
ANNUAL REPORT ON THE ENVIRONMENT

CHAPTER VII

**ECOLOGICAL
RESOURCES**

VII. ECOLOGICAL RESOURCES

This chapter summarizes the status of ecological resources and the actions of public agencies and citizen 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. The actions and decisions of the BOS 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 policies 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 the 2005 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 document can be viewed at: http://www.fairfaxcounty.gov/living/environment/eip/bos_environmental_agenda.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 it is taking 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 where possible. The following projects were in progress or completed in 2007:

Table VII-1. DPWES Stream Restoration Projects in 2007

| PROJECT NAME | PROBLEM | SOLUTION |
|--|---|---|
| Pleasant Ridge | Streambank Erosion | Installed 125 linear feet elliptical storm pipe, 4 storm structures and site restoration work |
| Hunters Branch | Stream Channel Blockage | Clean-up and blockage removal |
| Runnymede | Streambank Erosion | Installed riffles, pools, rock weirs/vanes, energy dissipaters, rock revetments and vegetation to re-establish stream buffer. |
| Governor's Run Phase 1 & 2 | Severe Sedimentation | Constructed access road, fore-bay, stream restoration, landscaping and tree plantings at Lake Martin |
| County-wide | Stream Channel Blockage | Remove debris from stream channels |
| Americana Drive | Streambank Erosion | Restored 50 linear feet of stream bank |
| Woodland Avenue | Streambank Erosion | Installed 80 linear feet of riprap |
| Balmacara Phase II | Streambank Erosion | Stabilized streambank with gabion basket walls, riprap and soil stabilization |
| Colonies at Scott Run | Streambank Erosion | Stabilized streambank with gabion basket walls, riprap and soil stabilization |
| English Hills | Streambank Erosion | Stabilized 175 linear feet of streambank with gabion basket walls, riprap and soil stabilization |
| Little Pimmit Run* | Severe Stream Erosion with Exposed and Threatened Sewer Lines | Restored 675 linear feet using natural stream channel design. Construction included two imbricated stone walls, 5 J-hooks, cobble, bankful benches, riffles and pools, an integrated trail crossing, floodplain and upland grading, and planting with native grasses, shrubs and trees. |
| Waverly Park Culvert Replacement (DPWES partnership with NVSWCD) | Severe Stream Erosion around Culvert Pipes | Removed 4 x 48" corrugated culvert pipes on Wolftrap Creek at two trail stream crossings and replaced with two fiberglass bridges (35' and 45' in length) |

*NVSWCD (project lead), in partnership with FCPA, DPWES, the Dranesville District Supervisor, a private engineering firm and a private construction company.

Source: 2008 EQAC Information, Attachment to email, Information for 2008 EQAC Annual Report (DPWES/STW-SPD IQ #187747), from Dean Blackwell, Department of Public Works and Environmental Services, Fairfax County, Virginia, to Noel Kaplan, Department of Planning and Zoning, Fairfax County, Virginia, July 2, 2008

b. Green Roof Technology

DPWES constructed a vegetated roof demonstration project on part of the Herrity Building parking garage. This project is being managed by the Facilities Management Division with support and funding provided by Stormwater Management. 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. Ongoing monitoring of this demonstration project is in progress, with interpretive signage to be installed in 2008.

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 Web site at <http://www.fairfaxcounty.gov/parks/>.

a. Acquisition of Park Land by FCPA

The FCPA added 169.5 acres between July 2007 and July 2008. This brings the parkland inventory to a total of 24,148 acres (which equates to 9.55 percent of the land mass of Fairfax County) as of July 2008.

FCPA purchased the following properties:

- Jean W. Pease, Trustee, 1.9615 acres. This parcel is in Mount Vernon District and provides an additional access point to Old Colchester Park and Preserve.
- William Milton Williams and Robert Orville Williams, 1.0925 acres. This parcel is in Mount Vernon District and provides an additional access point to Old Colchester Park and Preserve.

FCPA acquired the following properties through dedications:

- Fairfield Dulles Corner, LLC, 4.2916 acres. This proffer agreement included the dedication of land and a ball field in Hunter Mill District.
- Fairfield Dulles Corner, LLC, 2.3986 acres. This proffer agreement included the dedication of land in Hunter Mill District.

FCPA acquired the following properties through transfers:

- Fairfax County Board of Supervisors--Thirty seven separate transfers
- Fairfax County Redevelopment and Housing Authority--One transfer

b. Natural Resource Management Plan

In past reports, EQAC recommended that the Fairfax 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 <http://www.fairfaxcounty.gov/parks/nrmp.htm>.

Some of the highlights of year four (FY 2008) included:

- Policy and Best Practices
 - Drafted a non-invasive plant policy for plantings on parkland
 - Identified best practices and policy needed throughout the agency
- 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
 - In partnership with Earth Sangha created a native arboretum at the Marie Bulter Leven Preserve

- In partnership with Earth Sangha, NVSWCD, and VDOF, built a rain garden at the Marie Butler Leven Preserve
- Invasive Non-native Species
 - Continued and expanded the Invasive Management Pilot Program
 - Developed scope for a countywide survey and prioritization report
 - 40 volunteer leaders led 935 volunteers in 4,300 hours of stewardship service
 - 1,300 native plants were re-established on about 34 acres of parkland
- Water Resources and Low Impact Development
 - Worked with DPWES to refine the process of reviewing, coordinating and implementing watershed plan projects
 - Continued implementation of LID demonstration projects (funded in support of the Board of Supervisors Environmental Agenda). Rain gardens have been constructed at Wakefield, Cub Run, and Mt. Vernon RECenters and a swale will be developed at Greendale
 - LID features incorporated in other site improvements including a LID parking lot at Hidden Oaks Nature Center
 - Began a stream stabilization project at Turkeycock Run
 - Continued the Huntley Meadows Wetland Restoration project
- Stewardship Education
 - Produced three new brochures (Underground World, Water and Night)
 - The Stewardship Education Team developed educational materials about storm drains (posters, window clings, brochures and buttons), trained staff and installed storm drain markers at all staffed parks

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, planner and project managers. 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. EQAC recognizes that personnel cannot just be transferred from another job (and skill set) to this program, but increased staffing can be accomplished by

hiring a new person with the right skills when normal attrition happens elsewhere on the FCPA staff.

c. Green Infrastructure/Natural Resource Mapping Effort

The goal of this project is to develop a framework for modeling ecologically significant resources to support land use and development decisions in Fairfax County. This information will also be used as needed by FCPA to provide for informed land acquisition decisions as well as to support park planning processes. The successful achievement of this effort will satisfy a long-standing EQAC recommendation.

A demonstration model will be conducted for the Sully Woodlands region and the results used to refine the model protocol. Development of the model for the entire county will be considered based upon the results of this study and the availability of funding. The scope of work is developed and the project should be underway in 2007 with a late 2008 completion date.

d. 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.

A number of volunteers have enabled the Invasive Management Area program to be established at 36 sites with 41 trained volunteer leaders. This program works on plots of land, typically ½ acre, to remove priority invasive species.

The Invasive Conservation Corps is an internship opportunity offered by FCPA for the first time in summer 2007. Nine graduate and undergraduate interns performed mechanical control of invasive plants at 21 sites. The program was extended into 2008 with a five-intern crew working through August 1.

FCPA continues with outreach and education in this area. FCPA published another brochure, *Non-Native Identification and Control*, completing its invasive plant stewardship series.

EQAC continues to commend 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.

e. Riparian and Bioengineering Projects

The Fairfax County Park Authority, along with and in partnership with other agencies, continues to work on stream stabilization/bioengineering projects. See the Water Resources Chapter of this report for descriptions of these projects. The stream restoration projects were the Turkeycock Run Stream Stabilization, encompassing about 1,000 linear feet in Green Spring Garden, and the Little Pimmit Run project, which included over 500 linear feet.

f. Environmental Stewardship

FPCA does offer a number of opportunities for volunteers and EQAC encourages county residents to take advantage of these opportunities. Information about these opportunities is available at <http://www.fairfaxcounty.gov/parks/volunteer.htm>.

More information about FPCA and its programs is available at these Web sites: <http://www.fairfaxcounty.gov/parks/resources/stewardship.htm> and <http://www.fairfaxcounty.gov/parks/resources>.

g. Fairfax County Park Foundation

Fairfax County citizens 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 the county's park system. Those interested in giving tax-deductible donations to the Foundation, can contact the Foundation at:

Fairfax County Park Foundation
 12055 Government Center Parkway
 Fairfax, VA 22035
 (703) 324-8581
SupportParks@aol.com
<http://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.

NVRPA has been in discussions with land owners along the Occoquan River regarding NVRPA's interest in land donations or acquisitions to expand its parkland along the river. In 2008, NVRPA signed an easement expanding protected open space along the Washington & Old Dominion Trail. This easement, the Wedderburn property in the Providence District, provides a two-acre buffer to the trail.

NVRPA completed certification by Audubon International of all three of its golf courses as Wildlife Sanctuaries. This extensive process took NVRPA over a year to complete, and NVRPA is the only public agency in the Mid-Atlantic region to achieve this designation for any of its golf courses.

NVRPA worked with EPA and the Virginia Department of Agriculture and Consumer Affairs to develop an aggressive pesticide and fertilizer use policy. This policy goes far beyond the law and has been implemented it at all of NVRPA's parks. This is particularly important since NVRPA parks are overwhelmingly riparian areas adjacent to local drinking water supplies.

Current information about the Northern Virginia Regional Park Authority can be found on its Web site, <http://www.NVRPA.org/> and its current annual report is at <http://euclid.willetts.com/www.nvrpa.org/documents/file/AnnualReport2007WEB.pdf>

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. The organization appreciates and supports the county's new goals to increase the tree cover in Fairfax County. Fairfax ReLeaf contributed to this goal by nearly doubling the number of tree seedlings planted over the previous year. 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:

- Improved air quality
- Reduced heat island effects
- Reduced noise
- Preservation of human and wildlife habitats

- Reduced energy use
- Reduced surface runoff and improvement of water quality

Fairfax ReLeaf remains very active in its efforts; the organization planted or distributed 3,860 trees in calendar year 2007. Volunteers spent over 3,000 hours planting tree seedlings, removing invasive species and maintaining sites. Some specific activities were:

- Distribution of over 800 seedlings to individuals and homeowner associations for planting
- Removal of invasive plants in the cloverleaf off of I-395 south and in Idylwood Park
- Planting of over 1,000 trees in parks
- Planting of over 200 trees at school sites
- Reforestation of a homeowner association site around Lake Martin by the planting of nearly 500 trees

For further information on Fairfax ReLeaf, visit its Web site at <http://www.fairfaxreleaf.org>. The 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 seventh year with recent funding for FY2008.

NVCT was founded in 1994 as the Fairfax Land Preservation Trust. In 1999, the Trust changed its name to The Northern Virginia Conservation Trust to better reflect the regional scope of the service area. 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

partnership with Arlington County and the City of Alexandria, and 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 2008, NVCT has preserved about 655 acres of open space in Fairfax County through easements, fee simple ownership, and partnerships. Between July 2007 and June 2008, NVCT permanently protected four acres along Piney Run in Lee District, and granted a trail easement to the Park Authority to complete the last segment of the Pimmit Run Trail from Old Dominion Drive to Pimmit Ben Park (which was opened with much fanfare by the Chairman of the Board of Supervisors). NVCT has numerous other projects close to completion, including conservation easements, fee acquisitions and trail easements.

Tables VII-2, VII-3 and VII-4 provide details on all these properties.

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 native trees, the removal of invasive plants, birding trips and guided hikes. NVCT naturalist-led kayak tours, part of its innovative environmental and conservation education program, “floating classrooms,” continue to be a huge success.

NVCT was listed in this year’s Catalogue of Philanthropy as one of the best small charities in Northern Virginia and so recognized by the Board of Supervisors with a special award presented on July 9, 2007.

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, <http://www.nvct.org>.

| Table VII-2. Easements Obtained by the Northern Virginia Conservation Trust | | | |
|--|-----------------|-----------------|--------------------|
| District | Location | Acreage | Recordation |
| Braddock | Annandale | 2.6 | 5/28/2004 |
| Dranesville | Great Falls | 5.6 | 12/1/2000 |
| Dranesville | Great Falls | 5 | 12/22/2005 |
| Dranesville | Great Falls | 14.07 | 7/3/2003 |
| Dranesville | Great Falls | 4.2 | 12/22/1999 |
| Dranesville | Great Falls | 5.1 | 8/14/2001 |
| Dranesville | Great Falls | 5 | 12/28/2000 |
| Dranesville | Great Falls | 5 | 7/18/2001 |
| Dranesville | Great Falls | 5 | 8/14/2001 |
| Dranesville | Clifton | 5.3 | 5/27/2003 |
| Dranesville | McLean | 62.7783 | 11/20/2006 |
| Dranesville | McLean | 7.7717 | 11/20/2006 |
| Dranesville | McLean | 1.9 | 12/14/2005 |
| Dranesville | McLean | 41 | 12/27/2005 |
| Dranesville | McLean | 6 | 8/1/2002 |
| Dranesville | McLean | 5.03 | 12/18/2006 |
| Hunter Mill | Vienna | 0.39 | 3/28/2003 |
| Lee | Alexandria | 3.98 | 1/8/2008 |
| Mason | Alexandria | 1.58 | 12/27/2002 |
| Mt. Vernon | Lorton | 33.73 | 5/18/2002 |
| Mt. Vernon | Alexandria | 0.4 | |
| Mt. Vernon | Alexandria | 0.92 | 6/20/2003 |
| Mt. Vernon | Mason Neck | 9 | 12/19/2003 |
| Mt. Vernon | Alexandria | 0.34 | 6/6/2005 |
| Providence | Falls Church | 1 | 4/14/2004 |
| Providence | Falls Church | 2.5797 | 3/10/2003 |
| Providence | Falls Church | 1.98 | 3/10/2003 |
| Providence | Falls Church | 1.56 | 3/10/2003 |
| Providence | Falls Church | 1.12 | 3/10/2003 |
| Springfield | Springfield | 0.87 | 10/30/2002 |
| Springfield | Springfield | 0.77 | 11/26/2002 |
| Sully | South Riding | 226 | 12/19/2003 |
| Sully | Fairfax | 1.51 | 7/17/2003 |
| | Total | 469.0797 | |

Source: *EQAC Update*, Email from Whit Field, Vice President and General Counsel, Northern Virginia Conservation Trust, Fairfax County, Virginia, to Robert McLaren, August 9, 2008.

| Table VII-3. Fee Simple Properties Owned by the Northern Virginia Conservation Trust | | | |
|---|-----------------|----------------|--------------------|
| Property/District | Location | Acreage | Recordation |
| Clifton Property/Dranesville | Clifton | 8.66 | Gift 6/2003 |
| Davenport/Pimmit Run/ Dranesville | McLean | 1 | Gift 8/2000 |
| Mason | Springfield | 0.001 | Gift 3/2005 |
| Little Hunting Creek/ Mt. Vernon | Alexandria | 2.01 | Gift 2002 |
| | Total | 11.671 | |

Source: *EQAC Update*, Email from Whit Field, Vice President and General Counsel, Northern Virginia Conservation Trust, Fairfax County, Virginia, to Robert McLaren, August 9, 2008.

| Table VII-4. Land Turned Over to Local Government and Associated Acreage | | | |
|---|-----------------|----------------|--------------------|
| Property/District | Location | Acreage | Recordation |
| Bannister Outlots/Springfield | Springfield | 0.6 | 12/2001 |
| | Total | 0.6 | |
| Assisted Acreage | | | |
| Property/District | Location | Acreage | Recordation |
| Turner Farm/Dranesville | Great Falls | 17 | 1998/99 |
| FCPA Elklick/Sully | South Riding | 157 | 12/2003 |
| | Total | 175.2 | |

Source: *EQAC Update*, Email from Whit Field, Vice President and General Counsel, Northern Virginia Conservation Trust, Fairfax County, Virginia, to Robert McLaren, August 9, 2008.

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 <http://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. This organization was 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 <http://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 the 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 MLC 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. NPS 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. The VOF was established “...to promote the preservation of open-space lands and to encourage private gifts of money, securities, land or other property to preserve the natural, scenic, historic, scientific, open-space and recreational areas of the Commonwealth.” The primary mechanism for accomplishing VOF’s mission is through open-space easements. Open space easements allow land to continue to be privately owned but restricted to serve and protect land for the public good.

The Virginia Outdoors Foundation currently holds six easements in Fairfax County as shown in Table VII-5. Additional information about VOF can be seen at its Web site: <http://www.vofonline.org/>.

| Table VII-5. Easements Held by the Virginia Outdoors Foundation 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 | |

Source: *2008 Annual Report*, Attachment to email, VOF Info for 2008 Annual Report, from Erika Richardson, Stewardship Specialist, Virginia Outdoors Foundation, Warrenton, Virginia, to Noel Kaplan, Department of Planning and Zoning, Fairfax County, Virginia, July 1, 2008.

* 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.

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.

The Fairfax County Chesapeake Bay Preservation Ordinance and Agricultural and Forestal District Ordinance require land in agricultural use to have a soil and water quality conservation plan. In Fairfax County, horse keeping operations are the predominant agricultural land-use. They are located mainly in the northern, western and southern areas of the county, and range from 5 to more than 100 acres. Plans include best management practices to reduce: erosion and sediment pollution from pastures and stables; 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 next to all streams and water bodies in Resource Protection Areas. Plans are updated and technical assistance is provided as needed. In 2007, seventeen soil and water quality conservation plans were prepared for 355 acres, which included 7,700 linear feet of stream buffers. All plans comply with the requirements of the Chesapeake Bay Program and several of the conservation plans also meet the county's requirements for the establishment or renewal of Agricultural and Forestal Districts. One manure composting facility was constructed for a horse operation with the help of funding through the state cost-share program. During 2007 and 2008, four conservation plans were prepared to assist landowners in correcting pollution problems identified through complaints made under the Virginia Agricultural Stewardship Act.

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 citizens a package of native tree and shrub seedlings for a small cost. In 2008, a variety of 6,000 native seedlings were bundled into 420 packages and sold at a small cost to individuals and groups to promote urban reforestation, habitat enhancement and water quality protection. The package, named a "Butterfly Buffet," contained six varieties of trees and shrubs that provide both habitat and food for butterflies. Seed packets of butterfly weed and Black-eyed Susans also were included.

NVSWCD is the local sponsor of **Envirothon**, a hands-on competition among high school teams to demonstrate their knowledge of natural resources – forestry, soils, wildlife, aquatic ecology – and special issue topics, such as urban-rural interface and recreational stress on natural resources. Local and regional competitions are held in April, and the state competition is in May. In 2008, the Hidden Pond Ecology Club, comprised of students from several county high schools, came in second in the regional competition. In the state competition, the team took first place in the special issue oral presentation category and came in fifth overall.

The **Neighborhood Ecological Stewardship Training** Program is a series of hands-on workshops and outings that connect people to their environment and inspire stewardship. In 2008, from March through July, 261 adults participated in the program, enjoying and learning about their local natural resources through the arts and sciences. Seventy-three organizations, writers, artists and scientists partnered with NEST to provide a range of classes and activities from watershed explorations by land and water, to soils art, bat habitat and stream ecology. Over 115 activities were linked to the NEST program. More information is available on the Web site at www.exploreyournest.org.

At the bi-monthly Saturday morning **Green Breakfasts**, interested citizens, county officials and agency staff, state legislators, students, members of the business community and representatives of local non-profits and environmental groups discuss environmental topics, share information and network. Each breakfast begins with a presentation. In 2007, topics included: Invasive Management and Ecological Stewardship Training Programs; the Tree Action Plan; the Chesapeake Bay Program Forestry Initiative; Land Conservation; Cool Counties; and the Virginia Wildlife Action Plan. The Green Breakfast coordinator also sends announcements about programs and events, including county initiatives, and other topics.

Conservation Currents, the NVSWCD quarterly newsletter, includes many articles related to ecological resources. In 2007, topics included: managing invasives in parks; the value of trees near streams, as shown in a riparian temperature monitoring project; the Meherrin scenic river; the rain barrel program; sustainable agriculture; the storm drain marking pollution prevention program; the consequences of disappearing dogwoods; tax credits for energy efficient homes; launching the Fairfax Chapter of the Virginia Master Naturalist Program; watershed improvements at the Mt. Vernon Unitarian Church; the results of the evaluation of 20 Rain Gardens; the Little Pimmit Run stream restoration; rehabilitation of the Pohick Creek Watershed dams; why are some plants pests; and Growing Native. Editors of homeowner association newsletters and other materials are encouraged to use the articles in their publications.

Formed in 2006, the Fairfax Chapter of the Virginia Master Naturalist Program provides local residents with naturalist training and then connects them with volunteer stewardship, citizen science and education opportunities in parks and natural areas. The process for becoming a certified Virginia Master Naturalist takes from six to 12 months. Two times a year, approximately twenty-five candidates are selected for a class. They begin with a 60-hour basic training course, which is a combination of classes and field work that grounds them in natural history and forest and aquatic ecology. Subject matter experts from the Northern Virginia Regional Park Authority, Fairfax County Park Authority, Virginia Department of Forestry, Virginia Tech, Northern Virginia Soil and Water Conservation District, EPA and National Academy of Sciences make up the faculty. Master Naturalists are expected to provide much-needed support to the many environmental organizations striving to protect natural resources in Fairfax County. Graduates provide 40 hours of volunteer service each year, undergo an annual recertification and take advanced training.

Fairfax Soil Survey and Soil Scientist. The county provided funding to NVSWCD to continue the expertise of a soil scientist. During the past year, the soil scientist has continued to facilitate the transition from the old to the new soil survey information. Descriptions of all 119 soils have been published in the *Description and Interpretive Guide to NRCS Mapped Soils in Fairfax County*. Also, county-specific ratings for the new soils and assignment of problem classes to the updated soils have been completed. The soil scientist and staff from DPWES are collaborating on updating codes and procedures, notifying industry and ensuring a smooth transition to using the new survey. A template map has been completed that will be available as a PDF (one for each tax grid) to the public through the county Web site. Also, new GIS layers have been created for landfills, quarries, Marumsco soils, old Marine Clay soils, asbestos-containing soils, and other shrink-swell soils.

The soil scientist continues to assist with providing technical assistance to homeowners, homeowner associations, the development and construction community and county staff on soils-related matters and problems. Technical assistance on infiltration practices also is provided. During 2007, soils information was provided to 232 consultants, engineers, realtors and homeowners, and during the first half of 2008, soils information was provided in 104 reports.

13. Fairfax County Wetlands Board

If you own property on the waterfront in Fairfax County, you may need a permit from the Fairfax County Wetlands Board 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 wetland. Land disturbing activities that may require a permit from the Wetlands Board include the following:

- Any construction project on or adjacent to a tidal body of water.
- Any construction project in which fill material is placed in or near tidal wetlands.
- Projects designed to protect property adjacent to shorelines.

The Wetlands Board evaluated four requests for Wetlands Permit Applications during 2008. The Wetlands Board seeks avoidance, minimization and mitigation or compensation for all tidal wetland impacts since the adoption of the Tidal Wetland Mitigation and Compensation Policy, which was adopted in 2005. The Wetlands Board received compensation for the wetland losses, which have resulted from permitted wetland impacts over the year at the board's approved rate of \$28 per square foot.

Restorations were completed for the three wetlands ordinance violations for which the Wetlands Board sought resolution between 2006 and 2007. To satisfy the board's condition that monitoring be conducted for three subsequent years following completion of the restorations, the subject property owners submitted photographs as part of the monitoring process to ensure the success of the restored wetland areas.

The Virginia Institute of Marine Science plays a crucial supporting role as academic advisors to tidewater localities in the administration of the tidal wetlands program. Carl Hershner, Director of the Center for Coastal Resources Management at VIMS announced significant changes in VIMS supporting role to the localities in an electronic advisory to local government staff in late May, effective as of July 2008.

The following excerpt from Hershner's advisory defines the new course.

“...We have incorporated the latest scientific understanding of tidal wetland functions in the form of revised permit application reports that stress preservation of ecosystem services....We have used our emerging understanding of climate change and its effects on natural resources as the basis for our Integrated Shoreline Management guidance. And, for the past year, we have focused

workshops and publications on the introduction and explanation of the integrated management approach.....

We are developing a more extensive training curriculum for local government planners and landuse managers to enable them to guide shoreline property owners to preferred project design alternatives....

We will continue to provide reports on permit applications, although we will rely more on desktop review and less on routine site visits.... We will continue to provide technical support for difficult cases within our resource limits. And, we continue to seek additional resources to build on and improve this suite of activities.”

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
<http://www.co.fairfax.va.us/dpz/environment/wetlands.htm>

14. Virginia Department of Forestry

The Virginia Department of Forestry has provided forestry related services in Fairfax County for over 55 years. VDOF is also participating in several efforts aimed at improving riparian zones. In these efforts, VDOF partnered with the Northern Virginia Soil and Water Conservation District, the Department of Public Works and Environmental Services, Fairfax County Park Authority, Fairfax ReLeaf and Earth Sangha.

The Virginia Department of Forestry is the lead state agency to oversee the planting and recordation of forest buffers planted in the state of Virginia. In 2007, approximately 5,500 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, Earth Sangha, Elementary School Children, private landowners, Fairfax ReLeaf and the Potomac Conservancy.

The Virginia Department of Forestry participates in the Fairfax County Arbor Day on the last Saturday in April each year. The County earned again, for the 25th 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 State Department of Forestry.

Tree seedlings are distributed by VDOF to citizens attending the Arbor Day celebration. In 2007, 350 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. In 2007, approximately 5,000 pounds of seeds were collected. Each year 500-700 seedlings are given to citizens 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 forest management plans are prepared by VDOF; these efforts support the management of forested land for conservation purposes. Eight A&F plans covering 349.6 acres were prepared in 2007. These plans provide detailed forest descriptions, information on protecting water quality, wildlife habitat and cultural resources, as well as a detailed five-year management plan that protects natural resources and promotes the landowner's management objectives. VDOF wrote two Stewardship Management plans covering 369.1 acres. VDOF also provides forestry management advice to Home Owners Association and Civic Groups. In 2007, five community forestry plans were prepared covering 85 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 65 applications and plans in 2007. In addition, VDOF annually inspects dry hydrants to make sure they are available to fight wildfires in the county.

The department maintains an active public education and out reach program. Audiences range from school 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 2007, VDOF conducted 26 talks on the general benefits of urban forests and riparian buffers.

15. Virginia Department of Transportation

The Virginia Department of Transportation mitigates unavoidable impacts to water resources within Fairfax County that occur during highway construction projects as required by federal and state laws and regulations. VDOT has created seven such wetland mitigation sites in Fairfax County:

- Approximately 0.5 acres off southbound Route 28 adjacent to Dulles Airport (Dulles site)
- Approximately two acres off westbound Route 7 adjacent to Sugarland Run (Sugarland Run site)
- Approximately 0.2 acres off southbound Route 29 adjacent to Big Rocky Run (Big Rocky Run site)
- Approximately two acres off northbound Route 6197, Roberts Parkway adjacent to the Burke Railway Express Station (Roberts Parkway site)
- Approximately 2.5 acres off northbound Route 228, Dranesville Road adjacent to Sugarland Run (Dranesville site)
- Approximately 2.5 acres off Route 1 on the Fairfax County side of Cameron Run (Woodrow Wilson Bridge Project – Belle Haven site)
- Approximately two acres will be constructed at the confluence of Taylor Run and Cameron Run Currently underway at the I-95/Telegraph Road interchange improvement (Woodrow Wilson Bridge Project – Cameron Run site)

These sites were created to mitigate unavoidable wetland impacts from construction of Route 28 widening, Fairfax County Parkway, Roberts Parkway Bridge Overpass, the Springfield Interchange Improvements, the Route 29 Bridge replacement over Big Rocky Run, and the Woodrow Wilson Bridge Replacement. All but the Woodrow Wilson Bridge Project sites have met wetland performance criteria. The Belle Haven site is in its fourth year of monitoring and the Cameron Run site monitoring will begin when its creation is complete.

Water quality permits require created wetland mitigation sites to be monitored for a period of five years following completion of construction to assess their functionality. Monitoring reports indicate that these created wetlands are providing a valuable water quality benefit in their respective watersheds as well as habitat for a host of aquatic organisms, waterfowl, and other wildlife. These land parcels are deeded in perpetuity for preservation as a wetland; however, these open spaces are continually pressured for development by others. EQAC agrees with VDOT that these VDOT-owned wetland mitigation sites should be protected.

Federal and state water quality regulations are now requiring mitigation of streams impacted by transportation projects. VDOT completed approximately 135 feet of on-site stream restoration of a Pohick Creek tributary in 2004 during the widening of Richmond Highway between Telegraph Road and Lorton.

VDOT estimates the need for mitigation of about 6,400 linear feet of streams and 12 acres of wetland impacts based on VDOT's current Six-Year Plan. This number would increase if more funds for construction became available. However, VDOT notes that opportunities for stream restoration credit or

competitive purchase of commercial bank credits within the watersheds of Fairfax County are limited. Therefore, VDOT is interested in discussion of opportunities for potential stream restoration sites within and beyond the state's right-of-way. This could include partnering with Fairfax County agencies and private property owners. Another possible partner would be the Northern Virginia Soil and Water Conservation District. (For example, VDOT transferred ownership of a stream restoration design along Turkeycock Run to the Fairfax County Department of Public Works and Environmental Services, which will take responsibility to build any portion of the design through its own funding.) EQAC urges county staff and NVSWCD to explore such possibilities.

VDOT, in partnership with the Virginia Transportation Research Council and the University of Virginia, had been involved in several environmental research studies. The following research study is presently underway:

- *Effects of Sedimentation of Freshwater Mussels:* Sedimentation from VDOT projects is assumed by regulatory agencies to pose a major negative impact to mussels downstream of construction sites; however, there is no empirical evidence to support this assumption. The research project will test the assumption of sediment impacts and evaluate whether VDOT projects do or do not contribute to significant sedimentation above ambient stream levels. Completion date target is September 2009.

VDOT completed these research projects in FY08:

- *Assessment of Soil and Wash-water Quality Beneath Salt Spreader Storage Racks: Lubricant and Salt Quantification.*
- *Understanding the Environment Effects of Cured-in-Place Pipes for Utility Pipe Rehabilitation:*
- *Recycling of Salt-Contaminated Storm-Water Runoff for Brine Production at VDOT Road-Salt Storage Facilities.*

VDOT is participating in a joint pilot project with VTRC and the Fairfax County Department of Transportation on the use of low impact development measures for the proposed Lorton Connector Road in the Laurel Hill development. This five-year pilot project will monitor the effectiveness of LIDs in managing stormwater runoff from the roadway.

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

- Richmond Highway widening from Lorton Road to Telegraph Road (completed October 2005 and the landscaping is in the final year monitoring of a three-year establishment period)

- Ox Road between Davis Drive and the Prince William County Line (completed May 2006 and the landscaping is in the final year monitoring of a three-year establishment period)
- Backlick Road Park and Ride Lot (completed November 2007 and landscaping is in the first year of a one-year establishment period)

VDOT is including landscaping in projects currently underway or scheduled to start in the next 12 months:

- Route 1/Capital Beltway interchange improvements associated with the Woodrow Wilson Bridge Project (landscaping and reforestation to begin October 2008)
- Telegraph Road/Capital Beltway interchange improvements associated with the Woodrow Wilson Bridge Project (project currently underway)
- Route 50 Pedestrian Bridge over Route 50 at the Seven Corners Shopping Center (construction underway with landscaping in Fall 2008)

Approximately 12 acres of wildflower meadow plantings exist in Fairfax County. This total represents approximately the loss of five acres of meadows, primarily due to construction underway of the Capital Beltway/HOT/Bus/HOV Lanes Project. Other meadows have been abandoned due to consistently poor performance. The wildflower program is not funded for FY09 and VDOT will focus efforts on maintaining the vitality of the remaining meadows. VDOT will also continue to evaluate use of grass species for application in its roadside seed mix specifications.

VDOT has increased its integrated vegetation control of invasive, non-native vegetation along interstate and primary roads in Fairfax County. One specific problem is bamboo. Many residents plant this species along their property lines with the state right-of-way, but bamboo quickly spreads to interfere with drainage and visibility of highway signs. EQAC encourages property owners to find native alternatives to bamboo since this invasive plant does spread very rapidly and is difficult to control.

16. Urban Forest Management

a. Urban Forest Management Division

In addition to carrying out its core services relating to land development (see Forest Conservation Branch update) and forest pest management (see Forest Pest Branch update), in 2007, the Urban Forest Management Division of the Department of Public Works and Environmental Services focused on several other projects that included:

- County Receives Tree City USA and Growth Award: For the 25th year, Fairfax County received the Tree City USA Award and its fourth Growth Award from the National Arbor Day Foundation. UFMD prepares the applications each year for these awards and Fairfax County has one of the ten longest running records in Virginia.
- 30-year Tree Canopy Goal:. According to long-range tree canopy modeling by UFMD, even if our community continues to preserve and plant trees at present levels of effort, our tree canopy will decrease in size from 41 percent to around 37 percent over the next 30 years. This loss (10,200 acres) equates in area to seven Huntley Meadows Parks and will go hand in hand with the loss of significant levels of environmental and social services associated with tree canopy such as air pollution removal, carbon storage, energy conservation and stormwater management. An initial analysis of the tree planting potential of 31,357 acres of county-owned property and 15,500 acres of commonly-owned open space found that only 4,200 acres have potential for additional tree planting. The same analysis found that 33,170 of 107,000 (31 percent) acres of low density residential land showed potential to accommodate additional trees. Therefore, the lion's share of tree planting will need to occur on privately-owned residential lots.

In order to reverse the loss and to actually increase canopy levels, the Board of Supervisors adopted a 30-year tree canopy goal of 45 percent on June 18, 2007. Fairfax County is the first large jurisdiction in Virginia to officially adopt a tree canopy goal.

Reaching this goal requires that we increase our present canopy levels by approximately 20,400 acres by the year 2037. Although canopy gains are expected from natural processes, this goal requires a large-scale tree planting program spread over a 30-year period. At present, our community is estimated to plant 21,000 trees annually. The adopted goal requires that we increase current planting levels to an average of 84,000 trees annually. The total numbers of trees that are needed to reach 45 percent is estimated at 2.6 million.

The Urban Forest Management Division has estimated that it will cost our community between 250 to 500 million dollars to install this number of trees depending on the size and species of trees that are eventually planted. However, the benefits provided by the added tree canopy should more than offset costs associated with planting and maintaining the new canopy. The UFMD has noted that the stormwater management capacity that is associated with 21,000 acres of mature tree canopy is estimated to cost \$510,632,400 to construct, and that this sum alone would offset the total cost estimated for this 30-year tree planting proposal. UFMD also estimates that this canopy increase would have

the capacity to provide an additional 5.3 million dollars of air pollution removal and 4.7 million dollars of energy conservation services each year for the life of the trees, which could easily reach 70 years or more.

- Implementation of the Tree Action Plan: In 2007, UFMD, in conjunction with the Fairfax County Tree Commission, developed, and the Board of Supervisors endorsed, the Tree Action Plan. The Tree Action Plan is a 20-year strategic plan for the conservation and management of the county's tree and forest resources. Over the past year, UFMD staff has made significant progress towards meeting goals and executing strategies of the plan. UFMD is currently engaged in 27 strategies associated with 10 out of 12 Core Recommendations of the Tree Action Plan. The 12 Core recommendations are:

1. Engage and Educate (the community)
2. Build Strong Partnerships and Alliances
3. Optimize Tree Conservation in County Policies
4. Improve Air Quality and Address Climate Change through Tree Conservation
5. Improve Water Quality and Stormwater Management through Tree Conservation
6. Use Ecosystem Management to Improve and Sustain the Health and Diversity of our Urban Forest
7. Strengthen State-Enabling Authority for Tree Conservation
8. Encourage Sustainable Design Practices
9. Plant and Protect Trees by Streams, Streets and Trails
10. Optimize Tree Conservation in Land Development
11. Optimize Tree Conservation in Utility and Public Facility Projects
12. Support and Refine the County's Urban Forestry Programs

For more information on the Tree Action Plan, please use the following Web link:

<http://www.fairfaxcounty.gov/dpwes/environmental/trees.htm>.

- Tree canopy measure included in the 2007 Metropolitan Washington DC air quality plan: Tree conservation is an effective air quality management tool. The U.S. Department of Agriculture Forest Service estimates that every one percent increase in canopy cover results in maximum mid-day air temperature reductions of 0.07 to 0.36°F (0.04° to 0.2°C). Reduction of ambient air temperatures is just one of the ways that trees help improve air quality. Planting and preserving tree canopy improves air quality in several ways. Trees absorb pollutants from the air through leaf uptake and contact removal. By shading buildings, trees also lower demand for air conditioning energy, thereby decreasing emissions from power plants.

In 2007, the Northern Virginia Urban Forest State Implementation Plan Group joined a regional effort organized by the Metropolitan Washington Council of Governments. The MWCOG group contributed to the development of the “*Urban Heat Island Mitigation/Tree Planting/Canopy Conservation and Management*” measure. This new voluntary measure is included in the 2007 Metropolitan Washington eight-hour ozone air quality management plan and is one of only two in the entire United States to be approved by the U.S. Environmental Protection Agency.

Fairfax County committed to implementing the following practices in support of the *Urban Heat Island Mitigation/Tree Planting/Canopy Conservation and Management* measure:

- Fairfax County tree canopy requirement for new development
- Fairfax County parking lot canopy ordinance
- Fairfax County government land planting program
- Fairfax County countywide nonprofit tree planting program

Although only four components of Fairfax County’s urban forestry program are specifically identified, it should be noted that most, if not all, UFMD programs directly support efforts to keep our air clean.

- Northern Virginia Urban Forestry Roundtable The lack of regional communication over urban forestry issues has 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 regional conferences on trees and air quality since November of 2005. NVUFR activities increased in 2007, resulting in the development of several tree conservation bills that were reenrolled in, and ultimately adopted by, the 2008 Virginia Legislative Assembly. More information about 2007 and 2008 tree conservation legislative efforts is provided later under section e.
- New Ordinance to Preserve Heritage, Specimen, Memorial and Street Trees: In response to a directive from the Board of Supervisors at its June 5, 2006 meeting, UFMD and the Office of the County Attorney developed a new tree preservation ordinance based on the enabling authority of Section 10.1-1127.1 of the Code of Virginia which provides

authority to regulate the preservation and removal of heritage, specimen, memorial and street trees. The Board of Supervisors adopted this new ordinance on October 15, 2007. The new ordinance will be administered by UFMD and others in DPWES.

Heritage trees are trees that have notable historic or cultural interest. Memorial trees are trees that are special commemorating memorials. Specimen trees are trees that are notable by virtue of their outstanding size and quality for their species. Street trees are trees that have been planted by local governments in the right-of-way or on adjoining private property with the permission of the owner. Designation of a tree under the new ordinance may require easements to protect the natural vegetation, topography and other natural features within the tree's critical root zone. The identification of trees by citizens, citizen's groups and other organizations will be through the submission of a report proposing tree designation to UFMD. In addition to the report, and as a prerequisite for scheduling public hearing held to consider tree designation, all proposals to designate trees for protection under this ordinance must be accompanied by written consent from tree owners.

All individuals and groups identifying trees for potential designation are required to communicate proposals to designate trees to the owners and to secure written consent from owners in order for the county to consider the tree for official designation. Subsequent to designation, trees preserved under the ordinance may only be removed with permission of the board and the board may require replacement of trees approved for removal. Tree owners are required to undertake reasonable efforts to preserve and protect designated trees, including the critical root zone, and advise the Urban Forester of any trees that appear to be damaged, diseased or dying.

A civil penalty of \$2,500 may be assessed for violations of the ordinance that cause, contribute to or permit injury to, removal or destruction of a tree designated for preservation under the ordinance. Provisions also have been included in the ordinance to prohibit property owners from destroying any tree proposed for designation pending a recommendation by UFMD and/or decision by the board. In addition to the exemptions provided for in the state code, the ordinance exempts the maintenance and repair of water lines and sanitary sewer lines from the requirements.

b. Forest Conservation Branch

In 2007, the Forest Conservation Branch of the Urban Forest Management Division continued to serve its traditional customers: citizens; 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, Park Authority and the School Board. Efforts included:

- Tree Planting on Government-owned Sites: Staff prepared planting plans and planted over 380 native and desirable trees at 28 county-owned facilities, including libraries, mental health centers, police and fire stations, government centers and more, to help meet the 30-Year Canopy Goal, adopted by the board in 2007.
- Education and Demonstration of Natural Landscaping Techniques: In cooperation with several county agencies, the branch designed a landscape plan and installed trees and shrubs at two stormwater management ponds on the grounds of the Government Center using natural landscape techniques as part of the Board of Supervisors Environmental Improvement Program.
- Improvements to the DPWES “Trees” Web Page: The Web page was upgraded with improvements such as:
 - Additional information for citizens and developers regarding natural landscape techniques, native plants, invasive plant species, model proffer language, the Tree Action Plan and hazardous trees
 - Adding “Tree Mail,” an avenue for citizens to ask general questions relating to trees and/or the urban forest and have a response from UFMD staff within 24 hours
- Tree Presentation and Planting Awards: Nominations were prepared for the Tree Commission of potential candidates for the Tree Preservation and Planting Awards. Awards for tree preservation are presented to recognize those developers and builders who have done an outstanding job of preserving trees on a project they have constructed. The Tree Commission awarded the 2007 Tree Preservation and Planting Awards to:
 - Carlton House/ Tree Preservation
 - Hawthorne Property, Section 2/ Tree Preservation
 - Squires Crest/ Tree Preservation

- Laurel Crest/ Tree Preservation
- James Lee Community Center/ Tree Planting
- Increased Public Awareness and Outreach: FCB staff continues to provide education and outreach to the public regarding the urban forest at many venues such as:
 - Talks to homeowners associations, scout groups and garden clubs
 - Participation in annual Earth Day/Arbor Day, Celebrate Fairfax and the 4-H fair with staff and educational exhibits
 - Providing staff and educational exhibits to the Mount Vernon Town Hall meeting and to the Providence District Workshop
- Natural Landscape Initiative: FCB staff continues to work cooperatively with various county agencies using GIS analysis to identify areas to reduce turf mowing activities and to identify potential planting sites for energy conservation and parking lot landscaping; staff has also developed model proffer language for implementation of natural landscape techniques.
- 2007 FCB Workload Summary: The following table summarizes the workload of FCB based on the requests for assistance that were completed for FY 2006, 2007 and 2008. These figures demonstrate the number of requests for assistance in 2007 appears to have increased by nine percent from the previous years.

| Table VII-6. Forest Conservation Branch Workload, 2006 through 2008 | | | |
|--|-------------------------------------|----------------|--------------|
| Type of Assignment | Number of Completed Requests | | |
| | 2006 | 2007 | 2008 |
| Waivers | 45 | 49 | 29 |
| Zoning Cases | 216 | 282 | 352 |
| LDS ¹ Requests: Plan Review | 676 | 628 | 586 |
| LDS Requests: Site Inspections | 726 | 810 | 978 |
| Other (Board of Supervisors, Park Auth., Other County Agencies, etc.) | 261 | 452 | 399 |
| Hazardous Tree Investigations | 8 | 8 ² | 34 |
| Total Completed | 1,932 | 2,229 | 2,378 |

¹ LDS – Land Development Services. ² Completed requests for hazardous trees do not include nine requests referred to VDOT and other county agencies that were inspected by FCB staff, but for which no correspondence was generated.

c. Forest Pest Section

i. 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 citizen involvement programs
- Biological: the release and monitoring of gypsy moth parasites and pathogens
- Chemical: the aerial and ground applications of Diflubenzuron and Bacillus thuringiensis (Bt) on areas experiencing high infestations
- Educational: the self-help program and lectures to civic associations and other groups

In calendar year 2008 gypsy moth caterpillar populations remained stable compared to previous years. There was measurable defoliation reported in Fairfax County, the State of Virginia and other states in the northeastern United States. Staff from the Forest Pest Program determined that there were 15 acres defoliated in Fairfax County during the spring of 2008. According to the Virginia Department Forestry, there were 112,340 acres of defoliated forest in the state. No defoliation numbers are currently available for the United States; however, it is expected that they will be comparable to last year. The gypsy moth staff will continue to monitor populations in fall 2008; treatment is very probable in 2008.

ii. 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 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 2007– 2008 monitoring effort indicated that no aerial treatment was required in spring 2008.

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.

iii. Emerald Ash Borer

The emerald ash borer (*Agrilus planipennis*) is an exotic beetle from Asia that 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 quarantined the area that was infested. 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 were 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 of 2004. Subsequent monitoring has indicated that this eradication effort was successful.

In July 2008, two new infestations of emerald ash borer were discovered in Fairfax County in the Town of Herndon and in the Newington area. Staff believes that these infestations were not related to the one found at Colvin Run Elementary in 2004. The U.S. Department of Agriculture's Science Advisory Council has recommended that no eradication action be taken in Fairfax County. This decision was made due to the extent of the infestations and due to the fact that similar eradication attempts in other U.S. states have failed. On July 11, 2008 a federal order

quarantined Fairfax County for Emerald Ash Borer. This means that all interstate movement of ash wood and wood products from Fairfax County is regulated, including all hardwood firewood, nursery stock, green lumber, waste, compost and chips from ash trees. The Virginia Department of Agriculture and Consumer Services has initiated similar quarantines for the counties of Fairfax, Arlington, Loudoun, Fauquier and Prince William and the cities of Falls Church, Fairfax City, Alexandria, Manassas and Manassas Park.

The Forest Pest Program has appointed an urban forester as its Emerald Ash Borer Outreach Coordinator. This staff member will be responsible for educating the public on how to deal with the impending death of many thousands of ash trees. Education will concentrate on how to hire a private contractor to remove dead and dying trees and how to properly apply pesticides that might keep trees alive.

iv. Hemlock woolly Adelgid

Hemlock woolly adelgid is a recent addition to the VDACS list of insects that can be controlled by the Forest Pest Program. This is an insect that infests and eventually kills hemlock trees. Staff is considering various control options for this pest. Staff will propose a control program for this pest in January or February of calendar year 2009 for approval by the Board of Supervisors. Possible control options include pesticide treatments and release of predatory insects that feed on HWA.

d. Tree Commission

In 2007, the commissioners continued to utilize 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 has continued 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. Tree Preservation Enabling Legislation

In 2007, UFMD continued to support the county's legislative efforts to obtain strong state enabling tree preservation authority. The UFMD worked with land developers, citizens, tree commissions and urban forestry officials from the Virginia Department of Forestry and other Northern Virginia

jurisdictions to build consensus that enabling authority is needed to protect regional vegetation resources. In 2007 UFMD worked within a subcommittee of the Northern Virginia Urban Forest Roundtable to build consensus around the contents of a tree preservation legislative proposal for 2008. NVUFR accepted the need to amend tree replacement provisions of § 15.2-961 and worked to generate language that was acceptable to all Northern Virginia jurisdictions. In addition, in 2007, NVUFR adopted an organizational structure that provided representation for Virginia's building and wood products industries. In 2007, NVUFR made a commitment to work with these groups in order to minimize opposition levels during future Virginia Legislative Assemblies.

Two tree conservation bills (House Bill 1437 and Senate Bill 710) were developed for the 2008 Virginia Legislative Assembly; the bills would authorize Northern Virginia localities within ozone nonattainment areas to enact tree conservation requirements. The language of these bills was developed by a committee that was formed as a result of a conference sponsored by the NVUFR. The committee included Virginia State Senator Patricia Ticer and Virginia State Delegate David Bulova plus representatives of the Northern Virginia Building Industry Association, the Fairfax County Tree Commission, the Virginia Department of Forestry Board, and the Fairfax County Urban Forest Management Division.

Through this coordinated effort, the NVUFR was successful in having tree conservation enabling legislation adopted during the 2008 session, and the legislation was signed into law by Governor Kaine. On October 20, 2008, the Fairfax County Board of Supervisors adopted tree conservation requirements into the County Code. The new tree conservation requirements will be discussed further in next year's Annual Report on the Environment.

f. Map and Analyze the County's Tree Cover

In 2007, due to other board assignments such as development of the 30-year tree canopy goal, UFMD suspended efforts to delineate the distribution of naturally occurring and landscaped vegetation, using the National Vegetation Classification System . However, mapping of forest resources is critical to the management of the county's natural resources, and it is anticipated that UFMD will be able to devote more resources to the mapping effort in 2008 and beyond.

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 2007 EQAC Annual Report on the Environment, there has been only one change to the A&F Program. The number of local districts increased from 45 to 46 while the number of state districts remained constant at two. The new district is in the Sully District (28.66 acres).

18. Gunston Cove Ecological Study

Gunston Cove is a tidal freshwater embayment of the Potomac River located approximately 20 miles south of Washington, DC. The cove is formed by the juncture of Pohick Bay and Accotink Bay, through which the waters of Pohick Creek and Accotink Creek flow to the Potomac River.

An ecological study of Gunston Cove, conducted by the Department of Environmental Science and Policy at George Mason University, and supported by the Department of Public Works, continued during 2006. This study is a continuation of work originated in 1984 at the request of the county's Environmental Quality Advisory Council and the Department of Public Works (now the Department of Public Works and Environmental Services). This ongoing monitoring program was established to determine impacts from local point sources and nonpoint sources and to evaluate the status of the Gunston Cove ecosystem. Information from this study is intended to form the basis for well-grounded management strategies for maintenance and improvement of water quality and biotic resources in the tidal Potomac.

The executive summary of the 2006 report by Jones and Kelso summarizes details from their report and covers water quality, phytoplankton biomass, zooplankton, fish larvae and fish, and benthic organisms. The following is extracted from this summary.

Phytoplankton density in the cove indicated a bimodal seasonal plot with a peak in early May and a higher one in early August. The August and September peaks would have been even higher if cells smaller than 1 μm had been included. Both cove peaks in phytoplankton density were due to *Oscillatoria* with *Coelospherium* and *Cyclotella* also important in the August peak. In the river phytoplankton density was more constant through the year with *Oscillatoria* and unknown cyanobacteria being dominant throughout. Biovolume indicated a single peak in the cove in August mainly due to the diatom *Cyclotella*. River biovolume was also dominated by a strong August peak with *Melosira* dominant and *Cyclotella* subdominant.

Rotifers were abundant throughout the year in the cove, with *Keratella* dominant in the spring and *Brachionus*, *Filinia*, and *Polyarthra* most important during the peak densities of mid summer. In the river densities were much lower overall and were dominated by *Brachionus* for most of the year. The small cladoceran *Bosmina* was found in very low numbers in the cove and was only somewhat higher in the river. The larger cladoceran *Diaphanosoma* had two major eruptions in the river and one in the cove when substantial densities were found. *Moina* was also important in 2006 with a major June peak and minor August maximum. *Leptodora* was most common in June and August. Copepod nauplii were very abundant in the river in late June, but declined strongly in early July only to increase again in late July. *Eurytemora* had a moderate peak in the river in June, declined in July and increased again in both areas in September. *Diaptomus* peaked in April and June in both study areas. Cyclopoid copepods were abundant in the river through most of the summer except for early July; in the cove densities were low most of the year, but increased in August and September. In most zooplankton species, the decline of the June peak came in the wake of the high discharges from the June rain events suggesting that flushing may have had an effect on these populations.

In trawls, white perch were most abundant with nearly half of the catch followed by blue catfish, brown bullhead, and bay anchovy. Unusual trawl catches included substantial numbers of young-of-the-year striped bass in late June and early July as well as several young-of-the-year American shad in the cove in September. Both of these events are encouraging in documenting the use of the cove by these two important species.

In the seines, banded killifish were the overwhelming dominants representing over two-thirds of the total catch. Inland silversides, white perch, and striped bass were found in substantial numbers. Banded killifish were even more

dominant (>90 percent of catch) at the two inner cove sites, while more diversity was observed at the near river site.

Data from 2006 generally reinforced the major trends which were reported in previous years. First, phytoplankton algae populations in Gunston Cove have shown a clear pattern of decline since 1989. Accompanying this decline have been more normal levels of pH and dissolved oxygen, increased water clarity, and a virtual cessation of cyanobacteria blooms such as *Microcystis*. The increased water clarity has brought the rebound of SAV which provides increased habitat value for fish and fish food organisms. The SAV also filters nutrients and sediments and itself will inhibit the overgrowth of phytoplankton algae. This trend is undoubtedly the result of phosphorus removal practices at Noman Cole wastewater treatment plant which were initiated in the late 1970's. This lag period of 10-15 years between phosphorus control and phytoplankton decline has been observed in many freshwater systems resulting at least partially from sediment loading to the water column which can continue for a number of years. Gunston Cove is now an internationally recognized case study for ecosystem recovery due to the actions that were taken and the subsequent monitoring to validate the response.

The 22-year record of data from Gunston Cove and the nearby Potomac River is starting to reveal many interesting long-term trends that will aid in the continued management of the watershed and point source inputs. The studies should continue to get a better idea of long-term trends.

C. COMMENTS

1. The Fairfax County Board of Supervisors has endorsed the goals and actions within the Tree Action Plan, adopted a new tree canopy cover goal for the county of 45 percent coverage by the year 2037 and adopted a tree conservation ordinance to strengthen tree preservation policies and procedures. In addition, trees were identified as a special area of interest in the FY 2008 Environmental Improvement Program.

EQAC commends the Board of Supervisors for its progressive approach to improving the retention and expansion of this valuable ecological resource. It is imperative that these programs not be allowed to weaken or be given less priority in future years. EQAC believes that continued emphasis of tree actions in the Environmental Improvement Program document is necessary to assure continued emphasis and eventual meeting of goals.

2. In past Annual Reports, EQAC recommended that the Board of Supervisors emphasize public-private partnerships that use private actions such as purchase of land and easements 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.

3. In past Annual Reports, EQAC recommended that the 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 to be 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.

4. In past Annual Reports, EQAC recommended that the Virginia State Code §15.2-961 be amended to include tree preservation requirements. This has now happened. EQAC supports the tree conservation requirements that were adopted in October 2008 pursuant to the new tree conservation authority.

D. RECOMMENDATION

1. 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 feels 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 should be found from internal FCPA staff assets.

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