NRMP: natural land managers, ecologists, restoration specialists, water resource specialists, wildlife specialists, planners and project managers. The FCPA staff estimates that $3 million per year is needed. EQAC does support increased funding for this purpose, but also notes that obtaining some of the needed positions from within internal resources also can be done.

c. Invasive Plant Control Efforts

Invasive plants are a problem because they can out-compete and replace native species. This change in vegetation disrupts the life cycles of many flora and fauna that depend on native vegetation. The Park Authority's Strategic Plan includes a strategy to develop invasive plant guidelines for consideration by the Environmental Coordinating Committee as a countywide standard. Invasives projects occur at staffed parks and in select parks when volunteers can assist in the efforts. For example, FCPA's partnership with Earth Sangha, a local non-profit agency, continues at both Marie Butler Leven Preserve and Wilburdale Park.

While EQAC commends the volunteers and the Park Authority staff who are cooperating in removing invasives, an increased effort should be established using dedicated funds for this purpose.

d. Riparian and Bioengineering Projects

The Fairfax County Park Authority, along with and in partnership with other agencies, continues to work on stream stablization/bioengeering projects. See the Water Resources Chapter of this report for descriptions of these projects. The stream bank stabilization projects were along Difficult Run near Georgetown Pike (completed November 2005), equestrian stream crossing on Difficult Run (completed spring 2006) and Barnyard Run stream stabilization at Huntley Meadows Park (completed spring 2006).

e. Easements

Easements are another way of protecting ecologically-sensitive properties. A number of organizations hold easements of such properties in Fairfax County (see below). FCPA also holds approximately 25 conservation easements totaling over 150 acres. A future Annual Report on the Environment will give further details on these easements.

The Fairfax County Park Authority, assisted by the Northern Virginia Conservation Trust, acquired a 41-acre conservation easement and purchase options on the historic property know as "Salona." Ten acres will be placed in active recreational use with the remainder used for passive recreation. Approximately two-thirds of the property consists of mature tree cover, which will be preserved under the FCPA plan to create a local park.

FCPA also acquired a number of trial easements during 2005 in support of the completion of the Cross County Trail and other trail projects.

f. Fairfax County Park Foundation

Fairfax County residents can donate to the Fairfax County parks through the Fairfax County Park Foundation. The Fairfax County Park Foundation is a 501(c)(3) not-for-profit organization and donations are tax deductible to the fullest extent allowed by law. The foundation's mission is to raise funds to support the parks and land under the stewardship of the Fairfax County Park Authority. Less than half of the Park Authority's annual operating funds come from tax support. The foundation's goal is to bridge the gap between income from tax support and user fees, and the cost to operate, maintain and preserve our park system. If you are interested in giving a tax-deductible donation to the foundation, contact them at:

Fairfax County Park Foundation
12055 Government Center Parkway
Fairfax, VA 22035
(703) 324-8581
SupportParks@aol.com
www.FairfaxCountyParkFoundation.com

4. Northern Virginia Regional Park Authority

Three Northern Virginia counties (Fairfax, Loudoun and Arlington) and three cities (Alexandria, Fairfax and Falls Church) participate in the Northern Virginia Regional Park Authority. NVRPA was founded in 1959 and owns and operates 19 regional parks and owns 10,256 acres of land throughout the region.

The NVRPA often partners with other organizations to meet its mission of caring for the environment, overseeing urban forestland, protecting water resources and preserving land for future generations. Some of these activities in 2005 included:

- U.S. Bureau of Land Management "Public Lands Appreciation Day" projects at Pohick Bay.
- Friends of the Occoquan and Chesapeake Bay Restoration Fund-sponsored Occoquan River Semi-Annual Cleanup Days at Occoquan, Fountainhead and Bull Run Marina.
- Alice Ferguson Foundation 16th Annual Potomac Watershed Cleanup Day at Pohick Bay.
- Virginia Division of Soil and Water Conservation's Urban Nutrient Management Program at NVRPA golf courses and athletic fields.
- The planting of 1,241 trees and shrubs by the Friends of the W&OD in conjunction with Dominion Virginia Power to offset losses on the Washington & Old Dominion Trail during utility maintenance.

Current information about the Northern Virginia Regional Park Authority can be found on its Web site, www.NVRPA.org/.

5. Fairfax ReLeaf

Fairfax ReLeaf is a non-profit (501(c)(3)), non-governmental organization of private volunteers who plant and preserve trees, restore forest cover, restore habitat and improve community appearance in Northern Virginia. Members of Fairfax ReLeaf have testified to county officials and politicians that an unacceptably rapid rate of tree loss in Fairfax County continues; ReLeaf members have stated that the county has not taken effective steps to stem this loss of forest infrastructure. Fairfax ReLeaf is very active in tree plantings and is always eager to sign up new volunteers.

These tree plantings lead to a number of benefits:

- Maintenance and improvement of air quality.
- Reduced heat island effects.
- Reduction of noise.
- Preserved human and wildlife habitats.
- Reduction of energy use.
- Reduction of surface runoff and improvement of water quality.

Fairfax ReLeaf remains very active in its efforts. For example, during fall 2005, ReLeaf:

- Worked in cooperation with the Mid-Atlantic Stake of the Church of Jesus Christ and Latter Day Saints and Earth Sangha to transform a deforested, Bradford pear forest into a elderberry, blueberry, sassafras and oak filled forest by a large drainage pond on the near the new Laurel Hill Golf Course.

- Planted 60 trees and shrubs, provided by the Fairfax County Department of Public Works and Environmental Services, to improve a riparian buffer area in the Rocky Run stream valley. This planting was done in an area that was being encroached by homeowners mowing into parkland. The new plantings will improve water quality in Rocky Run.

- Worked with the Oakton High School Eco-Club in replacing redbud, serviceberry and dogwood trees at the school. These students also learned about the invasive species of plants around their school property. These activities will improve the appearance of the school, provide habitat for wildlife and improve the environment.

- Worked with Eagle Scout Tom McPeek to plant a hillside near the new ball field in Wakefield Park. The trees will slow the runoff of rainfall

and reduce erosion on this hillside. Fairfax ReLeaf provided the trees and tree protectors for this Eagle Scout project.

- Worked at VolunteerFest with Volunteer Fairfax at Pine Ridge Park, removing weeds and vines, planting trees and mulching.

For further information on Fairfax ReLeaf, visit its Web sites at www.fairfaxreleaf.org or www.geocities.com/RainForest/5663. This organization can be reached at:

Fairfax ReLeaf
12055 Government Center Parkway
Suite 703
Fairfax, VA 22035
Telephone: (703) 324-1409
Fax: (703) 631-2196
Email: trees@fairfaxreleaf.org

6. Northern Virginia Conservation Trust

Past EQAC reports recommended that the Fairfax County Board of Supervisors form public-private partnerships for the purpose of obtaining easements on environmentally sensitive land. EQAC pointed out that entities such as The Nature Conservancy use easements very successfully as a way of protecting environmentally sensitive properties. With the signing of a Memorandum of Understanding on June 20, 2001 between the Fairfax County Board of Supervisors and the Northern Virginia Conservation Trust, such a public-private partnership now exists. The partnership is now in its sixth year with funding allocated through FY 2007.

The Northern Virginia Conservation Trust was founded in 1994 as the Fairfax Land Preservation Trust. In 1999, the organization changed its name to the Northern Virginia Conservation Trust to better reflect the regional scope of its organization. NVCT is a 501(c)(3) nonprofit land trust dedicated to preserving and enhancing the natural and historic resources of Northern Virginia. NVCT also has formed public-private partnerships with Arlington County and the city of Alexandria; it owns properties or easements in Arlington, Fairfax, Loudoun, Prince William and Stafford counties and in the cities of Alexandria and Fairfax.

From the time NVCT accepted its first easement in 1999 through June 2006, NVCT has preserved 568 acres of open space in Fairfax County through easements, fee simple ownership and partnerships. Between June 2005 and June 2006, NVCT has obtained the following:

- Cafferty Easement, 5+ acres in Dranesville District, December, 2005.

- Eight Oaks Easement, 2.0+ acres and historic house in Dranesville District, December 2005.

- Salona Easement, 41+ acres surrounding a historic residence in Dranesville District, December 2006.

NVCT continues to work toward reaching agreements on more conservation easements. Some that are possible in the future include locations in Alexandria, Reston and McLean.

NVCT also has a public outreach program – Adventures in Conservation – to bring hands-on volunteerism and environmental education opportunities. These activities included the planting of thousands of native trees, the removal of tons of invasive plants, birding trips and guided hikes. NVCT's naturalist-led kayak tours, part of its innovative environmental and conservation education program, continue to be hugely successful.

EQAC encourages all landowners whose property contains environmentally sensitive land such as wetlands, stream valleys and forests to consider contacting NVCT and learning more about easements. If these landowners grant easements, they will not only protect sensitive land, but can realize some financial benefits. A perpetual easement donation that provides public benefit by permanently protecting important natural, scenic and historic resources may qualify as a federal tax-deductible charitable donation. Under the Virginia Land Conservation Act of 1999, qualifying perpetual easements donated after January 1, 2000 may enable the owner to use a portion of the value of that gift as a state income tax credit. Fairfax County real estate taxes could also be reduced if the easement lowers the market value of the property.

Additional information on NVCT can be found on its Web site, www.nvct.org.

7. The Nature Conservancy

The Nature Conservancy has a very successful program of obtaining easements from property owners for conservation. Its program was the inspiration for EQAC's past recommendations for Fairfax County to seek conservation easements as a measure of protecting ecological valuable property. This recommendation led to the public/private partnership with the Northern Virginia Conservation Trust mentioned above. The Nature Conservancy does not hold any easements in Fairfax County at present; however, it owns one preserve (the Fraser Preserve) of approximately 233 acres on the Potomac River. For further information on The Nature Conservancy, see www.nature.org.

8. The Potomac Conservancy

Other organizations also hold easements in Fairfax County. This and the following paragraphs report on these organizations. One of these is the Potomac Conservancy. They were formed in 1993 by individuals concerned about inappropriate development, clear cutting and other activities that were beginning to have a negative impact on the unspoiled character of the Potomac Gorge. This led to the formation of the nonprofit land trust now known as the Potomac Conservancy. The Conservancy was incorporated on August 24, 1993 in Maryland as a nonprofit corporation. The Conservancy is registered in Maryland, Virginia and West Virginia and is an easement holder in Maryland's Conservation Reserve Enhancement Program.

The Potomac Conservancy currently holds easements of four properties in Fairfax County. These properties total 13.46 acres with 0.14 of that being river frontage. For further information on the Potomac Conservancy, see www.potomac.org.

9. The McLean Land Conservancy

The McLean Land Conservancy was formed to promote and foster the preservation, protection, conservation and balanced use of the McLean area's unique natural, cultural, recreational and historic resources. MLC's main objective is to preserve open green space.

MLC has worked to raise awareness of the value of protecting natural resources. A healthy balance of land use will maintain and enhance the character and quality of life in McLean, as well as the economic sustainability of our region in the face of rapid build-out.

MLC is a 501(c)(3) land trust organization that was incorporated in the commonwealth of Virginia in January 2000 and recently became a "full-fledged" land trust in Virginia, with the ability to hold conservation easements. As a result, the conservation easements identified and negotiated before July 2004 were deeded to Fairfax County, but with MLC assigned as the easement monitor.

MLC has concentrated on the preservation of riparian buffers on privately owned land. Successful projects include the protection of one acre adjacent to the headwaters of Four Mile Run, important because the health of the headwaters is critical to the health of a stream, and 2.77 acres on Pimmit Run in a pristine wooded area. These two easements are held by Fairfax County but monitored by MLC.

10. The National Park Service

Another holder of conservation easements in Fairfax County is the National Park Service, which holds 38 easements covering 326.67 acres. A future Annual Report on the Environment will provide more details on these easements.

11. The Virginia Outdoors Foundation

The Virginia Outdoors Foundation was created by an Act of the Virginia General Assembly (Chapter 18 of Title 10.1) in 1966. VOF is defined by the Act as a 'body politic' of the commonwealth and is governed by a seven member Board of Trustees appointed by the governor for four-year staggered terms. The Attorney General's Office has opined that VOF is both a state agency and an independent instrumentality. VOF, as the name indicates, is also a public foundation and can "…accept, hold, and administer gifts and bequests of money, securities or other property, absolutely or in trust, for the purposes for which the Foundation is created." The Act has language regarding role and function, but a good summation of the VOF legislative charge may be that VOF is steward of the natural and cultural heritage land resources of Virginia on behalf of present and future residents.

The Virginia Outdoors Foundation currently holds six easements in Fairfax County as shown below:

Table VI-3. Easements Held by VOF in Fairfax County

Original Donor*	Acreage	Date Recorded
Thayer, Virginia Pratt and Robert H.	59.33	10/30/1969
American Horticultural Society	8.15	10/03/1978
McCormick-Goodhart, Nita Emma et al.	26.665	06/13/1988
McCormick-Goodhart, Nita Emma et al.	5.25	06/13/1988
McKee-Bennett, Thistle	20.47	12/28/1990
Ridder, Marie W. and Albert Andrews, Jr., trustees	7.858	12/23/1998
Total Acreage under Easement	**127.723**	

***** Note that the original donors listed may not be the current landowner of record as the eased property may have been sold since the deed of easement was recorded.

Source: *Fairfax County Annual Report on the Environment*, Letter from Erika Richardson, Stewardship Specialist, Virginia Outdoors Foundation to Noel Kaplan, Department of Planning and Zoning, Fairfax County, Virginia, August 1, 2006.

Additional information about VOF can be seen at its Web site: www.virginiaoutdoorsfoundation.org/

12. Northern Virginia Soil and Water Conservation District

The Northern Virginia Soil and Water Conservation District continues to provide leadership in the area of bioengineering techniques in streambank stabilization and in the general area of erosion and stormwater control. NVSWCD works in partnerships with other agencies and organizations. For example, it has partnered with the Fairfax County Park Authority, Virginia Department of Forestry, the Fairfax County Department of Public Works and the Reston Association. See the Water Resources Chapter in this report for descriptions of stream stabilization/bioengineering projects for which NVSWCD has provided leadership.

All Agricultural and Forestal Districts are required to have a conservation plan. NVSWCD develops soil and water quality conservation plans that comply with the Chesapeake Bay Preservation Ordinance requirements. They include best management practices to reduce: sediment pollution from erosion; excess nutrients from animal waste and fertilizers; and the misuse of pesticides and herbicides. The plans also include the establishment and maintenance of vegetated riparian buffers within all Resource Protection Areas and along other streams. Plans are updated and technical assistance is provided as needed.

NVSWCD's annual seedling program emphasizes the role of vegetation in preventing erosion, conserving energy and decreasing and filtering stormwater runoff. Those planted in riparian areas also help to protect stream channel stability and stream water quality, as well as improving the surrounding habitat. This seedling program offered residents a package of native tree and shrub seedlings for a small cost.

a. Fairfax County Soil Survey

Fairfax County used to have soil scientists on the staff, but in a budget cut several years ago, the office was abolished. In past Annual Reports, EQAC deplored this move and recommended that soil scientist expertise be bought back to the county staff. While the board of supervisors did not exactly follow this recommendation, it did satisfy the intent of EQAC's recommendation by funding NVSWCD to finish the county's soil survey. The funding for this effort became available to NVSWCD in Fiscal Year 2004 and will continue through Fiscal Year 2007. The field surveys will be complete in 2007 and the final reports and maps will be available in 2008.

NVSWCD is working with the National Resources Conservation Service in accomplishing the update of the Fairfax County soil survey. The board of supervisors provides money to NVSWCD to hire a soil scientist who is a member of the survey team. It also funds NRCS for its assistance ($110,000 per year), which consists of two NRCS soil scientists on site and soils expertise and resources from throughout the agency, including a soils data quality specialist, a digitizing unit, the National Soil Survey Lab in

Nebraska and the National Soils Information System database. NRCS matches the funds provided, thereby leveraging the funds provided by the board of supervisors.

The Fairfax County soil survey update will modernize an existing soil survey. The update will enable the GIS system to use the soil survey information (a capability that did not exist). As a result, this update will enable planners, individuals, scientists and anyone involved in land use planning to make smart land use decisions that will work to save money and conserve valuable natural resources.

The resulting database and maps will incorporate the new information and scientific knowledge acquired about soils in the last 30 years. However, the updated maps will not eliminate the need for site-specific surveys when construction or changes in site use occur. The maps will better describe, characterize and define the properties of the soil components within existing delineations. The maps will also show that inclusions of other soil types can exist, but will not show the extent of smaller inclusions. Site-specific surveys will be need for this fine detail.

One new effort that is being done under the soil survey is the characterization of man-made soils (urban soils). The characteristics of urban soils can be quite different from native soils. One significant difference is the ability of water to infiltrate urban soils (much less than many native soils). Knowing where urban soils exist and the type of urban soil can be critical to stormwater control efforts that incorporate infiltration of water (rain gardens, grassy swales, etc.).

In a similar fashion, neighboring counties are updating their soil maps. Loudoun County updated its soil maps and incorporated those data into their GIS system. Loudoun County, however, recognizes that the soils map needs to be continuously updated (based on field site inspections) and has a county Soil Scientist to provide site-specific soil interpretations. In a like fashion, Fauquier County has also updated its soil survey and incorporated this information into its GIS. Fauquier county also have a county Soil Scientist Office to provide site-specific information.

The Soil Survey is progressing well and on schedule. As of July 2006, the mapping and data collection have been completed and are undergoing quality control and assurance processes and waiting scanning and digitization by the USDA-NRCS state office in Richmond. In addition, the special study to characterize the large percentage of disturbed soils in the county is nearly completed. Disturbed soils no longer have their original structure, are generally denser and less permeable than undisturbed soils and create more runoff than undisturbed soils. Knowing the behavior and characteristics of human disturbed soils is vital for understanding the

stormwater management and erosion issues that will affect Fairfax County in the future, especially as efforts towards meeting the Chesapeake Bay Agreement intensify.

The NVSWCD soil scientist provides additional services to Fairfax County. He conducts infiltration studies for proposed infiltration practices, such as rain gardens and porous pavers. Additionally, the NVSWCD staff provides soils information to consultants, developers, realtors, homeowners and the public.

Now that the soil survey is just about complete, a number of tasks are needed in order to successfully transition to using the new information in the updated soil survey:

- Integrating the new survey maps and information into the county GIS system.
- Creating county-specific ratings for the new soils and to reassign problem classes and other ratings to the new soil types.
- Making the necessary changes to the County Code.
- Training county staff members who deal with soil issues on the use of the new survey.
- Educating the private sector on the new soil survey information and its appropriate and effective use.
- Developing a process for maintaining and updating the soil survey as land uses change.

In addition to these tasks identified during the transition period, there will be a continuing need in the county for the expertise of a soil scientist to:

- Maintain and update the county's soil survey, including coordinating with USDA-NRCS and GIS.
- Evaluate and interpret soils information.
- Conduct soils investigations.
- Retrieve and apply the appropriate soils information for given situations.
- Conduct soils-related research in order to meet county needs, especially to expand knowledge on the behavior of human disturbed soils.

- Evaluate and test soils for infiltration capability, especially for siting and designing LID practices.

- Provide information and advice to county staff, land managers, the development community and the general public.

- Develop and lead training and education programs on soils and the appropriate and effective use of soil maps and soil information.

Like our neighboring counties, Fairfax County also needs to maintain expertise in soils. At present, funding for the expertise will end after Fiscal Year 2007. The expertise provided by the soil scientist will be required to accomplish the tasks listed above. Without this expertise, problems will likely develop as uses are changed on sites. In addition, detailed knowledge of soils will be critical to future stormwater control efforts as well as other activities. One just needs to look at the slope failure several years ago on the widened Telegraph Road to see the importance of knowing soils and their characteristics. In this case, the failure of the slope due to clay soils jeopardized houses on the top of the hill. EQAC therefore recommends that the board of supervisors continue to fund soil scientist expertise past Fiscal Year 2007.

EQAC notes that the county staff supported this recommendation in its response to 2005 EQAC Annual Report on the Environment.

13. Fairfax County Wetlands Board

If you own property on the waterfront in Fairfax County, you may need a permit before you build or make improvements on your property. These activities, known as land disturbing activities, often require a permit if done in an area that has been identified as a tidal wetlands. Land disturbing activities include the following:

- Any construction project on or adjacent to a tidal body of water.

- Any construction project in which fill material is place in or near wetlands.

- Construction of bridges, tunnels or roads which may have an impact on wetlands, either tidal or non-tidal.

- Projects designed to protect property adjacent to shorelines

The Wetlands Board adopted the Tidal Wetlands Mitigation and Compensation Policy in 2005 to ensure conformance with the spirit and the intent of the Chesapeake 2000 Agreement, which seeks, among other things, "to achieve a no net loss of jurisdictional tidal wetlands acreage and function through regulatory programs..." Upon seeking to encourage wetlands permit applicants to avoid, minimize and reduce tidal wetland losses, the Wetlands Board policy provides for compensatory mitigation when impacts are unavoidable. Because Fairfax County has so little tidal land available which could be used for wetland creation or mitigation, the board envisioned that a potential means for wetlands applicants to mitigate and compensate for future tidal wetland losses could be through the establishment of an in lieu fee fund. Thus, the Wetlands Board and the Northern Virginia Regional Park Authority have entered into a Memorandum of Understanding so that NVRPA can accept in lieu fees from future wetlands permit holders as the compensatory mitigation for unavoidable tidal wetlands impacts. On May 22, 2006, the Wetlands Board voted to adopt a Memorandum of Understanding between the Northern Virginia Regional Park Authority and the Wetlands Board.

The Wetlands Board is continuing to work on practical mechanisms to implement the Tidal Wetlands Mitigation and Compensation Policy.

The Wetlands Board is actively involved with the evaluation and the ultimate resolution of three wetlands ordinance violations that have occurred on Little Hunting Creek.

For further information, contact the Wetlands Board at:

Fairfax County Wetlands Board Staff
Department of Planning and Zoning, Planning Division
12055 Government Center Parkway, Suite 730
Fairfax, VA 22035-5504
(703) 324-1210
www.fairfaxcounty.gov/dpz/environment/wetlands.htm

14. Virginia Department of Forestry

The Virginia Department of Forestry has provided forestry related services in Fairfax County for over 30 years. It is also participating in several efforts aimed at improving riparian areas and stream bank stabilization projects. In these efforts, VDOF partnered with the Northern Virginia Soil and Water Conservation District, the Department of Public Works and Environmental Services and the Reston Association. See the Water Resources chapter in this report for further details. Also, see the Water Resources chapter for details on VDOF riparian buffer reforestation efforts.

The Virginia Department of Forestry is the lead state agency to oversee the planting and recordation of forest buffers planted in the commonwealth of Virginia. In 2005, approximately 3,500 seedlings were planted along 3,020 linear feet of stream corridors under the leadership of the Virginia Department of Forestry in Fairfax County. Partners involved in these plantings were Eagle Scouts, Difficult Run Community Conservancy, elementary school children, private landowners and Fairfax ReLeaf.

The Virginia Department of Forestry participates in the Fairfax County Arbor Day, the last Saturday in April each year. The county earned again, for the 22st year, the Tree City USA award. This award is given for having a planting plan, management plan, a Tree Board/Commission and sponsoring an Arbor Day Celebration. The award is applied for by the Fairfax County Urban Forest Management Division and given through the Virginia Department of Forestry. Tree seedlings are distributed by VDOF to residents attending the Arbor Day celebration. In 2005, 500 seedlings were distributed for planting by residents in their communities.

The Virginia Department of Forestry sponsored a drop off site in Fairfax County for the Growing Native project. This project involves the collection of tree seeds (acorns, hickory nuts, black walnuts etc.) which are transported to VDOF nurseries where the seeds are planted and seedlings are grown. Each year 500-700 seedlings are given to residents for planting on public lands in Fairfax County.

The conservation of the forested land base in Fairfax County is a part of the VDOF plan. The Fairfax County office works closely with the Northern Virginia Conservation Trust to review easements for the conservation of forests. Also, Agricultural and Forestal District plans are reviewed by VDOF; these efforts support the management of forested land for conservation purposes. Six A&F plans covering 400 acres were prepared in 2005. VDOF also provides forestry management advice to homeowners associations and civic groups. In 2005, four community forestry plans were prepared covering 100 acres.

The Virginia Department of Forestry also helps protect water quality and forest resources in the county by reviewing and commenting on rezoning applications and development plans. VDOF reviewed 30 applications and plans in 2005.

VDOF maintains an active public education and outreach program. Audiences range from schools groups to adults. Topics range from general discussion of the importance of urban forests for environmental quality to technical training in planning and installing rain gardens and forested riparian buffers. In 2005, VDOF conducted 25 talks on the general benefits of urban forests and three workshops on rain gardens and buffers.

15. Virginia Department of Transportation

VDOT mitigates unavoidable impacts to water resources within Fairfax County that occur during highway construction projects as required by federal and state laws and regulations. The Virginia Department of Transportation is currently monitoring three wetland mitigation projects within Fairfax County.

- In the Dranesville District, VDOT created a wetland project along Dranesville Road near Sugarland Run to mitigate for construction impacts from the Fairfax County Parkway.

- In the Braddock District, VDOT constructed a wetlands project in 2003 near the Robert Parkway overpass and Virginia Railway Express—Burke Station.

- In the Sully District, VDOT created a wetland near Lee Highway and Big Rocky Run.

These sites were created to mitigate unavoidable wetland impacts from construction of the Fairfax County Parkway, Roberts Parkway Bridge Overpass, the Springfield Interchange and the Route 29 Bridge replacement over Big Rocky Run. All sites are undergoing five-year monitoring as required by federal and state permits. Two years of monitoring at the Dranesville District and Sully District sites are complete and the third year of monitoring is in progress. The first full year of monitoring is complete at the Braddock District site and the second year of monitoring is in progress. The results for all three sites have been impressive with each site fulfilling success criteria outlined in the water quality permits. These sites provide a water quality benefit in these watersheds as well as habitat for a host of amphibians, birds and mammals.

VDOT, in partnership with the Virginia Transportation Research Council and the University of Virginia, had been involved with an animal crossing study of two underpasses on the Fairfax County Parkway that were built specifically for deer and other wildlife. The study, completed last year, found at least one of the underpasses to be successful in facilitating deer passage. Additional research is now under consideration to evaluate methods to improve and increase the dataset on animal-vehicle collisions in Virginia using Personal Digital Assistant/Global Positioning System units.

VDOT continues to use bioengineering techniques for transportation projects with associated riparian impacts. Stream restoration on a Pohick Creek tributary near Lorton Road was completed in the spring of 2005 as a part of VDOT's Richmond Highway widening project. VDOT is assessing other potential stream restoration sites within the state's right-of-way to compensate for stream impacts from road construction projects. VDOT also seeks opportunities to partner with Fairfax County agencies and private property owners on future bioengineering projects. EQAC encourages the Northern Virginia Soil and Water Conservation District and the Department of Public

Works and Environmental Services to work with VDOT to identify possible stream restoration projects and to partner with VDOT in the accomplishment the identified projects.

VDOT includes landscaping in several construction projects to enhance road improvements. Fairfax County projects include:

- Ox Road between Burke Lake Road and Davis Drive (completed April 2004 and under a three-year establishment period).

- Ox Road between Davis Drive and the Prince William County Line (completed May 2006 and under a three-year establishment period).

- Gambrill Road Park and Ride Lot (completed June 2005 and under a two-year establishment period).

- Richmond Highway widening from Lorton Road to Telegraph Road (completed October 2005 and under a three-year establishment period).

- Lorton Road between Richmond Highway and Silverbrook Road (anticipated construction completion date is August 2006).

VDOT maintains about 22 acres of flowering bulbs, wildflowers and native grasses planted throughout Fairfax County. These areas are reseeded and controlled for week invasion as needed throughout the growing season.

Controlling invasive, non-native vegetation along interstate and primary routes in Fairfax County is a major initiative for the Northern Virginia District of VDOT. Once satisfactory control is achieved, VDOT evaluates the location as potential candidate reforestation and wildflower/native grass planting projects. EQAC continues to commend VDOT on the invasive plant removal and replacement effort.

16. Urban Forestry

a. Urban Forest Management Division

In 2004, in addition to carrying out its core services relating to land development (see Forest Conservation Section update) and forest pest management (see Forest Pest Section Update), in 2005, Urban Forest Management focused on several other projects that included:

Working with the Tree Commission to Develop a Tree Action Plan.

The Tree Action Plan represents a long-range strategic plan for the county's urban forestry program. As directed by the board of supervisors' Environmental Committee in September 2005, UFMD worked with the Fairfax County Tree Commission to develop specific recommendations on how to implement the conceptual-based Tree Commission Tree Action Plan Framework. UFMD developed 76 action steps in response. For more information on this topic please see the Summary of Tree Commission Activities for 2005 below.

Strengthening Tree Preservation Policies and Procedures.

- In February 2005 the board directed the Urban Forest Management Division, DPWES and the Zoning Evaluation Division of the Department of Planning and Zoning to review and strengthen tree conservation policies and procedures used during the review of zoning cases. As part of this effort, a committee consisting of representatives of UFMD, the Zoning Evaluation Division, DPZ, the Office of the County Attorney, the Planning Commission and the Providence Magisterial District BOS Staff was formed to examine the effectiveness of model proffer language relating to tree preservation and landscaping.

- Efforts to develop suggestions regarding proffers will help developers communicate very specific intentions regarding tree preservation, conservation and removal efforts and the county's ability to ensure compliance with these commitments during construction activities. It is anticipated that commitments that will be offered by developers during the zoning process will provide an enhanced system of assigning monetary values to trees to be preserved and using these values as the basis for establishing tree bonds which developers will post with the county to ensure the preservation of proffered trees and tree save areas.

- When finished, this effort will result in a suggested approach that developers could apply to tree conservations matters within their rezoning proposals; this approach would not be formally adopted as an expected standard commitment but would instead be offered for consideration as an effective approach to achieving a desired outcome. This effort is expected to be completed in 2006.

Setting up a County Fund for Tree Preservation and Planting

- This project established a funding mechanism to facilitate the expenditure of donations from zoning cases and other source to fund

a countywide tree planting program for purposes of improving the county's air quality. On June 20, 2005, the board of supervisors directed staff of DPWES, the Department of Planning and Zoning and the County Attorney's Office to investigate the possibility of creating a funding mechanism for a countywide tree planting program through the use of reparations obtained from violations of tree save commitments, cash proffers and in-kind proffer commitments obtained during the land development process.

- Land Development Services is establishing criteria to approve track and report on tree-related projects funded through the Tree Preservation and Planting Fund. It is anticipated that this fund will be used to support tree-related activities such as:

  - Tree planting projects on county properties and on Virginia Department of Transportation rights-of-ways.

  - Grants to support the activities of non-profit tree planting groups.

  - Natural landscaping-related projects on county property.

  - Development of educational materials and workshops.

  - Implementation of a future local "Heritage, Memorial, Specimen and Street Tree" ordinance.

- The Tree Preservation and Planting Fund and associated standard operating procedures are expected to be finished and put into use in 2006.

Developing a Tree Canopy Measure for the 2007 Metropolitan Washington D.C. Air Quality Plans.

- In response to a June, 2005 board matter directing staff to prepare a report that delineates what urban forestry-related practices, including tree planting, the county can use to improve air quality and how these practices can be included in the air quality management plans, UFMD organized several meetings that gathered urban forestry official from jurisdictions from Northern Virginia, USDA Forest Service researchers, Virginia Department of Forestry representatives and regional non-government organizations to examine what should be done to build stronger links between urban forestry practices and federal Clean Air Act regulations.

- From these initial meetings, a more formal group, called the Northern Virginia Urban Forestry SIP Work Group emerged to examine what steps Virginia jurisdictions should do to take advantage of new U.S. Environmental Protection Agency policy approving "tree canopy programs" as "promising and emerging" voluntary measures that can receive limited offset credits (up to 6 percent of total) in Ozone mitigation programs. In 2006, the NOVA UF SIP Group is expected to contribute to a larger effort organized by the Metropolitan Washington Air Quality Committee to examine this issue.

Natural Landscaping Committee

- On June 21, 2004 the board directed staff to identify county properties where natural landscaping could be used to reduce maintenance practices that can cause harmful environmental impacts such as air pollution and to reduce the need and expense of mowing, pruning, edging and using fertilizers, pesticides and herbicides. Staff was asked to prepare a related report with a proposed countywide implementation plan. In response, the county executive tasked UFMD with a convening the Natural Landscaping Committee to identify practices, policies and a Countywide implementation plan. A final report and recommendations was prepared and presented to the board's Environmental Committee and approved by the BOS on July 11, 2005. The board directed the county executive to commission a multi-agency group to:

    - Update the palette of natural landscaping techniques and practices as new information and research emerges.

    - Establish formal guidelines for retrofitting the landscapes of county properties both with and without developed facilities.

- Develop natural landscaping guidelines and specifications for new facilities.

- Draft a countywide Natural Landscaping Policy to communicate the purpose, goals and importance of natural landscaping features on county properties.

- Implement a five-year natural landscaping plan in an aggressive but cooperative fashion.

- Produce an annual progress report that evaluates the level of cost-effectiveness and benefits that specific natural landscaping practices, techniques and projects are likely to provide.

- Submit natural landscaping projects to the ECC for possible inclusion into the annual Environmental Improvement Program.

Northern Virginia Urban Forestry Roundtable

- The lack of regional communication over urban forestry issues is thought to have limited past efforts to obtain tree conservation legislation and to develop other effective programs and practices related to the management of trees and forest resources. The NVUFR was formed in 2005 to bring local environmental groups, tree commissioners and urban forestry officials together to examine ways to cooperate over regional issues such as efforts to obtain tree conservation legislation and to develop urban forestry practices and measures for ozone mitigation. UFMD provided leadership during the formation of NVUFR and has been instrumental in organizing a regional conference on trees and air quality plans in November of 2005. NVUFC activities are expected to increase in 2006.

b. Forest Pest Section Update

Gypsy Moth Caterpillar

The gypsy moth was first detected in Fairfax County in 1981. To avoid the environmental, economic and health hazards associated with this pest, the board of supervisors enacted an Integrated Pest Management Program to control the gypsy moth. The purpose of the program is to reduce gypsy moth populations below defoliating levels. The goal of the program is to minimize the environmental and economic impacts of the pest by limiting the amount of tree mortality and use of pesticides in the environment. The control methods considered annually are:

- Mechanical: the gypsy moth egg mass Search, Scrape and Destroy Campaign and Burlap Banding for Gypsy Moth Caterpillars. These are community involvement programs.

- Biological: the release and monitoring of gypsy moth parasites and pathogens.

- Chemical: the aerial and ground applications of Diflubenzuron and Bacillus thuringiensis on high infestations.

- Educational: the self-help program and lectures to civic associations and other groups.

In calendar year 2006, gypsy moth caterpillar populations increased compared to previous years. Insect populations are cyclical in nature and it is impossible to determine whether this increase is a sign that outbreak populations are imminent. While gypsy moth populations increased in 2006, there was no defoliation in Fairfax County; for the first time in several years there was measurable defoliation reported in other areas of the commonwealth of Virginia. According to the Virginia Department of Agriculture and Consumer Services, there were 13,000 acres of defoliated forest in the state. No defoliation numbers are currently available for the United States, however, it is expected that they will increase dramatically. The gypsy moth program staff will continue to monitor populations in the fall of 2006 and treatment is very probable in 2007.

Fall Cankerworm

The fall cankerworm is native to the United States and feeds on a broader range of trees than the gypsy moth. Periodic outbreaks of this pest are common, especially in older declining forest stands. The area of the county that had the most severe infestations of fall cankerworm was in the Mount Vernon District and Lee magisterial districts. Typically this insect will defoliate in the early spring when the trees are able to withstand the impacts and little long-term damage is expected; however, tree mortality is possible when combined with conditions that place stress on the trees, such as drought. Nuisance to homeowners occurs when large numbers of caterpillars hang from the trees and migrate to the ground.

The Forest Pest Program conducted an aerial treatment program during the spring of 2003. Staff has monitored for adult female moths throughout the Mount Vernon and Lee Districts since January of 2001. The result of the winter 2005–2006 monitoring effort indicated that no aerial treatment was required in the spring of 2006.

The Forest Pest Program will monitor for fall cankerworm again this winter. It is expected that populations of this pest will be low in the near future.

Emerald Ash Borer

The emerald ash borer (Agrilus planipennis) is an exotic beetle from Asia and was discovered infesting ash trees in the state of Michigan in 2002. This beetle is known to attack only ash trees and can kill trees in as little as two years. After it was discovered, the United States Animal Plant Health Inspection Service established a quarantine area around the infestation spot in order to contain the pest. Unfortunately, a tree nursery owner inside of the quarantine area illegally shipped infested ash trees to a nursery in Maryland. During the summer of 2003, 13 of the ash trees were planted at the Colvin Run Elementary School site (Dranesville District). These trees were removed by the Virginia Department of Agriculture and Consumer Services and incinerated.

The removed trees contained evidence that adult beetles had escaped into the environment. In order to prevent the beetles from becoming established in Fairfax County, APHIS and VDACS conducted an Emerald Ash Borer Eradication Program. It was ordered that all ash trees within a one-half mile radius of the school site must be removed and incinerated. This area included a total of 278 ash trees, 90 of which were on 29 privately owned properties. All tree removals were conducted in March 2004.

On December 12, 2003, the Commissioner of VDACS added the emerald ash borer to the list of insects that can be controlled by service districts. On January 26, 2004, the board of supervisors directed Forest Pest Section staff to coordinate with VDACS in implementing the Emerald Ash Borer Eradication Program. Staff of the Forest Pest Program began assisting VDACS shortly after the insect was added to the list and board direction was given. FPP duties included surveying the area around Colvin Run Elementary for ash trees, conducting public notification meetings, preparing maps for tree removal contractors, monitoring contracted services, preparing mailings and responding to media inquires.

Since the trees were removed in 2004, staff has been monitoring for the presence of adult beetles. Monitoring is conducted by placing 80 “sentinel” ash trees at various areas around the school site. An additional monitoring site was established in the Fort Hunt area of Fairfax County and was in response to a suspected infestation on the Maryland side of the Potomac River. At the end of the summer, the sentinel trees will be removed and checked for life stages of the emerald ash borer. This effort would not have been possible except for the cooperation of the National Park Service.

The Maryland Department of Agriculture has maintained an emerald ash borer monitoring program similar to efforts in Fairfax County. MDA recently examined its sentinel trees in Prince Georges County and found evidence of emerald ash borer larvae. This discovery is significant since it means that the insect is surviving and reproducing in Maryland. It is too early to say what impact this will have on Fairfax County; however, it is of concern due to the proximity of Prince Georges County, Maryland and Fairfax County, Virginia. Staff is awaiting guidance from state and federal agencies in this matter; however, it is likely that monitoring efforts for this insect will continue for the foreseeable future and will be expanded.

c. Forest Conservation Section

In 2005, the FCS continued to serve its traditional customers: residents, builders, developers, planners, engineers, landscape architects, private arborists and other county staff and agencies, including the board of supervisors, Planning Commission, Tree Commission, Environmental and Facilities Review Division, Environmental and Facilities Inspections Division, Department of Planning and Zoning, Office of Capital Facilities and the School Board.

The year started out with two vacant positions--an Urban Forester II and an Urban Forester III. This diminished workforce was a bit of a strain on the remaining staff until both positions were filled by May 2005 with sharp and highly qualified candidates from outside the agency. After a brief orientation period for the two prodigies, the staff was once again whole around mid-year.

Also in May 2005, the Forest Conservation staff launched into a new computerized tracking system for the numerous and diverse requests for assistance the section receives. This automated tracking and filing system, known as the Internet Quorum or IQ system, would provide a more efficient means of record-keeping and request processing specifically designed for the workload of the Forest Conservation Section. Initially, the conversion learning curve was difficult and some system adjustments had to be made. However, by the end of the year, staff was more comfortable with the new technology, which seemed to be working fairly well.

Table VI-4 summarizes the workload of the FCS based on the requests for assistance that were completed for FY 2003, 2004 and 2005. These figures demonstrate the number of requests for assistance in 2005 appear to have decreased noticeably (10 percent) from the previous years. This apparent decline is a misnomer due to the migration to the IQ system in tracking the FCS workload. For example, re-inspections of project releases are recorded under the same IQ numbers instead of under new numbers for consistent record-keeping. Similarly, many “Other” requests were not tracked at all

during the transition period because of uncertainty in the system's capabilities. Subsequently, many improvements in the use and operation of the IQ system have made it a much more efficient and accurate tool.
In FY 2005, as in FY 2004, requests for assistance increased from previous years for Department of Planning and Zoning requests, as did hazardous tree complaints (many outside our jurisdiction) with the advent of more stormy weather patterns. It is anticipated that FCS will continue to spend a significant percentage of staff time on zoning cases in 2006 and subsequent years. It is anticipated that there will be more requests for plan review assistance with by-right and infill plans as tree cover and tree protection issues become more complicated.

Table VI-4.
Urban Forest Management Workload,
2003 through 2005

Type of Assignment	Number of Completed Requests		
	2003	***2004***	***2005***
Waivers	67	64	56
Zoning Cases	140	191	206
OSDS Requests: Plan Review	736	677	651
OSDS Requests: Site Inspections	732	663	620
Other (BOS, FCPA, Other County Agencies, etc.)	628	610	431
Hazardous Trees	15	17	19
Total Complete	**2,318**	**2,222**	**1,983**

d. Tree Commission

In 2005, Tree Commission activities focused on generating the Tree Action Plan that Chairman Connolly charged it to develop in December 2004. The Tree Action Plan represents a long-range strategic plan for the county's urban forestry program.

By April of 2005, the Tree Commission had approved a draft plan which was presented to Chairman Connolly in June 2005 and to the board's Environmental Committee in September 2005. The Environmental Committee directed the Urban Forest Management Division to develop specific actions to implement the conceptual goals and strategies contained in the Tree Commission Action Plan Framework document. In response, UFMD, in coordination with a subcommittee of the Tree Commission staff, developed 76 action step recommendations to accompany the Tree Commission Action Plan Framework document.

In December 2005, after reviewing the 76 actions step recommendations and surmising that these had significant potential to impact the policies and practices of multiple county and Virginia agencies, local non-governmental organizations and the land development industry, the board's Environmental Committee directed UFMD to form an enlarged "Working Group" (TAP Work Group) comprised of representative from various urban forestry program stakeholders to work collaboratively on the Tree Action Plan. The board's Environmental Committee charged the TAP Work Group to:

- Examine the feasibility of the concepts and strategies contained in the original Tree Commission Action Plan Framework.

- Examine the feasibility of implementing the 76 actions step tactics prepared by UFMD.

- Prepare implementation plans for the concepts and actions that are found to be feasible from both the Framework and 76 action steps.

The Tree Action Plan Work Group is scheduled to meet throughout 2006 and it is anticipated that it will submit a final report with recommendations for review by board's Environmental Committee in late 2006.

In 2005, the Commissioners continued to use their monthly meetings to research and discuss county tree and landscape issues and policy. Various speakers made presentations to the Commission. In addition to participating in numerous public events such as the Fairfax County Earth Day-Arbor Day Celebration and the county's Land Conservation Awards program, Commissioners also provided input on various land use and development proposals affecting trees and landscaping. The Commission continues to support and advocate for the passage of legislation dealing with tree preservation and the use of native and desirable landscape trees during development.

e. Summary of Status of Tree Preservation Enabling Legislation

In light of continued opposition encountered during recent Virginia State Legislative Assemblies to amend the tree replacement provisions of § 15.2-961 to include tree preservation requirements, the board of supervisors decided not to include a specific tree preservation proposal in the 2005 Legislative Program. However the board did forward a supporting position for tree conservation legislation as part of the 2005 Legislative Program.
Past recommendations made by the Tree Preservation Task Force, the New Millennium Occoquan Watershed Task Force, the Tree Commission and the Environmental Quality Advisory Council, coupled with certainty that the County's efforts to protect air, water, soil and wildlife resources will be extremely difficult without concurrently protecting trees and forest covers,

virtually ensures that Fairfax County will continue to seek opportunities to submit and promote tree preservation legislation.

f. Status of grant proposal for satellite mapping of the County's tree cover and analysis of tree cover data

In 2005, Urban Forest Management continued efforts to delineate the distribution of naturally occurring and landscaped vegetation, using the National Vegetation Classification System. However, this project received less intention than in previous years due to staff hours needed to addresses multiple board matters dealing with tree preservation, air quality, natural landscaping etc. Since the NVCS tree cover mapping is prerequisite to implementing multiple aspects of the Tree Action and the countywide Urban Forest Management Plans, it is anticipated that Urban Forest Management will need to devote considerable resources to the mapping effort in 2006 and subsequent years.

17. Agricultural and Forestal Districts

Landowners may apply to place their land in special Agricultural and Forestal Districts that are taxed at reduced rates. A&F Districts, which are created by the commonwealth of Virginia, must have 200 or more acres. A&F Districts of local significance, governed by the Fairfax County A&F District ordinance, must have at least 20 acres and must be kept in this status for a minimum of eight years.

Fairfax County's policy is to conserve and protect and to encourage the development and improvement of its important agricultural and forestlands for the production of food and other agricultural and forest products. It is also Fairfax County policy to conserve and protect agricultural and forestlands as valued natural and ecological resources that provide essential open spaces for clean air sheds, watershed protection, wildlife habitat, aesthetic quality and other environmental purposes. The purpose of the Local Agricultural and Forestal District program is to provide a means by which Fairfax County may protect and enhance agricultural and forest lands of local significance as a viable segment of the Fairfax County economy and as an important economic and environmental resource. All district owners agree to no intensification of the use of their land for the life of the district.

Since the 2005 EQAC Annual Report on the Environment, there have been only two changes to the A&F Program. The number of local districts increased from 41 to 43 while the number of state districts remained constant at two. The two new districts are in Great Falls (about 24 acres) and a horse farm off Route 29 just east of the Prince William County line (about 105 acres). Total acreage in A&F districts increased from about 2,805 acres to about 2,934 acres.

18. South Van Dorn Street Phase III Road Project

The U.S. Army Corps of Engineers issued a permit for the construction of South Van Dorn Phase III on May 28, 1996. Conditions contained in the permit required that no construction could start on the roadway until several conditions were completed. Three of these conditions are aimed at protecting Huntley Meadows Park. All three of these conditions were satisfied by Fairfax County, construction was completed and the roadway opened to traffic on April 26, 2005.

One condition is that seven parcels of land (102 acres) adjacent to Huntley Meadows Park must be purchased by Fairfax County. This is in lieu of creating wetlands for the five acres of wetlands that will be destroyed in road construction. These 102 acres contain about 69 acres of wetlands and 33 acres of uplands. This action will ensure preservation of the wetlands contained in this 102-acre tract as well as provide a valuable addition to Huntley Meadows Park.
The county now has possession of these seven parcels of land, which will be turned over to FCPA to become part of Huntley Meadows Park. The Corps also required that this land remain natural (as is the rest of Huntley Meadows Park).

Another condition by the Corps required stormwater management improvements on eight ponds in and around Greendale Golf Course. The last pond, at the intersection of South Van Dorn Street and King Centre Drive, was completed in June 2002.

A third condition by the Corps required that Fairfax County submit a Monitoring and Maintenance Plan for these stormwater improvements. The plan details the monitoring and maintenance requirements for a ten-year period. The Corps approved the plan in October 2001. The monitoring station was installed in July 2002. The initial three years of monitoring are complete. In lieu of further chemical monitoring, the county is proposing to make a contribution to the Northern Virginia Soil and Conservation District to complete a streambank restoration project in the vicinity. The remaining cost of the streambank restoration project (Kingstowne II) is proposed to be funded by a grant from the Virginia Aquatic Resources Trust Fund, which is administered by the US Army Corps of Engineers. The Nature Conservancy will likely provide project implementation.

C. COMMENTS AND RECOMMENDATIONS

COMMENTS

1. In past Annual Reports, EQAC recommended that the county board of supervisors emphasize public-private partnerships that use private actions such as purchase of land and easement by existing or new land trusts to

protect forests and other natural resources, including champion/historic trees. With the signing of a Memorandum of Understanding between the board of supervisors and the Northern Virginia Conservation Trust, such a public-private partnership came into being. Thus, EQAC's recommendation has been satisfied. EQAC continues to commend the board of supervisors for this action and recommends continued support for this partnership. EQAC notes that the MOU was for a three-year period and this period is over. While the board of supervisors continues to fund the public-private partnership with NVCT, no new MOU has been put into place by Fairfax County. Since this interjects uncertainty into the future of this program, and the program has proved its value, EQAC believes that a MOU covering a three-year or five-year period be put into place.

2. In past Annual Reports, EQAC recommended that the county board of supervisors develop and implement a countywide Natural Resource Management Plan – an ecological resources management plan that can be implemented through the policy and administrative branches of the county government structure. Two necessary tasks should be accomplished first -- prepare and adopt a unified Natural Resource Conservation Policy and complete a Countywide Baseline Natural Resource Inventory. EQAC notes that slow progress is being made in this area due to efforts by the Fairfax County Park Authority staff in its efforts to establish a natural resources baseline inventory. The FCPA has developed a countywide Green Infrastructure Map that appears a basis for a Natural Resource Inventory. Additionally, the Urban Forest Management Division is continuing efforts to devise a countywide map for use as a layer on the county's GIS that will delineate the distribution of naturally occurring and landscaped vegetation. However, these efforts must be supplemented by an inventory of the county that accounts for flora and fauna. The Park Authority has now prepared a Natural Resources Plan for management of the county's parks. EQAC also notes the accomplishment of the Park Authority in preparing and publishing a Natural Resources Plan for management of the county's parks and urges the Park Authority to fully implement this plan. EQAC fully supports these efforts, urging that they culminate in a countywide Resource Management Plan. EQAC's intent is that Fairfax County should have all the tools in place (the policy and the data) to create a plan that will support the active management and conservation of the county's natural resources.

RECOMMENDATIONS

1. Fairfax County no longer has dedicated Soil Science staff. EQAC in the past recommended that the board of supervisors reestablish such dedicated staff. The board of supervisors did not establish staff positions in response to this EQAC recommendation; however, they did provide funding to the Northern Virginia Soil and Water Conservation District for mapping of the county's soils. The funding is through 2007. This enabled NVSWCD to provide the needed expertise. There is, however, a continuing need for this

expertise in the county past 2007. The incident on Telegraph Road where a hillside slid into Telegraph Road and endangered homes at the crest of the hill points out the soils problems that exist in the county. The increasing urbanization of the county has created new types of soils – urban man-made soils. These soils can have different characteristics in water infiltration and erosion. Therefore, as various projects are started in these soils, including stream restoration and other water control measures, expertise in these soils are needed in the county. At present the only place where there is dedicated soil science staff is in NVSWCD. EQAC therefore recommends that the board of supervisors continue the agreement with NVSWCD past 2007 to provide dedicated soil scientist expertise. This is the same recommendation as in the 2005 Annual Report on the Environment. The county staff response to this recommendation fully supports EQAC's position. In addition, the FY 2008 Environmental Improvement Program (item EIP08-WQ07-8(B)) recognizes the need for retention of soil science expertise beyond the completion of the county soil survey.

2. The Fairfax County Park Authority approved a Natural Resource Management Plan in 2004. This partially fulfills a long-standing EQAC recommendation to develop and implement a countywide Natural Resource Management Plan. However, most of this plan cannot be implemented without additional staff and funding for the FCPA. While EQAC recognizes and commends the board for funding well over $1 million towards Environmental Agenda projects that support the goals and objectives in the FCPA's Natural Resource Management Plan over the past three carryover budget years (FY 2004 thru FY 2006), the FCPA staff estimates that implementation of the plan will require $3 million plus per year. A more phased approach will allow FCPA to begin to manage 10 percent of parklands and set up the program to be phased in over time. Phase 1 with this approach would require $650,000 and six positions. EQAC strongly believes that the Plan needs to be implemented. Therefore, EQAC recommends that the board of supervisors provide funding and some staff positions to implement Phase 1. EQAC recommends that some of the six staff positions need be found from internal FCPA staff assets. A number of projects in the FY 2008 Environmental Improvement Program would support FCPA Natural Resource Management efforts. Project EIP08-PT08-01(B) addresses the Phase 1 effort described above.

3. Despite continued opposition encountered during the 2002, 2003, 2004 and 2005 Virginia State Legislative Assemblies, EQAC continues to recommend that the Virginia State Code § 15.2-961 be amended to include tree preservation requirements. Mature trees provide a number of benefits to the environment and the quality of life in Fairfax County. These benefits include improved air quality and improved stormwater management. The value of preserving trees during the development process (versus cutting

them and replacing with small plantings) is too great to give up on fighting to get tree preservation legislation.

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