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ANNUAL REPORT ON THE ENVIRONMENT

CHAPTER VII

**ECOLOGICAL  
RESOURCES**

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## **VII. ECOLOGICAL RESOURCES**

This chapter summarizes the status of ecological resources and the actions of public agencies and stakeholder 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.

As of January 2011, Fairfax County contains a total of about 228,017 acres, excluding areas in roads, water or small areas of land unable to be zoned or developed. Of this total, about 32,861 acres (14.4 percent) are in parks and recreation. Another approximately 15,870 acres (7.0 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 7.0 percent as of January 2011.

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 Fairfax County Park Authority approved the Natural Resource Management Plan for park properties. 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.

EQAC also commends those residents of Fairfax County who give donations and time to a number of county organizations involved in environmental activities. EQAC encourages such volunteer activity. The following paragraphs describing organizations' activities mention opportunities for such stewardship.

## **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 had 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](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. Fairfax County Park Authority

The Fairfax County Board of Supervisors created the Fairfax County Park Authority in 1950, authorizing the Park Authority Board to make decisions concerning land acquisition, park development, and operations. As a result, Fairfax County has a system of parks that serve a number of uses, including active recreation such as sports, historic sites and buildings, and preserving environmentally sensitive areas such as forests and stream valley lands. For current information on the county's parks, visit the FCPA website at <http://www.fairfaxcounty.gov/parks/>.

### a. Acquisition of Park Land by FCPA

Between June 2011 and May 2012, the Park Authority has added 300 acres to its parkland inventory.

FCPA purchased the following properties:

- On December 20, 2011 the Park Authority acquired 7.2 acres from the Northern Virginia Conservation Trust to create a new local park in Falls Church adjacent to Interstate 66 and the Orange line of the Metro system. The acquisition was partially funded with a grant from the Land and Water Conservation Fund administered by the Virginia Department of Conservation and Recreation.

FCPA acquired the following property through transfers:

- On October 13, 2011, twenty two parcels totaling 273.1 acres of land were transferred from the Board of Supervisors to the Park Authority. These acquisitions included additions to Huntley Meadows Park, Accotink Stream Valley Park and an addition to the Historic Centreville District.

FCPA acquired the following property through dedications:

- On June 24, 2011, Basheer, Edgemoor- Moutoux LLC dedicated 17.4 acres to the Park Authority as an addition to Wolf Trap Stream Valley Park.
- On April 30, 2012, Chesterbrook Manor LLC dedicated 1.54 acres to the Park Authority as an addition to Kent Gardens Park.

**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 FY 2012 included:

- Natural Resource Management Planning Program
  - The Natural Resource Management and Protection Branch experienced significant staff changes in the last year: The Natural Resource Specialist position was filled in July 2011. In January 2012, the branch manager position was vacated and subsequently filled in March 2012. The Senior Natural Resource Specialist position was vacated and filled in April. Both of these positions were filled through promotion. The Natural Resource Specialist Position was vacated in April 2012 and was anticipated to have been filled by July.
  - Cost estimates for a non-native invasive plant removal – To manage all park natural areas, it is estimated that \$8 million per year and dozens of staff are needed (this includes \$3.5 million for natural resource management as well as \$4.5 million per year for an invasive plant removal program).
  - Staff continued to pursue the concept of natural capital for support for resource management funding including briefings for the Park

- Authority Board on the concept and discussion of the use of bond funds for natural resource management.
- Significant resource inventory and planning for Old Colchester Park and Preserve resulted in contractor-developed assessments for water resources and vegetation assessment and a Natural Resource Management Plan. The Park Authority Board committed \$325,000 from the Vulcan Quarry fund dedicated to Old Colchester in FY 13 for the first phase of the natural resource management plan implementation.
  - Policy and Best Practices
    - Staff drafted a parkland ranking protocol to prioritize natural areas by resource quality and sensitivity. The protocol was applied on two park planning projects: Old Colchester Park Natural Resource Management Plan and Riverbend Park Master Plan. Agency staff will work to adopt the protocol as standard practice in FY 14.
  - Resource Assessment and Planning
    - Staff worked with the Northern Virginia Regional Commission on its new Conservation Corridor mapping effort for Northern Virginia.
    - Implementation of the Non-Native Invasive Plant Assessment and Prioritization protocol continued. Over 700 acres of parkland have been assessed with the NNIAP protocol.
    - A Natural Resource Management Plan for Old Colchester Preserve was completed.
    - Staff provided training for Resource Management Division sites to develop simple natural resource plans (called Natural Resource Action Plans).
    - Deer census assessments for Old Colchester Preserve were conducted and contracted assessments for vegetation and water resources began.
    - A study began in May 2012 to assess impacts of radio-controlled aircraft on breeding birds at Poplar Ford Park with Dr. Andrew Dolby of the University of Mary Washington.
    - A forest treatment plan was developed for Fitzhugh Park. This project is being paid for with the compensation funds from the Virginia Department of Transportation for land taken from the park for the 495 Express Lanes project.
    - The Park Authority Board committed \$340,000 in easement fee, bond and proffer funding to conduct a multi-year pilot study to develop a landscape-scale forest management model at Ellanor C. Lawrence Park. The project began in May 2012 and will run through 2014.

- Resource Management
  - Two NRMP staff received certifications to apply herbicide and began treating small areas of non-native invasive plants.
  - The sixth year of the Invasive Management Area program was completed in 2011. The program now has 40 sites and in calendar year 2011, 1,016 volunteers donated 3,001 hours of work in support of habitat restoration at IMA sites.
  - In 2011, IMA had its most successful Volunteer Fest Day to date with 480 total hours, 253 volunteers and over 115 bags of invasive plant debris removed. Additional information on 2011 IMA accomplishments can be viewed at:  
<http://www.fairfaxcounty.gov/parks/resources/IMA/IMA-annualrpt.htm>.
  - Over 658 acres of parkland were managed by a contractor for invasive plant removal.
  - The Early Detection Rapid Response volunteer program, a program to detect new non-native invasive plant populations, was launched. Thirteen volunteers were survey leaders in 2011, logging almost 296 hours surveying 13 parks.
  - Over 4,000 trees and shrubs were planted on parkland in calendar year 2011.
  - Project planning began on the stabilization of 300 linear feet of stream in Wakefield Park in partnership with the Northern Virginia Soil and Water Conservation District. This project is being paid for with the compensation funds from VDOT for land taken from the park for the 495 Express Lanes project.
  - Deer population control continued at Laurel Hill with 84 deer harvested. The Natural Resource Management Plan and Meadow Management Handbook will soon be completed. NRMP staff worked with park operations staff to begin meadow management activities.
  - Invasives inventory and control efforts as well as deer population reduction continued at Elklick Woodlands Natural Area Preserve. Staff also located two state rare plant populations within the larger Elklick Preserve in coordination with the Virginia Natural Heritage Program.
  - The deer management program was expanded to include archery at 31 parks while continuing sharpshooting and managed hunts. Over 909 deer were removed from Fairfax County parkland, and approximately 1,000 removed countywide under the program.
  - Staff researched, refined and implemented a new countywide deer population density and browse impact survey methodology in consultation with the National Park Service Center for Urban Ecology staff. This project was the first attempt at a countywide deer census and browse impact assessment. Interns, volunteers and merit staff all contributed to the project success over three stages.

- Goose egg oiling continued on parkland.
- Collaboration
  - NRMP continued to collaborate with the Virginia Department of Forestry on a number of initiatives to include two deer browse enclosures at Huntley Meadows and Riverbend Parks, forest ecology outreach education, participation in the Urban Forestry Roundtable in May 2011 and the Park Authority's prescribed burn management program.
  - NRMP worked with the Virginia Department of Agriculture and Consumer Services and Virginia Department of Forestry to collaborate on biocontrol for the non-native, invasive plant, mile-a-minute.
  - NRMP continued its partnership with Earth Sangha, a local non-profit organization. During 2011, Earth Sangha donated over 1,790 volunteer hours and 310 staff hours to Fairfax County Park Authority projects and donated over 768 plants.
  - Natural Resource Management and Protection Section staff delivered training on meadow management for staff from Arlington County and the City of Alexandria.
  - Natural Resource Management and Protection staff worked with the county Wildlife Biologist to train a diverse group of residents, business community members and public staff on Wednesday, April 6 to correctly oil Canada goose eggs. The content of the training session was similar to that delivered in previous years by county staff and by volunteers from Geese Peace.
  - NRMP collaborated with the Northern Virginia Soil and Water Conservation District to: coordinate and provide support for numerous stream clean up locations for the Potomac Watershed Clean Up; assess stormwater facility performance at Ossian Hall and Patriot Parks; conduct a site review of stormwater flows at the Green Spring Gardens Visitor Center; plan for a rain garden at the Packard Center; begin design for stream improvements at Wakefield Park; and review Park Authority and external projects to improve design and water quality benefits.
  - NRMP worked with Department of Public Works and Environmental Services to: provide input for the county's MS4 permit implementation and annual report (see the Water Resources chapter of this report for a definition and discussion of the MS4 permit); provide input on the final five watershed management plans; review and coordinate stream stabilization and pond retrofit projects on parkland; act as a liaison for stream assessments and sewage spill damage assessment related to the Upper Occoquan Service Authority's sewer replacement project in Cub Run; review development plans; support permitting for IMA and Earth Sangha projects in Resource Protection Areas; and develop and implement

- restoration plans for construction projects on parkland by the Park Authority and others.
- NRMP continued participation in the Fairfax County Restoration Project as a member of the Leadership Team.
- NRMP continued coordination and support for Audubon Society of Northern Virginia research efforts to include the annual Christmas Bird Count and Breeding Bird Survey.
- NRMP worked closely with staff from the Virginia Department of Game and Inland Fisheries on: deer management; tidal marsh assessment at Old Colchester Park; freshwater mussel population census and relocation for two projects in Cub Run, Walney Pond and Lake Accotink fishery assessments; and release of sterile grass carp in Lake Fairfax to control submerged aquatic vegetation.
- Education
  - NRMP continued working with volunteers and local media to educate residents about non-native invasive plant issues on and off park property.
  - NRMP published the latest stewardship brochure, “Bees.”
  - NRMP developed a new portable exhibit on dark skies.
  - The Stewardship Education Team continued its outreach efforts and launched an awareness campaign about dark skies.
  - NRMP continued participation in the Envirothon program for high school students and in the Master Naturalist programs in Fairfax and Arlington counties.

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

Unfortunately, insufficient staffing and funding are limiting implementation of the NRMP. The Fairfax County Park Authority staff lacks a number of functions and capabilities in regard to the NRMP: natural land managers; ecologists; restoration specialists; water resource specialists; wildlife specialists; planners; and project managers. 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. At present, the resources allocated by the FCPA between protection of sensitive environmental land and active

recreation are out of balance. Resources devoted to the protection of the environment need to be increased.

**c. Natural Area Geospatial Analysis Model Feasibility Study**

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. The end product will be a detailed protocol including all analytical steps as well as data needed, sources and costs. Development of the model for the entire county will be considered based upon the results of this study and the availability of funding. The Park Authority is leading this project and collaborating with the Department of Information Technology, the Department of Planning and Zoning, the Department of Public Works and Environmental Services and others.

The project was awarded to PlanGraphics, Inc. in fall 2007; PlanGraphics, Inc. teamed up with George Mason University as a sub-consultant. The project was completed in December 2009. The final product includes an assessment of other green infrastructure and natural area models; evaluation of existing data; and recommendations for model options including costs of development and data acquisition. Development of the model for the entire county will be considered based upon results of this study and availability of funding. The ideal model would cost up to \$2 million and requires dedicated technical staff and funding for model and data maintenance.

**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.

Invasive plant control projects occur at over 56 park sites throughout the county. Resource Management Division nature centers such as Eleanor C. Lawrence Park, Huntley Meadows Park and Riverbend Park also work collaboratively with the Invasive Management Area program to remove the most highly invasive plant species from selected areas of parkland.

The partnership with Earth Sangha, a local non-profit organization, continues to be a highlight of invasive plant control efforts at both the Marie Butler Leven Preserve and Wilburdale Park. In addition, in 2011 Earth Sangha donated 768 native plants to restore areas previously controlled for invasive plants throughout the Park Authority. Overall, Earth Sangha contributed thousands of volunteer hours to park projects.

The Invasive Management Area program began the sixth year by adding a new component – the Early Detection Rapid Response project. IMA Lite is similar to the regular IMA program in terms of its focus on manual removal of invasive species, but volunteer site leaders are not required to host large group workdays and can instead work independently or in small groups on a more frequent basis. The IMA program continues to capture the enthusiasm of volunteers for unstaffed parks; there are currently 35 sites with 40 active volunteer leaders. Over 20,000 volunteer hours were contributed to the IMA since its inception in 2005. On average, more than 3,000 volunteer hours are donated by approximately 1,000 participants a year. The Invasive Management Area program works on plots of parkland, typically one acre in size, to remove priority invasive species and restore native vegetation where needed. Program staff has documented significant reductions of non-native invasive species within its sites, averaging a 24% reduction in cover. Extensive training of volunteer leaders, careful selection of sites and species and a coordinated plan of environmental monitoring will allow program staff to continue to learn from this project. At a minimum, invasive species removal should be planned on three year cycles, with the first three years including aggressive removal and pesticide use if necessary so that following years' management can be at a maintenance level. A short summary is available at [www.fairfaxcounty.gov/parks/resources/IMA/IMA-annualrpt.htm](http://www.fairfaxcounty.gov/parks/resources/IMA/IMA-annualrpt.htm).

An outgrowth of the Invasive Management Area program has been the state-wide Invasive Plant Removal Day. On May 7th, the IMA program participated in the 3rd annual state-wide event and 4rd annual county wide event. Eighteen IMA sites held events with 154 volunteers participating. Five-hundred and six hours of volunteer service were provided to remove 132 bags of biennial garlic mustard and other invasive plants.

FCCA contracts with Invasive Plant Control, Inc. to apply selected and careful herbicide treatments for the removal of invasive plants. Seven-hundred acres of parkland were treated by IPC from January 2011 to December 2011. This includes acres that overlap areas where volunteers provided the manual removal of priority species as well as retreating parkland from last year.

The Non-native Invasive Plant Assessment and Prioritization project was completed in 2009. This project took a hands-on approach to the non-native

invasive species issues as they occur in Fairfax County. Products of the plan include an assessment and prioritization tool kit, twelve best management practice recommendations and an operations plan for how to continue to make progress with managing non-native invasive species. This plan is fully benchmarked and annotated, creating a defensible strategic plan which will allow us to prioritize where and what is needed for invasive management in Fairfax County. On May 9<sup>th</sup>, 2011, program staff shared the assessment and prioritization tool kit with other natural resource managers from Anne Arundel County (Maryland), Arlington County (Virginia), City of Bowie (Maryland), and Loudoun County (Virginia).

A critical component of any invasive control effort will always be outreach and education. *Non-Native Identification and Control* was published in 2008 and is now available for sale. Over 500 copies of the books have been sold or provided to partners free of charge. The full color, 150+ photographs help the reader determine if he/she has a non-native invasive plant and what to do about it. The book was recognized with the highest honors from by the Communicator Awards and the MarCom Awards.

FCPA continues to work with its partner organizations: Earth Sangha; Northern Virginia Soil and Water Conservation District; Virginia Department of Forestry; Virginia Cooperative Extension; Fairfax ReLeaf; Northern Virginia Conservation Trust; the Virginia Native Plant Society, Pawtomack Chapter; Fairfax Master Naturalists; DPWES, and others to provide technical assistance regarding invasive species removal, and where possible, on the ground removal from parkland.

EQAC continues to commend the volunteers and the Park Authority staff who are cooperating in removing invasives. EQAC notes that these efforts have increased in recent years; however, further increases in efforts are needed to bring the invasives problem under control.

**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. Two stream restoration projects were completed on parkland in 2011: The Schneider Branch and Flatlick Branch stream stabilization projects, both in Cub Run Stream Valley Park, each address approximately 1,000 linear feet of stream. Construction began in winter 2010 and was completed in summer 2011. Restoration plantings for the projects were completed in fall 2011. Funding for the projects was supplied by the Department of Public Works and Environmental Services.

See the Water Resources chapter of this report for descriptions of additional projects.

**f. Low Impact Development Practices at the Spring Hill RECenter**

The Spring Hill RECenter parking lot was expanded. Construction was completed in September 2011 and included the addition of 150 parking spaces, installation of LED lighting throughout the new and existing parking areas and redevelopment of the existing storm water detention pond to current standards. Two large underground storm water management facilities were added to increase the overall storage capacity for the site. Pervious pavers, a bio-retention basin, a vegetated swale and one tree box were incorporated into the design to improve water quality for the existing and proposed parking lot expansion. The Park Authority worked with the Department of Public Works and Environmental Services, Stormwater Planning Division to develop the low-impact development features in order to improve the water quality at the headwaters of Bull Neck Run.

**g. Environmental Stewardship**

FCPA offers 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/>.

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

**h. Fairfax County Park Foundation**

Fairfax County residents can donate to the Fairfax County parks through the Fairfax County Park Foundation. The Fairfax County Park Foundation is a 501(c)(3) not-for-profit organization and donations are tax deductible to the fullest extent allowed by law. The foundation's mission is to raise funds to support the parks and land under the stewardship of the Fairfax County Park Authority. Less than half of the Park Authority's annual operating funds come from tax support. The foundation's goal is to bridge the gap between income from tax support and user fees and the cost to operate, maintain and preserve 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](mailto:SupportParks@aol.com)  
<http://fairfaxparkfoundation.org/>

### **3. 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 25 regional parks and owns 11,156 acres of land throughout the region. It also holds conservation easements on 115 parcels covering more than 652 acres.

#### **a. Acquisition**

NVRPA's recent acquisition activities in Fairfax County include: coordinating with Northern Virginia Conservation Trust to place a conservation easement on the Webb Sanctuary in Clifton and working to acquire the Webb Sanctuary from the Audubon Naturalist Society; negotiating the acquisition of five acres fronting on the Potomac River Gorge in Great Falls; and preparing to acquire 1.5 acres on Mason Neck near Pohick Bay Regional Park.

#### **b. Planning & Development**

NVRPA and Fairfax County signed a long-term lease for Occoquan Regional Park, and NVRPA subsequently started the process of re-visioning this river front park, outlining not only capital facilities and recreational uses but also environmental resource areas. To start the planning process, NVRPA hosted public input meetings that were facilitated by George Mason University school of Park, Recreation and Leisure Studies. Other planning efforts include many staff and board meetings to update NVRPA's Strategic Plan, including setting the agency's conservation and environmental priorities for the next five years. In addition to building a LEED® Gold certified visitor center and park office in Loudoun County, NVRPA installed a "grass crete" parking surface for the first time at Meadowlark Botanical Gardens. This is a permeable, hard surface underlayment that sits just below the mowed grass, allowing storm drainage and surface flow to percolate normally into the soil horizons. Initial use of the surface is very promising, and this technique is expected to be used in other regional park development projects.

#### **c. Sustainability**

Working in partnership with the local mountain biking club, MORE (Mid-Atlantic Off Road Enthusiasts), NVRPA completed enhancements to its eight-mile long mountain bike trail at Fountainhead Regional Park. The single use mountain bike trail provides a very challenging cross country trail system that has become one of the most popular riding destinations in the region. However, there was significant erosion and trail widening in many

locations as a result of unsustainable alignments, steep grades, poor flow, overuse and riders going off the trail to find less challenging routes. NVRPA and MORE were concerned not only for the environmental impacts of the original trail system but also for the decrease in riding experience and user safety. In order for the Fountainhead mountain bike trail to maintain value as a recreational trail system, it became imperative to address design flaws and ongoing erosion. Trails were redesigned and constructed using the International Mountain Bicycling Association sustainable trail building standards. The new trail is designed to be sustainable by routing segments along contours with appropriate switchbacks, rather than running straight down slope without proper drainage controls. All new trail tread is out-sloped five percent, or when water flows down the trail for short lengths it is directed to a water diversion facility. The project includes filter strips, which are vegetated areas downslope of the trail corridor intended to treat sheet flows coming off the tread. Filter strips function by slowing down flow velocities, filtering out sediments, and providing an opportunity for infiltration into the underlying soils. The project design includes grade reversals, in-sloped turns, armored fords, stone pitching, turf block pavers and terraces, and these techniques help keep water off the trail and riders on the trail to reduce erosion and enhance sustainability.

Pohick Bay Regional Park Golf Course on Mason Neck gained recertification as an Audubon Cooperative Sanctuary with Audubon International, with a case study on water conservation and irrigation audit after its irrigation system replacement. The golf course also was designated by the Groundwater Foundation as a Groundwater Guardian Green Site. Pohick Bay is the first golf course in Virginia to achieve this designation and one of only 140 in the country.

Pohick Bay Regional Park also completed a comprehensive trail plan with a grant from the Bureau of Land Management, designed to take measures to protect the streams and watersheds at Pohick Bay and Meadowood Recreation Area by restoring poorly designed trails and stream crossings and relocating unsustainable trail segments to maintainable areas. Rehabilitation of the trail system will occur in the next year.

#### **d. Invasive Management**

NVRPA partnered with Dominion Virginia Power for its “Trail Mix” program, a series of outdoor community events along the Washington & Old Dominion Trail that highlight environmental stewardship and healthy living. The event featured the largest community service project in the trail’s history, which included invasive plant removal along the trail within Fairfax, Loudoun and Arlington Counties, and culminated with a festival that encompassed themes of active lifestyles, recreation, family, the environment and the community.

Other invasive plant control efforts occurred at: Occoquan Regional Park, where Eagle Scouts helped to remove invasive growth at the mouth of the tributary flowing into the Occoquan River and created a new viewpoint with a bench and interpretive display; Bull Run Shooting Center, where staff has been working on grapevine and honeysuckle removal in areas around the facility; and Carlyle House Historic Park, which has prepared a plan to remove the English Ivy from around the house and grounds and has solicited volunteers to donate the labor for this project. Occoquan Regional Park also is working with the Occoquan Watertrail League and George Mason University to conduct a survey of an invasive snail that has invaded the waters of the Potomac and its tributaries.

At Meadowlark Botanical Gardens, most invasive removal takes place in the Potomac Valley Collection forest, which is the oldest and most biologically diverse forest at the park and is its “flagship” conservation collection. Priority species for removal include: Morrows Honeysuckle; multiflora rose; Japanese honeysuckle; garlic mustard; and Japanese stilt grass. Basket grass has been reported once and removed. Other younger forested areas that are degraded by these plants are used as an interpretive forum for education about invasive species. The lakes at Meadowlark are treated with “aqua shade” to retard sun penetration into the water column, which helps reduce highly invasive Hydrilla.

**e. Flora and Fauna**

Meadowlark Botanical Gardens and Pohick Bay Regional Park continue cooperative programs with the Audubon Society of Northern Virginia and the Northern Virginia Bluebird Society on topics including birding, native plant culture and gardening with deer. Pohick Bay hosted an annual bird count by the local Audubon chapter, recording 36 different species and 300+ birds. In addition, the Northern Virginia Blue Bird Society ended its 15<sup>th</sup> season of the blue bird trail at the Pohick golf course with a total of 146 Blue Birds and 36 Tree Swallows fledging. These groups noted the healthy diversity of wildlife out on the course and commended Pohick Bay golf course for maintaining such a friendly environment. Meadowlark also is now in its 10th year of cooperative programming with the Blue Bird Society, which brings many expert birders to the property and helps not only bluebird reproduction, but overall monitoring of bird diversity in general.

Meadowlark Botanical Gardens recorded its 56th butterfly species last summer, making the garden one of the most diverse butterfly habitats in northern Virginia. The combination of ornamental and native plants is an ideal setting for both nectaring and host plants for butterflies. The exclusion of deer also is ecologically highly important. Meadowlark also has initiated a new American Chestnut orchard with the American Chestnut Foundation, to be planted in its Experimental Meadow

Where not provided by park staff, several of the parks have contracted for both tree care that is 100% organic and lawn care that uses all organic fertilizer and semi-organic weed control--horticultural vinegar is often used as the “green” weed control on sidewalks, park access paths and ornamental beds. Meadowlark uses no chemicals on lawn and turf areas and does use corn gluten as an effective and wholly organic broad-leaved plant control in turf areas. The parks also compost as much as possible; for example, Bull Run Regional Park has four bins at its Shooting Center.

**f. Environmental Education and Outreach**

Meadowlark Botanical Gardens continues a full slate of environmental camps and education projects, including for Fairfax County Public Schools, the Smart Outside Program and Camp Grow; it also hosted the NOVA Smart Outside Education Summit. These are largely focused on public school groups, scout groups and garden clubs, most often discussing regional plant diversity and conservation of habitats. Meadowlark remains a popular location for college and university classes in woody plant identification and sustainable landscape design. Northern Virginia Community College horticulture students study plant collections and take exams in the garden and George Washington University landscape design students visit to study native plants for sustainable uses. MBG has cooperative internships with NVCC and George Mason University Department of Environmental Science, with stipends through the Turnage Endowment.

Occoquan Regional Park hosted the Occoquan River Festival to connect people to the river’s great natural resources. The event attracted 1,000 visitors and included demonstrations by groups such as the George Mason University Environmental Research and Education Center, the Virginia Department of Forestry, Chesapeake Gateway Association, Prince William Streams and Trails, the Raptor Conservancy, the Izaak Walton League, the Bureau of Land Management, National Park Service’s Rivers and Trails Conservation Assistance and others. NVRPA also is an active supporter of the Occoquan Watertrail League, providing river access and building six new Occoquan Water Trail kiosks in Bull Run, Fountainhead, Bull Run Marina and Occoquan Regional Parks, with maps and brochures about the river environment.

All proceeds from the NVRPA/Dominion Virginia Power Washington & Old Dominion Trail Mix annual activity go to support NVRPA’s “Nature Nuts” program. The goal of the Nature Nuts program is to give half a million children a meaningful outdoor experience that positively affects them through interaction with and education of the environment. Meadowlark Botanical Gardens also received a grant from the Volgenau Foundation for a Nature Nuts program focused on underserved children in

Fairfax County. This interpretive program features a teacher training workshop, student visits to MBG and publication of an entirely new Potomac Basin map for school classrooms.

Adventure Links at Hemlock Overlook Regional Park in Clifton offers a variety of outdoor and environmental education and team development programs for public and private schools, religious and community groups, sports teams, corporations, professional organizations and local, state and federal government and military agencies. Adventure Links held camp fairs at the *Be Fit Expo* in McLean as well as in Arlington and Alexandria that focused on getting children and families outside.

The Park Authority partners with REI's adventure school, introducing people to the outdoors at Pohick Bay, Hemlock Overlook and Fountainhead Regional Parks. The Park Authority's naturalists hold regular educational canoe and kayak trips at Pohick Bay, and the roving naturalist conducts environmental programs at Meadowlark Botanical Gardens as well as at Bull Run and Pohick Bay Regional Park campgrounds.

#### **g. Stewardship Opportunities**

Environmental Stewardship opportunities for volunteers are available at Meadowlark Botanical Gardens, Potomac Overlook Regional Park, Upton Hill Regional Park, Pohick Bay Regional Park and various other parks on occasion. More information can be found at [http://www.nvrpa.org/park/main\\_site/content/volunteer](http://www.nvrpa.org/park/main_site/content/volunteer). NVRPA implemented a program that allows youth to access its fee-based park facilities through volunteer service. It has a wide variety of community partnerships in place that encourage groups to take advantage of the regional parks for environmental and historic education and service projects.

For current information about the Northern Virginia Regional Park Authority, visit its website, <http://www.NVRPA.org/>.

#### **4. Fairfax ReLeaf**

Fairfax ReLeaf is a non-profit (501(c)(3)), non-governmental organization of private volunteers who plant and preserve trees in Northern Virginia, preserve native habitat and educate the public about the benefits of trees. These volunteers appreciate and support the county's goals to increase the tree cover in Fairfax County.

Fairfax ReLeaf is very active in tree plantings and is always eager to sign up new volunteers. These tree plantings:

- Improve the appearance of roadways, parks, schools and private land in Fairfax County.
- Improve air quality.
- Reduce heat island effects.
- Reduce noise.
- Preserve of human and wildlife habitats.
- Reduce energy use.
- Reduce surface runoff and improve water quality.

Fairfax ReLeaf planted and distributed 5,065 trees in calendar year 2011. Nearly 1,000 volunteers spent over 3,400 hours planting tree seedlings, removing invasive species and maintaining planting sites. Highlights of Fairfax ReLeaf's 2011 plantings were:

- The planting of 1,510 trees in parks, including private, county, and national parks.
- The planting of over 1,054 trees on school grounds.
- The planting of over 700 trees in riparian areas.

Fairfax ReLeaf provided many opportunities for community groups to serve Fairfax County in 2011. These included seven school groups, four Eagle Scout projects and a Boy Scout event. ReLeaf led five corporate workdays, where employees from workplaces such as Level Three, Winchester Homes and AMEC gave their time to improve Fairfax County. Fairfax ReLeaf also conducted two workshops to prepare individuals to lead plantings.

Fairfax ReLeaf will continue its school and park plantings while increasing partnerships with homeowner associations and the Fairfax County Stormwater Planning Division.

Fairfax ReLeaf offers a number of opportunities for stewardship. 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](mailto:trees@fairfaxreleaf.org)

## 5. 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 12th year. In FY 2004, NVCT became a county contributory agency.

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 it owns properties or easements in Arlington, Fairfax, Loudoun, Prince William and Stafford Counties and in the cities of Alexandria and Fairfax. NVCT was one of a handful of the first land trusts accredited throughout the country by the Land Trust Accreditation Commission and is the only accredited land trust serving Fairfax County. NVCT has been honored twice and is currently listed as one of the "**Best Small Nonprofits in the DC Area**" by the [Catalogue for Philanthropy](#).

From the time NVCT accepted its first easement in 1999 through June 2012, NVCT has preserved approximately 700 acres of open space in Fairfax County through easements, fee simple ownership and partnerships. A major project started in FY 2008 and completed this year was the transfer to the Fairfax County Park Authority of over seven acres owned by NVCT in the Providence District for use as a public park. NVCT helped the Park Authority by acquiring a Land and Water Conservation Fund grant for \$125,000. NVCT continued work on numerous other projects, including protection of the historic Oakton Trolley Station. NVCT is on the cusp of recording an easement on the 20-acre Webb Sanctuary in Clifton.

NVCT estimates a value of over \$52.6 million in protection through this program, a return on investment to the county of \$18 in land and conservation value for every dollar the county has funded NVCT. In addition, the raw value of the land and conservation easements, NVCT estimates a return of almost \$140,000/year in ecosystem services (water quality, flood control, etc.) provided by these protected lands.

Tables VII-1, VII-2 and VII-3 provide details on all these properties. Figure VII-1 presents a map of these properties.

NVCT also has a public outreach program – *Explore and Restore* (formerly known as 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. The outreach program has been a huge success.

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.

As can be seen by the paragraphs above, NVCT offers many opportunities in stewardship for Fairfax County residents. Additional information on NVCT can be found on its website, <http://www.nvct.org>.

## **6. 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>.

## **7. 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,

<b>Table VII-1. Easements Obtained by the Northern Virginia Conservation Trust</b>			
<b>District</b>	<b>Location</b>	<b>Acreage</b>	<b>Recordation</b>
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	Great Falls	24	12/28/2011
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
Dranesville	McLean	5.0	3/8/2011
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
Mt. Vernon	Alexandria	0.83	11/19/2008
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
Providence	Oakton	0.87	7/12/2011
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
	<b>Total</b>	<b>500*</b>	

2012 EQAC Update, E-mail from Whit Field, Vice President and General Counsel, Northern Virginia Conservation Trust, Fairfax County, Virginia, to Noel Kaplan, Department of Planning and Zoning, Fairfax County, Virginia, June 12, 2012. (\* This number will increase by 20 acres when the Webb Sanctuary easement is recorded and another "tree" added to the map [Figure VII-1] in the Clifton area.)

<b>Table VII-2. Fee Simple Properties Owned by the Northern Virginia Conservation Trust</b>			
<b>Property/District</b>	<b>Location</b>	<b>Acreage</b>	<b>Recordation</b>
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
	<b>Total</b>	<b>11.671</b>	

2012 EQAC Update, E-mail from Whit Field, Vice President and General Counsel, Northern Virginia Conservation Trust, Fairfax County, Virginia, to Noel Kaplan, Department of Planning and Zoning, Fairfax County, Virginia, June 12, 2012.

<b>Table VII-3. Land Turned Over to Local Government and Associated Acreage</b>			
<b>Property/District</b>	<b>Location</b>	<b>Acreage</b>	<b>Recordation</b>
Bannister Outlots/Springfield	Springfield	0.6	12/2001
Pimmit Run Trail off Brookhaven		1.0	6/2008
	<b>Total</b>	<b>1.6</b>	
<b>Assisted Acreage</b>			
<b>Property/District</b>	<b>Location</b>	<b>Acreage</b>	<b>Recordation</b>
Turner Farm/Dranesville	Great Falls	17	1998/99
FCPA Elclick/Sully	South Riding	157	12/2003
	<b>Total</b>	<b>175.2</b>	

2012 EQAC Update, E-mail from Whit Field, Vice President and General Counsel, Northern Virginia Conservation Trust, Fairfax County, Virginia, to Noel Kaplan, Department of Planning and Zoning, Fairfax County, Virginia, June 12, 2012.

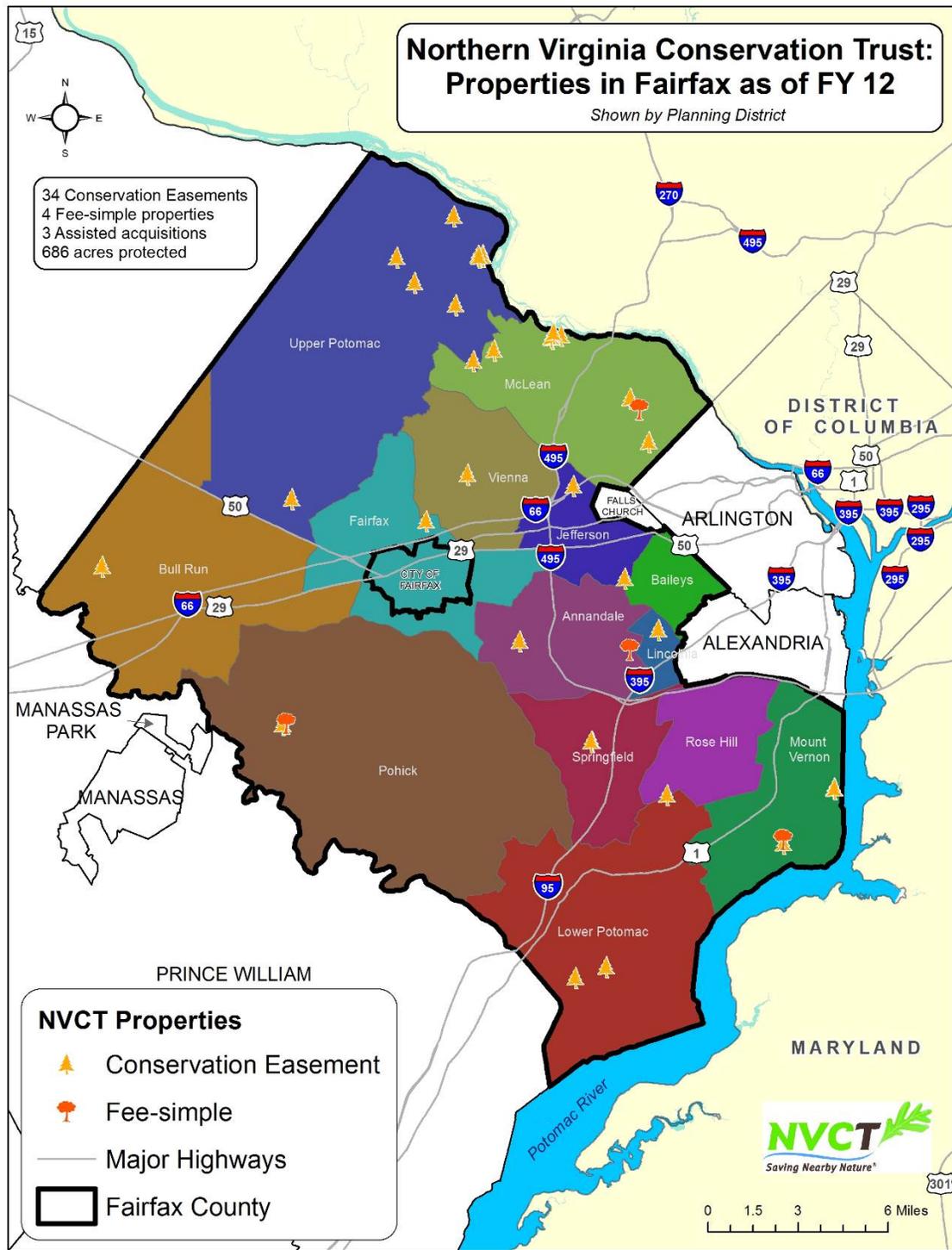


Figure VII-1. NVCT Properties in Fairfax County as of FY 2012. 2012 EQAC Update, E-mail from Whit Field, Vice President and General Counsel, Northern Virginia Conservation Trust, Fairfax County, Virginia, to Noel Kaplan, Department of Planning and Zoning, Fairfax County, Virginia, June 12, 2012.

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>.

## **8. 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. The conservancy'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.

MLC holds a 16-acre conservation easement on Scotts Run in McLean. This important property is vital for the health of Scotts Run, which provides stormwater drainage for Tysons Corner.

## **9. 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.

## 10. 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 and is both a state agency and an independent instrumentality. VOF is also a public foundation and can "...accept, hold, and administer gifts and bequests of money, securities, or other property, absolutely or in trust, for the purposes for which the Foundation is created." A good summation of the VOF legislative charge may be that it is steward of the natural and cultural heritage land resources of Virginia on behalf of present and future residents.

The primary mechanism for accomplishing VOF's mission is the perpetual open space easement. As of May 24, 2012, VOF holds easements on over 684,000 acres in over 100 local jurisdictions across the Commonwealth. These easements protect a wide variety of natural resources, including farm and forest land, natural areas, watershed areas, rural historic districts and the settings for historic homes, scenic views, lands adjacent to public parks and game preserves.

The Virginia Outdoors Foundation currently holds six easements in Fairfax County as shown in Table VII-4.

Additional information about VOF can be seen at its Web site:  
<http://www.vofonline.org/>.

<b>Table VII-4. Easements Held by the Virginia Outdoors Foundation in Fairfax County</b>		
<b>Original Donor*</b>	<b>Acreage</b>	<b>Date Recorded</b>
Thayer	59.33	10/30/1969
American Horticultural Society	8.15	10/03/1978
McCormick-Goodhart	26.665	06/13/1988
McCormick-Goodhart	5.25	06/13/1988
McKee-Bennett	20.47	12/28/1990
Ridder and Andrews, Jr., trustees	7.858	12/23/1998
<b>Total Acreage under Easement</b>	<b>127.723</b>	

Source: *Virginia Outdoors Foundation*, Attachment to email, Environmental Quality Advisory Council's Annual Report on the Environment: Information Request for the 2012 Report, from Erika Richardson, Stewardship Specialist, Virginia Outdoors Foundation, Warrenton, Virginia, to Noel Kaplan, Department of Planning and Zoning, Fairfax County, Virginia, May 24, 2012.

\* 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.

## **11. 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.

### **a. Kingstowne Stream Restoration Project, Phase II**

The Kingstowne Stream Restoration Project, Phase II, was completed in May 2011. The \$1.2 million project restored 2,500 feet of a badly eroded stream in the southeastern part of Fairfax County. The natural channel design created a gentle meander to successfully carry the volume and energy of the stream flow. The formerly unsafe and deep vertical streambanks have been replaced with gentle slopes and well-vegetated riparian areas. Backyards are no longer threatened by the action of eroding streambanks. Already, the riparian and aquatic habitats are teeming with new life. The residential community has an attractive amenity to view and enjoy and the project ultimately helps to protect the wetland downstream in Huntley Meadows Park.

The success of Phase I, completed in 2000, helped to bring about Phase II. Phase I was one of the first projects in the county to demonstrate natural channel design analysis and techniques to create a stable, healthy and natural system. Phase II picked up where Phase I ended and restored the stream to where it enters Glendale golf course. NVSWCD facilitated Phase I with a grant from the Virginia Department of Conservation and Recreation and construction management assistance from the county. It initiated and helped to facilitate Phase II with several partners. The same engineer designed both projects, working as an NRCS engineer during Phase I and as an engineer with the firm of Vanasse Hangen Brustlin, Inc. for Phase II.

For Phase II, the Nature Conservancy secured funding for the project from the Virginia Aquatic Resources Trust Fund, a source of mitigation funds to offset impacts to streams. Fairfax County also contributed \$200,000 to the project. The local homeowner's association did not have to contribute any funds, but did have to adopt restrictive covenants that would guarantee the integrity of the riparian area, which helps to protect and work in harmony with the channel design.

Both projects were supported by local environmental groups and are examples of successful partnerships.

**b. Conservation Planning**

In 2011, soil and water quality conservation plans were prepared for 26 parcels on 443 acres. These included 10,655 linear feet of Resource Protection Area, primarily stream buffers, of which 2,250 linear feet were new vegetated buffers and 8,405 linear feet were re-planted buffers. All plans comply with the requirements of the Chesapeake Bay Program and help landowners to comply with the county's Chesapeake Bay Preservation Ordinance. Three of the plans were required for the renewal of Agricultural and Forestal Districts in the county. In 2011, 70 participants attended two horse management seminars that were sponsored by NVSWCD. The seminars covered pasture planning and horse waste management.

NVSWCD provided technical assistance to the county's Code Enforcement Division and four landowners by preparing plans for properties cited for County Code violations. Technical assistance included three stabilization plans for restoring sites that had imported "fill material" (soil) without an approved rough-grading plan. Such stabilization plans included the use of appropriate vegetation, and the use of riprap and erosion control blankets; the fourth plan was designed to correct illegal activities and remediate improper use of an RPA.

**c. Seedling Program**

The Northern Virginia Soil and Water Conservation District's annual seedling program emphasizes the role of vegetation in preventing erosion, conserving energy and decreasing and filtering stormwater runoff. In spring 2012, a variety of 7,600 native seedlings were sold at a small cost to promote urban reforestation, habitat enhancement and water quality protection. The theme was *Incredible Edibles*, featuring shrubs and trees that have fruits or nuts that are edible for wildlife and humans. There were 405 packages with species of shrubs and small trees, and 245 packages of tree seedlings.

**d. Envirothon**

In 2012, six teams of local high school students (representing Centreville, Langley and Marshall High Schools and Hidden Pond Nature Center) participated in the year-long training in soils, aquatics, forestry, wildlife, estuaries and a special topic, which this year was focused on stormwater management. Following the local hands-on competition, two teams from Hidden Pond Nature Center advanced to the regional competition, where one of the Hidden Pond teams came in first. Hidden Pond then went on to finish second among the 15 top teams in Virginia.

**e. Composter Program**

In 2011, NVSWCD began a new program to enable residents to build their own tumbler-style composters, using olive and pickle barrels, most of which had slight flaws and could not be used for the rain barrel program. During two workshops, 40 participants built frames using recycled wood, added a rod for rotating the barrel, drilled aeration holes and took home 30 composters.

**f. Green Breakfasts**

In 2011, NVSWCD sponsored six Saturday morning *Green Breakfasts* featuring presentations on: Urban Stormwater Management in Fairfax County; Upcoming Environmental Legislative Issues; Off-Shore Wind Power; Electricity from Nuclear Energy; Demystifying Recycling; and Why Green Energy Conservation Makes Economic Sense. Announcements about programs and events, including county initiatives, and other topics of interest are sent to 548 recipients on the *Green Breakfast* email distribution list.

**g. Conservation Currents Newsletter**

In 2011, NVSWCD published three editions of *Conservation Currents*. Topics included: stream health; stream monitoring and stream restoration; lawn care; low-impact development practices; tree and native plant benefits; and other actions that residents can take to improve stream water quality. 2,500 copies are sent mainly to homeowners associations, which are encouraged to reprint articles in their newsletters. Copies are distributed to libraries and offices via the county courier system. There also is a growing list of e-subscribers, and many articles are posted on the NVSWCD website.

**h. Fairfax County 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 Fairfax County Soil Survey. Descriptions of all 119 soils have been published in the *Description and Interpretive Guide to NRCS Mapped Soils in Fairfax County*. The new soil survey has been integrated into the county's GIS. Maps showing soil types layered over county property maps have been created for each tax grid in the county. These maps are available to the public through the Digital Map Viewer on the county website. The soil survey information is also available online at two U.S. Department of Agriculture-Natural Resources Conservation Service websites; the soil map and tabular data are available at the Web Soil Survey website, and tabular data alone is available at the Soil Data Mart website. The tabular and map data available at the USDA-NRCS

Web sites are much broader and more extensive than that found on the county website, but the data on the county website is more specific to the needs of Fairfax County residents, and the maps include county property information.

A reformulation of the soil problem classes has been completed and applied to all soil types in the new survey. The new problem classes more closely resemble those used in Loudoun and Prince William Counties so as to cause less confusion for private industry. One major difference will be that disturbed soils, which are mapped only in Fairfax County, have their own separate problem class.

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. The soil scientist has made presentations to several groups, including the Engineering Standards Review Committee, and, with Code Analysis staff, attended the Planning Commission and Board of Supervisors meetings to answer questions regarding Public Facilities Manual revisions. In June 2011, the Board of Supervisors approved the new survey as the official Fairfax County Soil Survey.

The Soil Scientist also collaborated on minor revisions to the shrink-swell layer and the Marumsco soil layer and with erosion susceptibility ratings for Urban Land soils, which will be used by Site Inspection. He worked with the Health Department to make minor revisions to the asbestos soil layer. The Fort Belvoir soils map was added to the county maps and uploaded to the county GIS.

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 on infiltration practices. During 2011, soils information was provided to 76 consultants, engineers, realtors and homeowners. Special infiltration studies were conducted for 11 county and NVSWCD projects. Guidance on interpreting soils information continues. Also, technical assistance is provided to solve problems on both private and public lands.

**i. Potomac Watershed Roundtable.**

Fairfax County and NVSWCD are members of the Potomac Watershed Roundtable, a regional government-resident forum founded in 2000 whose purpose is to enhance communication, collaboration and cooperation on environmental concerns, especially water quality issues and ecological resources, among the various local governments and stakeholder interest groups residing on the Virginia side of the middle and lower Potomac River watershed. Members include nine counties, five cities and towns, six soil

and water conservation districts, two members of the General Assembly, Planning District Commissions, Water and Wastewater Utilities and representatives of several stakeholder interests – Environmental, Agriculture and Forestry, Fishing and Boating, Development, Construction and Real Estate, Waste Management and Recycling and Citizens of the Watershed. Fairfax County Supervisor Penny Gross is the Chair of the Roundtable, and NVSWCD provides administrative support and financial administration.

The Roundtable meets quarterly throughout the lower Potomac watershed to share technical information, strategies, programs and policies. Topics have included water quality and quantity, nonpoint source pollution, nutrients, stormwater regulations, land-use planning, best management practices, innovative techniques and land conservation. 2011 topics were: Chesapeake Bay TMDL – the technical aspects of implementation; Strategies for Best Practices, including LID practices, water re-use, regulatory issues and Eco-City Alexandria; the award winning Prince William County Landfill and the surrounding buffer with diverse vegetation and habitat that is the focus of an environmental studies project; and in recognition of 2011 as the International Year of the Tree, a focus on trees and their many environmental and social benefits. Information about the Roundtable is available at [www.potomacroundtable.org](http://www.potomacroundtable.org).

## 12. 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 disturb the land or build or make changes on your property that might affect the shoreline and tidal wetlands. 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 Center for Coastal Resources Management of the Virginia Institute of Marine Science estimates that Fairfax County's tidal shoreline is approximately 111.85 linear miles. The county's tidal shoreline within the coastal plain extends from Cameron Run on the north, traversing south along the Potomac River and extending to the Occoquan Reservoir on the south where the tidal influence terminates at the dam.

The Wetlands Board's jurisdiction is that area between mean low water and mean high water in non-vegetated wetland environments and between mean low

water and the equivalent of 1 1/2 mean high water in vegetated environments. Since 2010, after the Board of Supervisors adopted the beach ordinance, the Wetlands Board has also reviewed tidal projects which may involve beach. Beach can extend beyond or it can be contiguous with non-vegetated tidal wetland area. The Wetlands Board uses the scientific analyses provided by the Virginia Institute of Marine Science.

In reviewing applications proposed to address shoreline erosion, the state law and the wetlands ordinance require that the Wetlands Board base decision-making on, and include consideration of, the following elements:

- Whether or not the proposed action, avoids and minimizes impacts to wetlands.
- Whether or not the public and the private benefits of the project outweigh the public and the private detriments.
- Whether or not the project conforms with the Wetlands Guidelines promulgated by the Virginia Marine Resources Commission.
- Public testimony.

After giving public notice, the Wetlands Board holds a public hearing on every application for a permit.

In March 2012, Julie Bradshaw of the Virginia Institute of Marine Science conducted a training session for Wetlands Board members and interested staff addressing decision matrices that VIMS has developed to assist Wetlands Board members in the permit decision-making process.

The Wetlands Board considered one application for a wetlands permit in August 2012 and two permit applications are pending Wetlands Board review as of November 3, 2012. The Wetlands Board will also consider, in December 2012, a proposal to require mitigation and restoration because of a wetlands ordinance violation.

The Wetlands Board has adopted a mitigation policy and a policy encouraging the use of living shorelines.

The Chair of the Wetlands Board was invited to participate and is participating in a committee established by the Virginia Marine Resources Commission to develop guidance for local wetlands boards to implement Senate Bill 964, now law, which directs VMRC to develop and implement a general permit to authorize and encourage the use of living shorelines as the preferred alternative for stabilizing tidal shorelines.

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>

### **13. Virginia Department of Forestry**

The Virginia Department of Forestry has provided forestry-related services in Fairfax County for over 60 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, the Fairfax County Park Authority, and Fairfax ReLeaf.

Despite continued difficulties with the Commonwealth's budget, VDOF will continue to be able to provide technical assistance to Fairfax County in its environmental initiatives, but little in the way of direct material or funding support. Reduced competitive funding will be available through Water Quality Improvement Fund grants to support riparian plantings and tree related storm water management projects. VDOF may also be able to support tree planting with donated seedlings.

The Virginia Department of Forestry is the lead state agency in meeting Virginia's riparian buffer commitments to the Chesapeake Bay Program. In 2006, urban tree canopy goals were added to the Bay Program's buffer strategy, recognizing the diminished water quality value of riparian forests in urban areas where upland storm water is conveyed directly to streams and bypasses the riparian forest. One way to view it is that street gutters and storm drains are manmade extensions of the natural stream network, so all trees are effectively riparian trees. In 2011, the Virginia Department of Forestry provided project leadership and technical support to tree planting efforts in partnership with 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 29<sup>th</sup> 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 2011, 250 donated short leaf pine seedlings were distributed for planting by volunteers 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 2011, approximately 3,500 pounds of seeds (mostly acorns) 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 Fairfax County Department of Planning and Zoning to review Agricultural and Forestal District applications. A&F District forest management plans are prepared by VDOF; these efforts support the management of forested land for conservation purposes. One new A&F plan and one revised plan (covering 62 acres) were prepared in 2011. VDOF also wrote two Neighborhood Forest Management Plans and provided less formal advice to a number of homeowners associations, civic Groups and residents. All plans and advice provided by the VDOF are informed by the water quality and conservation benefits of protecting and maintaining forests and street trees.

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 60 applications and plans in 2011. In addition, VDOF annually inspects dry hydrants to make sure they are available to fight wildfire in the county.

The Department maintains an active public education and outreach 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 2011, VDOF conducted 60 talks on the general benefits of urban forests and riparian buffers.

The Virginia Department of Forestry website ([www.dof.virginia.gov](http://www.dof.virginia.gov)) contains many pages on forest management and urban forestry. Topics range from tree identification to proper planting under power lines. The pages contain information developed by VDOF and links to many other sources of information on urban forestry and tree care.

## **14. Fairfax County Restoration Project**

The Fairfax County Restoration Project formed in 2009 to help protect the county's remaining undeveloped areas and, where feasible, restore natural communities on land that is already developed. The driving issue that led to the founding of FCRP is the loss of forested land due to the ongoing Capital Beltway Express Lanes construction project, but FCRP sees its mission

continuing long after the project has been completed. Its mission statement reads as follows:

*The Fairfax County Restoration Project (FCRP) will strengthen the relationship between people and nature through community action. FCRP will **connect, create, and promote efforts** to restore ecosystem functions in Fairfax County through collaboration with public, private, and volunteer organizations.*

FCRP serves as an organizing body that can bring together stakeholders from local and state government, private industry, non-profits, universities and citizens associations to address common concerns about protecting Fairfax County's environment and increasing quality of life for its citizens.

Since its inception, FCRP moved rapidly to bring stakeholders and experts together to assemble a habitat restoration plan for the Express Lanes corridor. As a result of the collaboration, there has been close coordination between project members and the Virginia Department of Transportation on reforestation efforts along the 14-mile construction site. The reforestation will incorporate areas both inside and outside the Express Lanes sound walls. Plantings will be made up of native plants that are adapted to the local conditions, require little maintenance and can provide food and shelter for wildlife. A special emphasis will be placed on plants that can attract native pollinators such as bees and butterflies. Plantings within the walls will be maintained by VDOT. Outside the Express Lanes sound walls, FCRP will recruit landowners and community and homeowner associations with property adjacent to the construction sites to help establish and maintain new plant cover. In 2012, a draft landscaping plan was presented to the public for comments.

FCRP has partnered with the Chesapeake Bay Club and the PlantMorePlants.com stormwater campaign. On behalf of FCRP, the Chairman of the Fairfax County Board of Supervisors requested that the ads that have been developed through this campaign be played as public service announcements by Cox Communications to cover the Northern Virginia market. Cox Communications has agreed to run these in its normal PSA cycle during fall 2012. Additionally, the Fairfax County Channel will be running the ads on a continuing basis.

FCRP has recently initiated a tree gifting program known as "Reforest Fairfax." Each \$35 gift that is purchased through this program includes five tree seedlings that will be planted in Fairfax County by Fairfax ReLeaf during the next planting season, a gift card with a personal greeting, a gift certificate with the registration numbers of the trees that have been purchased and access to an on-line locator tool to see the areas within which the trees were planted.

Additional activities have included: the organization of a series of events relating to vernal pools; outreach and technical support to homeowner associations in the area of the I-495 Express Lanes project; a collaboration with several partners to provide a dynamic environment for elementary school children to learn about the streams and forests and to improve the community through restoration of native forest cover (the “Chesterbrook Living Classroom” project); a native tree discount coupon program; technical assistance to a church on a parking lot retrofit project; technical assistance to Centerville High School on proposed environmental improvements to the school campus; and the creation of a community produce garden on the George Mason Fairfax Campus with the George Mason University Office of Sustainability and the Transurban-Fluor Capital Beltway Project Community Grant Program.

Additional FCRP activities are noted on the project’s website at <http://www.fcrpp3.org/>. FCRP’s numerous efforts resulted in the organization’s receipt of an Environmental Excellence Award in 2011.

## **15. Fairfax Master Naturalists**

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 outreach 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 candidates are selected for a class. They begin with a 60-hour basic training course, which is a combination of classroom lectures 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. To be certified, graduates must provide 40 hours of volunteer service and receive eight hours of advanced training each year.

The Fairfax Master Naturalist chapter successfully ran two basic training classes in 2011, recruiting 40 new members. This brought the number of trained volunteers to 207 at the end of 2011, with 133 current members. FMN provided over 4,200 hours of volunteer service in 2011 of which 1,055 hours were in education and outreach, 948 in citizen science projects and 1,778 in stewardship efforts. Through this volunteer service, FMN members played a significant role in the Fairfax County Park Authority’s Invasive Management Area and Early Detection and Rapid Response efforts, nature center programs and wildlife surveys. They also made significant contributions to the school system through the development of discovery gardens and support of teachers in developing

outdoor activities tied to Standards of Learning. The Northern Virginia Soil and Water Conservation District recognized FMN as “Cooperator of the Year” for contributions throughout the county including a significant role in stream monitoring and other watershed efforts.

## **16. 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. Highway construction projects can potentially impact wetlands and streams. These resources are identified early in the project development process so avoidance and minimization measures can be considered. Given the linear nature of highway projects, some impacts are often inevitable. Federal/state water quality laws and regulations may require compensatory mitigation for permanent impacts to these resources. Wetlands creation is one form of compensatory mitigation for wetland impacts. For stream impacts, stream restoration is a compensatory mitigation; natural stream channel design principles are used to the extent possible.

VDOT created approximately eight acres of wetlands (seven acres non-tidal and one acre tidal) and restored 2,635 linear feet of streams in Fairfax County’s watersheds as compensatory mitigation for unavoidable impacts from highway construction projects including the Fairfax County Parkway, the Route 28 widening, the Roberts Parkway bridge overpass, the Springfield Interchange improvements, the Route 29 bridge replacement over Big Rocky Run, the Route 1 widening and the Woodrow Wilson Bridge replacement. VDOT is presently creating another two acres of wetlands at the confluence of Taylor Run and Cameron Run during at the I-95/Telegraph Road interchange improvement; a five-year success monitoring of that mitigation site will begin in the following year of its establishment.

While the county’s preference is to compensate for wetland and stream impacts within its watersheds; however, on April 10, 2008, the Environmental Protection Agency and U.S. Army Corps of Engineers jointly issued a Federal Mitigation Rule giving preference first to mitigation banks, second to in-lieu funds, and third to permittee responsible mitigation as compensatory mitigation for minor impacts to aquatic resources. Subsequent to this rulemaking, the Virginia Department of Environmental Quality directed staff to recognize the preference hierarchy presented in the Rule. As a result, VDOT purchases wetland and stream credits from approved mitigation banks to compensate for unavoidable impacts to wetlands and streams instead of creating on-site and off-site mitigation sites near its construction projects. To date, VDOT has purchased slightly more than 30 wetland mitigation credits and 2,085 linear feet of stream credits. VDOT would be interested in purchasing wetland and stream bank credits from mitigation banks in Fairfax County

Landscaping contributes much more than just visual aesthetics. Trees support filtering of air and stormwater pollutants/sediments, slowing the erosive acceleration of stormwater runoff, lowering stormwater runoff temperatures from heated impervious surfaces and screening of headlight glare and street light trespass onto residential properties at night. VDOT has included landscaping on several road construction projects to enhance context sensitive road design.

Recent or current projects with landscaping and/or architectural treatments include:

- Fairfax County Parkway extension through Fort Belvoir North Tract Area.
- Telegraph Road/Capital Beltway interchange improvements associated with the Woodrow Wilson Bridge replacement.
- Decorative Stone Rubble Masonry signs at four locations on Georgetown Pike.
- Fair Lakes Parkway/Fairfax County Parkway interchange.
- Rte 29/Gallows Road Intersection Improvements in Merrifield.

VDOT's Wildflower Program is funded through revenue fees paid of wildflower license plates at the Virginia Department of Motor Vehicles. In Fairfax County, there are approximately 3.5 acres of right-of-way at four locations maintained as perennial wildflower meadows. Warm season, native grass species are also used in VDOT's roadside seed mix specifications on its construction projects where opportunity exists to take advantage of low maintenance requirements. Control of invasive vegetation is a large part of VDOT's roadside vegetation management program. Colonization of bamboo and callery pear are significant problems in the county.

VDOT supports initiatives by the county as well as local communities to enhance the state's right-of-way with tree plantings and other landscaping. For selected areas of the state's right-of-way, the VDOT has worked with local service groups to implement reforestation plantings; these reforestation areas contribute to tree canopy cover goals established in the county's Tree Action Plan. Other stewardship programs include the Adopt-A-Highway program which provides residents, community groups and businesses a great civic service opportunity to the commonwealth and Fairfax County in keeping the roadsides clean. The public can view highways available for adoption and those that have been adopted on VDOT's website at:

[http://www.virginiadot.org/programs/adopt-a-highway/adopt-a-highway\\_northern\\_virginia.asp](http://www.virginiadot.org/programs/adopt-a-highway/adopt-a-highway_northern_virginia.asp). More information on these programs and other stewardship opportunities are available at VDOT's website.

## **17. Virginia Department of Environmental Quality**

Ten wetlands permitting activities involving six facilities in Fairfax County were completed in 2011. The types of wetlands affected and the acreage of each type were: non-tidal forest mitigated, 15.8 acres; non-tidal forest permitted, 7.8 acres; non-tidal scrub mitigated, 2.9 acres; non-tidal scrub permitted, 0.5 acres; non-tidal open permitted, 1.9 acres; non-tidal open mitigated, 0.6 acres; non-tidal emergent mitigated, 3.4 acres; and non-tidal emergent permitted, 1.5 acres.

## **18. Urban Forestry**

In addition to carrying out its core services relating to land development and forest pest management, in 2011, the Urban Forest Management Division started the work needed to realign the division from Land Development Services to another business area within the Department of Public Works and Environmental Services that would be more conducive to implementing the Tree Action Plan and 30-Year Canopy Goal. DPWES leadership determined that UFMD's alignment within the Stormwater Business Area would provide significant opportunities for mutual mission support and this represented optimal alignment for TAP and 30-year Canopy Goal support. A test period of one year was set aside to observe the pros and cons of this new relationship and if the new alignment proved beneficial then UFMD would officially transfer to the new business area at the beginning of FY 2013 (July 2012).

On March 22, 2011, the Board of Supervisors' Environmental Committee directed staff to develop specific actions to implement goals and strategies in the Tree Action Plan. In response to this directive, staff from UFMD and the Department of Planning and Zoning started to draft amendments to the Public Facilities Section of the Policy Plan volume of the Comprehensive Plan. The draft amendments are intended to enhance tree preservation and landscaping/buffering on new or re-developed county public facilities. It is anticipated that this amendment will go forward for consideration during CY 2013.

UFMD staff facilitated planning meetings with Stormwater Planning, Maintenance and Stormwater Management Division and Facilities Management Department to discuss potential tree planting locations on the Government Center property. Coordinated tree planting activities at the Government Center included relocation of existing trees and saplings that were located in areas designated for a stream restoration project. UFMD staff organized and directed approximately 30 volunteers from various Fairfax County agencies in this multi-day planting effort.

As part of the 2011 Land Conservation Award Program, UFMD staff prepared nominations to 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. Tree planting and landscaping awards are presented to recognize developers and builders who have done an outstanding job of replacing tree that were unavoidably destroyed

due to development. The Tree Commission awarded the 2011 Tree Preservation and Planting Awards to:

- Kendrick: Tree Preservation.
- The Commons, Phase IV Shopping Center: Tree Preservation.
- The Grove at Huntley Meadows: Tree Planting and Tree Preservation.
- The Falls at Flint Hill: Tree Planting.
- McLean Cove: Tree Planting.
- Goodwin House: Tree Planting.

Gypsy Moth Caterpillar: In calendar year 2011, gypsy moth caterpillar populations remained very low. There was no measurable defoliation reported in Fairfax County or elsewhere in the Commonwealth of Virginia. The reason for the extremely low gypsy moth populations in Fairfax County and other areas is due to effective control programs in past years and the fungal pathogen *Entomophaga maimaiga*. The gypsy moth staff will continue to monitor populations; treatment was not planned for 2012. It is important to note that gypsy moth populations are cyclical in nature and it is not uncommon for outbreaks to occur following dormant phases.

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. The result of the winter 2011– 2012 monitoring effort indicated that 115 acres of treatment were required in spring 2012. These areas were to have been treated with hydraulic ground spraying equipment and with the pesticide Bt. It is expected that populations of this pest will be increasing in the near future.

1000 Cankers Disease of Black Walnut: In August 2010, a fungal disease was detected in black walnut (*Juglans nigra*) in Tennessee. During spring 2011, this disease was identified near Richmond, Virginia. This disease and the beetle that spreads the disease are native to the western United States. In its native range, this disease causes minor damage to western walnut species. Unfortunately, eastern walnut trees are very susceptible to the disease. Trees die within a few years of infestation with the beetle/fungus. Staff is monitoring the development of this disease and has petitioned the Virginia Department of Agriculture and Consumer Services to include this pest/disease to the list of pests that can be

controlled by service districts in Virginia. Staff planned to establish trapping sites for this pest during summer 2012.

**Emerald Ash Borer:** The emerald ash borer (*Agrilus planipennis*) is an exotic beetle from Asia and was discovered infesting ash trees in the state of Michigan in 2002. This beetle is known to attack only ash trees and can kill trees in as little as two years. In July 2008, two infestations of emerald ash borer were discovered in Fairfax County in the Town of Herndon and in the Newington area. 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. Since July 11, 2008, a federal order has 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, Prince William and the cities of Falls Church, Fairfax City, Alexandria, Manassas and Manassas Park. Trapping efforts since 2008 have revealed that the beetle can be found in many areas of the county. The Forest Pest Program has appointed an Urban Forester as its Emerald Ash Borer Outreach Coordinator. This staff member is responsible for educating the public on how to deal with the impending death of many thousands of ash trees. Education efforts emphasize how to hire a private contractor to remove dead and dying trees and how to properly apply pesticides that might keep trees alive.

**Hemlock Woolly Adelgid:** Hemlock woolly adelgid is a recent addition to the Virginia Department of Agriculture and Consumer Services' 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. Possible control options include pesticide treatments and release of predatory insects that feed on HWA.

## **19. Agricultural and Forestal Districts**

Landowners may apply to place their land in special Agricultural and Forestal Districts that are taxed at reduced rates. Statewide A&F Districts must have 200 or more acres. A&F Districts of local significance must have at least 20 acres and must be kept in this status for the life of the District, which can be up to 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 2008 EQAC Annual Report on the Environment, there has been some changes to the A&F Program as shown in Table VII-5. While there were changes in Dranesville and Springfield, there was a net loss of two local districts during this reporting period. Since 2010, there was a loss of 52.3 acres in local districts through the withdrawal of Salona and a gain of 5.08 acres to the Eagle I District. The total acreage in all districts, both local and statewide, was 2,951.06 as of July 31, 2012.

<b>Table VII-5: Change in Local and Statewide A&amp;F Districts from January 1, 2008 to July 31, 2012</b>				
<b>Magisterial District</b>	<b>No. of Local Districts</b>		<b>No. of Statewide Districts</b>	
	<b>2008</b>	<b>2012</b>	<b>2008</b>	<b>2012</b>
Dranesville	17	13	1	1
Mt. Vernon	3	3	1	1
Springfield	19	21	0	0
Sully	4	4	0	0
<b>Total</b>	<b>43</b>	<b>42</b>	<b>2</b>	<b>2</b>

Source: *Fairfax County 2009 and 2012 Agricultural & Forestal District Annual Statistical Reports*, Zoning Evaluation Division, Department of Planning and Zoning, Fairfax County, Virginia, September 1, 2009 and August 1, 2012.

### C. STEWARDSHIP OPPORTUNITIES

The Fairfax County Park Authority offers 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/>. More information about FCPA and its programs is available at these websites: <http://www.fairfaxcounty.gov/parks/resources/stewardship.htm> and <http://www.fairfaxcounty.gov/parks/resources>.

Fairfax County residents and other interested parties 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. 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](mailto:SupportParks@aol.com)  
<http://www.fairfaxparkfoundation.org>

The Northern Virginia Regional Park Authority also has opportunities for volunteers. These environmental stewardship opportunities for volunteers are available at Meadowlark Botanical Gardens, Potomac Overlook Regional Park, Upton Hill Regional Park, Pohick Bay Regional Park and various other parks on occasion. More information can be found at [http://www.nvrpa.org/park/main\\_site/content/volunteer](http://www.nvrpa.org/park/main_site/content/volunteer).

Fairfax ReLeaf offers a number of opportunities for stewardship. For further information on Fairfax ReLeaf, visit its website 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](mailto:trees@fairfaxreleaf.org)

The Northern Virginia Conservation Trust offers many opportunities in stewardship for Fairfax County residents. Additional information on NVCT can be found on its website, <http://www.nvct.org>. Landowners whose property contains environmentally sensitive land such as wetlands, stream valleys and forests can also participate in environmental stewardship. If these landowners grant easements to NVCT, 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.

For stewardship information on the Potomac Conservancy, see <http://www.potomac.org>.

VDOT supports initiatives by the county as well as local communities to enhance the state's right-of-way with tree plantings and other landscaping. For selected areas of the state's right-of-way, VDOT has worked with local service groups to implement reforestation plantings; these reforestation areas contribute to tree canopy cover goals established in the county's Tree Action Plan. Other stewardship programs include the Adopt-A-Highway program which provides citizens, community groups and businesses a great civic service opportunity to the commonwealth and Fairfax County in keeping the roadsides clean. The public can view highways available for adoption and those that have been adopted on VDOT's website at: [http://www.virginiadot.org/programs/adopt-a-highway/adopt-a-highway\\_northern\\_virginia.asp](http://www.virginiadot.org/programs/adopt-a-highway/adopt-a-highway_northern_virginia.asp).

## D. 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 Geographic Information System 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. EQAC 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. Additionally, EQAC notes that the Park Authority has taken some steps in implement the plan, but much more needs to be done. EQAC fully supports these efforts. EQAC's intent is that Fairfax County should have all the tools in place to create a plan that will support the active management and conservation of the county's natural resources.

## **E. 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. The FCPA staff estimates that full implementation will require approximately \$8 million per year and dozens of staff positions. This includes about \$3.5 million to focus on general natural resource management and \$4.5 million for a non-native invasive plant control program. 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 sufficient funding to implement Phase 1. And, as the county's budget problems are eased, EQAC further recommends that the Board of Supervisors increase funding with an aim toward supporting the full implementation of the Natural Resource Management Plan. In the meantime, EQAC recommends that some additional staff positions and supporting funding be found from internal FCPA staff assets, to include funding of the two new vacant positions in the Natural Resource Management and Protection Section.

## LIST OF REFERENCES

Fairfax County Land Use Data, <http://www.fairfaxcounty.gov/demogrph/Lusebut.htm>.

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