

*City of Alexandria, Virginia*

## MEMORANDUM

DATE: JUNE 1, 2007

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: JAMES K. HARTMAN, CITY MANAGER 

SUBJECT: CITY COUNCIL CONSIDERATION OF THE FY 2006 ANNUAL REPORT FROM THE ALEXANDRIA ENVIRONMENTAL POLICY COMMISSION

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**ISSUE:** City Council consideration of the FY 2006 Annual Report from the Alexandria Environmental Policy Commission.

**RECOMMENDATION:** That City Council receive the FY 2006 Annual Report from the Environmental Policy Commission.

**DISCUSSION:** The Alexandria Environmental Policy Commission (EPC) is an advisory body comprised of thirteen citizen members appointed by City Council to advise and make recommendations to City Council and, where appropriate, to the Planning Commission, City Staff, and the City Manager on issues relating to clean air, land use, noise pollution and abatement, pesticides, herbicides and contaminants, solid waste, water quality and supply, other topics relating to conservation and protection of environmental conditions, and other such matters referred to the Commission by City Council. The EPC is staffed by the Department of Transportation and Environmental Services (T&ES), Division of Environmental Quality.

The EPC prepared a report which highlights the principal activities of the EPC for FY 2006 that is provided as Attachment I. Highlights of the Commission's work include:

Environmental Spending Recommendations

- **Solid waste:** proposed that extra funding be included in the City budget to ensure that commercial and residential recycling programs are fully implemented
- **Hybrid vehicles:** encouraged all City departments to use/purchase hybrid vehicles
- **Green buildings:** proposed that more outreach be funded to increase public awareness; proposed that funding to purchase clean energy be evaluated for the upcoming fiscal year
- **Stormwater:** encouraged funding a stormwater utility fee study and encouraged alternative funding sources to educate the public on how to divert or eliminate stormwater runoff

Resolutions sent to Council:

- Unanimously in favor of the City's position on Mirant Power Plant
- Endorsed the Four Mile Run Master Plan
- Encouraged approval of the Recycling Ordinance with greater public outreach and education than what was in the ordinance
- Unanimously voted to designate May as Watershed Awareness month.
- Recommended that the City join the "2030 Challenge" for all new and renovated buildings and that the City encourage and facilitate the implementation and inclusion of green-building attributes for all new construction or facility upgrade and/or expansion requests, and to provide incentives encouraging the application of green building initiatives regardless of whether they are public or private.

City Staff Briefings:

- Transportation issues – roadways and DASH
- Mirant
- Virginia Paving
- King Street Flood Abatement Project.
- Water Quality Management Supplement Update
- Program for BMP Inspections and Maintenance
- Flooding Issues associated with the June 25<sup>th</sup> rain event
- Recycling Ordinance

**FISCAL IMPACT:** None

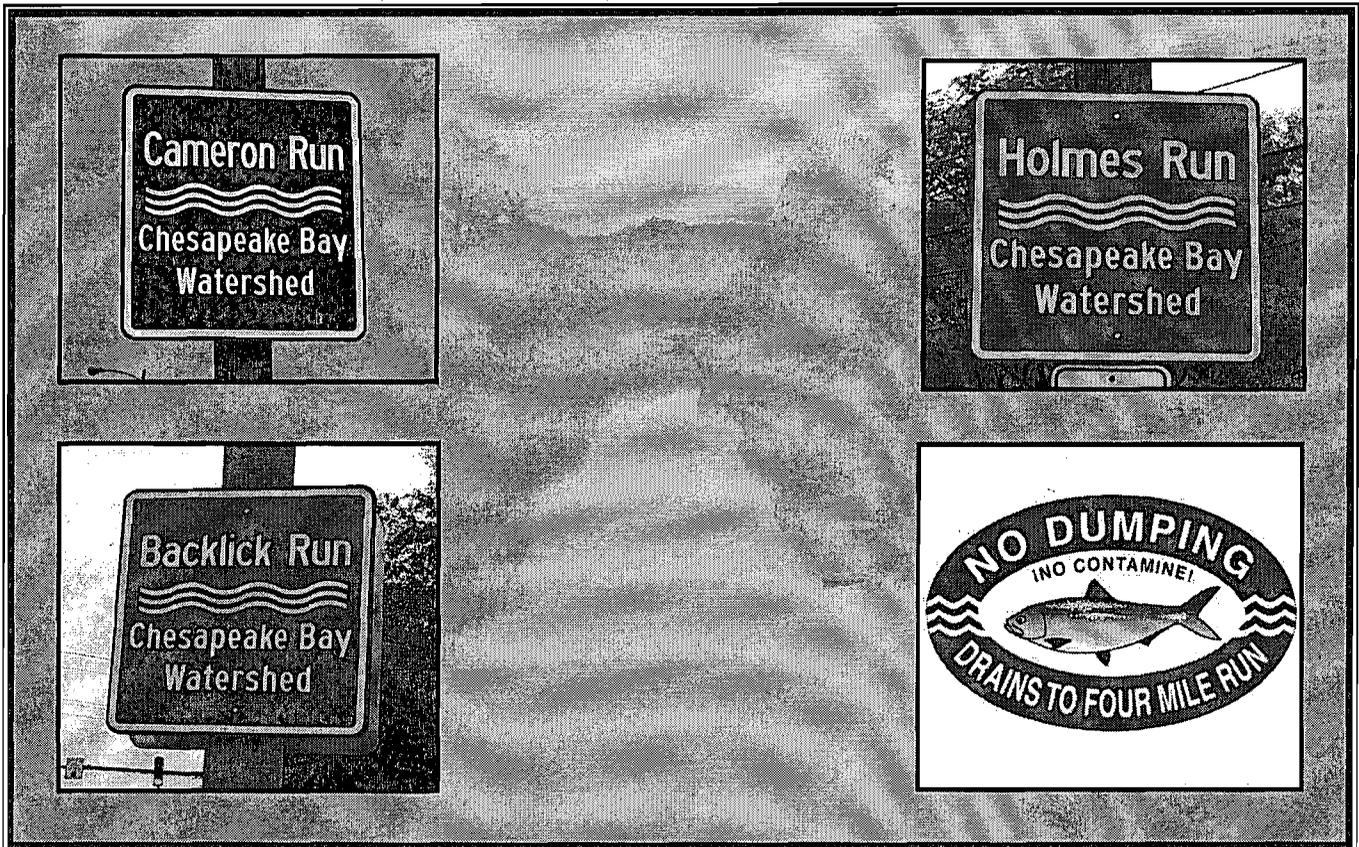
**ATTACHMENTS:**

- I. Environmental Policy Commission Annual Report for FY 2006
- II. Water Quality Management Supplement Progress Report FY 2006

**STAFF:**

Richard J. Baier, P.E., Director, Transportation and Environmental Services  
William J. Skrabak, Chief, Division of Environmental Quality  
Claudia Hamblin-Katnik, Ph.D., Watershed Program Administrator, T&ES

# Alexandria Environmental Policy Commission



**Report for Fiscal Year 2006**

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## **1. Introduction**

The Alexandria Environmental Policy Commission (EPC) was established under Chapter 4, Article M, of the City Code to "advise and make recommendations to the City Council and, where appropriate, to the Planning Commission and City Manager." This report provides a summary of EPC's activities during Fiscal Year 2006 (FY06). This report also includes descriptive information on the EPC.

## **2. Who We Are**

In April 1970, millions of Americans participated in the first Earth Day. The outpouring of support for the idea of preserving and improving the natural environment led directly to the creation of the U.S. Environmental Protection Agency and many local environmental agencies.

The Alexandria City Council established the EPC in 1970 to advise and make recommendations to the City Council and City Manager, where appropriate, on matters relating to the following:

- Clean air
- Land use
- Noise pollution and abatement
- Pesticides, herbicides and contaminants
- Solid waste
- Water quality and supply
- Other matters referred to the EPC by the City and citizens
- Other topics relating to the conservation and protection of Alexandria's environment

The EPC consists of 13 members, including five members from the field of environmental sciences, five citizen-at-large members, one member from the field of urban planning, one student attending high school in the City of Alexandria and one member with experience in Federal or state environmental statutes, regulations, and procedures. The Commission is supported by the City of Alexandria Department of Transportation and Environmental Services (T&ES), Division of Environmental Quality.

## **3. EPC Priorities for FY06**

The EPC began the 2006 fiscal year with the second meeting of a two-part retreat to establish goals and objectives for the year. The EPC decided to focus its FY06 activities on three areas:

- Transportation/Air Quality
- Water Quality
- Open Space

During FY06, the EPC worked with other city commissions and groups to address water quality, energy, green building, transportation and open space issues facing the City, and to increase the visibility and importance of environmental issues to city residents. The EPC was represented on the following city commissions and working groups:

- Four Mile Run Restoration Project Committee: Robert Swanson
- Jones Point Committee: Jill Bennis
- Alexandria Recycling Committee: Jill Bennis
- Mirant Community Monitoring Group: Thomas Hewson
- Urban Forestry Steering Committee: Patrick Hagan
- Earth Day Committee: Jane Casteline, Chair
- Waterfront Committee: Josh Dickinson/Thomas Hewson

#### **4. A Year of Transition**

FY06 marked a year of significant transition for the EPC. At its first meeting in July 2005, the Commission elected Jill Bennis as chair. Ms. Bennis replaced Cindy DeGroot, who in turn had replaced Kenyon Larsen in January 2005. In January 2006, Ms. Bennis resigned as EPC chair due to scheduling conflicts. She was replaced by Danielle Fidler. In addition to leadership changes, there was considerable turnover in EPC membership: at the beginning of FY06, only four commission members had a year or more of service on the EPC.

#### **5. Environmental Spending Recommendations**

An important part of EPC deliberations over the course of FY06 related to environmental expenditures in the City operating and capital improvement budgets. On November 4, 2005, the EPC submitted a letter to Mayor Euille and the members of City Council that included recommendations for environmental spending in the next City budget cycle. These recommendations included the following:

- Solid waste: proposed that extra funding be included in the City budget to ensure that commercial and residential recycling programs are fully implemented
- Hybrid vehicles: encouraged all City departments to use/purchase hybrid vehicles
- Green buildings: proposed that more outreach be funded to increase public awareness; proposed that funding to purchase clean energy be evaluated for the upcoming fiscal year
- Stormwater: encouraged funding a stormwater utility fee study and encouraged alternative funding sources to educate the public on how to divert or eliminate stormwater runoff.

## **6. Transportation and Air Quality Issues**

On October 17, 2005, City staff briefed the EPC on transportation issues. This was followed by a briefing on June 19, 2006 by City staff about DASH operations and environmental improvements.

### Mirant:

City staff provided frequent updates on activities related to the Mirant power plant. On June 21, 2004, EPC submitted an unanimous resolution in favor of the City's position on this issue. During FY06, Tom Hewson represented EPC on the Mirant Community Monitoring Group. He was succeeded at the end of the fiscal year by fellow EPC member Jane Casteline.

### Virginia Paving:

EPC was also briefed on the status of the Virginia Paving application for a new special use permit, including presentations by City staff and residents of Cameron Station at its May 22<sup>nd</sup> meeting, which was also attended by representatives of Virginia Paving.

## **7. Alexandria Transportation's Environmental Challenges**

Alexandria is designated as being in non-attainment for ozone (formed from interaction of VOC/NOx with heat and sunlight) and fine particulates (mostly from formation of secondary particulates formed from interaction of SO<sub>2</sub>/NOx/ammonia).

EPA considers driving a private car is a typical citizen's most polluting activity. Motor vehicles contribute 70% of the city's carbon monoxide emissions (20,189 Tons Per Year (TPY)), 25% of the NOx emissions (2,103 TPY), 2% of the primary fine particulates (42.5 TPY), 39% of the ammonia (97.3 TPY) and 38% of the VOC emissions (1,713 TPY) (1999 EPA AIRS database). Transportation emission share has been increasing with implementation of tighter limits on stationary sources and a higher mix of heavier vehicles.

Transportation is considered one of the largest problems in the Washington metropolitan area. More than 3.8 million people commute to work each day in Washington-Baltimore region. More than 71% drive alone to work (2000 U.S. Census). The region ranked 4th worst in the nation in 2003 for per capita traffic delay, with average of 69 hours versus 46 hours nationally (2005 Urban Mobility Study, Texas Transportation Institute). Traffic congestion costs the region \$2.47 billion per year. The average household spends 19.1 percent of their income on transportation (Bureau of Labor Statistics 2003).

Nearly 50% of workers describe their commutes as unsatisfying or stressful and 36 percent are willing to take a 10% pay cut for a shorter commute (HR Magazine Survey Oct 2001). Many people move to Alexandria in order to have a shorter commute.

## Transportation Metrics:

City motor vehicle registrations—131,270 (2002), 1.055 vehicles/driver vs. 1.30 VA avg  
City vehicle mix—11% (13,854) are heavier than 5,000 pounds, including 338 buses  
City licensed drivers—124,431 drivers (2003) in a population of 135,000 (92%)  
Estimated city vehicle miles traveled—between 1998-2003, vehicle miles traveled (VMT) increased by 10% in Virginia, Virginia 2003 10,407 VMT/capita  
Carpool ridership—13.9% regional commuters participate, 21% of large Virginia metropolitan employers participate  
Mass transit ridership—Current and historical trends are comparable to national averages DASH- 2.24 million people (FY95)

## Options to reduce environmental emissions from the transportation sector

### **Reduce vehicle miles traveled**

Increase mass transit ridership—Public transportation uses one-half of fuel consumed by cars and a third of the fuel consumed by SUVs and light trucks. Ways to increase public transportation ridership include greater system area coverage, improved scheduling, employer incentives, improved travel time and higher parking fees. Most likely option will be to encourage more employer incentives by greater program exposure. Employees that are offered commuter benefits are eight times more likely to use transit than those that do not have them (Xylo Survey 2001). There are 187 employers (6 in Alexandria) representing 176,249 commuters that provide commuter benefits as part of *Greater Washington Region's Best Workplaces for Commuters* program. The City offers \$105/employee for the first six months. City is also considering expanding its master plan to include Bus Rapid Transit in the Potomac Yard Transit Corridor as part of a \$1.8 million study.

Promote carpooling—Currently, incentives are limited to HOV lane access & providing Alexandria Rideshare information. According to Commuter Connections (June 2005), 343,000 people (13.9%) of Washington area commuters participate in carpools, coming in third in the nation behind Los Angeles & Chicago. Virginia program participation rate among large (>100 employees) area employers is 21% (vs. 69% in MD, 10% in Washington, DC). In areas designated as severe non-attainment, large employers were required to develop carpooling programs. The City should consider expanding Flexcar program throughout the city. Examination of successful programs in other cities may provide new ideas to improve participation.

Promote alternative modes of transportation (walking, biking, water). Expand bike dedicated lanes/paths, bike parking ordinances, bike integration with mass transit, study potential for river boat commuting. The City is working on developing a public education program to promote walking and biking.

Promote telecommuting-The Washington Council of Governments has developed a study that examines telecommuting and policies. The study promotes telecommuting in an effort to gain emission reduction credits from the U.S. EPA. (e.g., cyber cafes/offices, employer programs, etc.). There are currently programs in place in six U.S. cities. Telecommuting increases worker retention, productivity, and mental health (Families and Work Institute, 2004). The City has taken a large step to promote telecommuting by providing wireless internet access in the city.

#### **Reduce emissions per vehicle mile traveled**

Compressed natural gas conversion/purchases for buses Virginia Power will pay for some bus conversions in the region as part of an enforcement settlement. The City currently has 159 buses (98 City-owned school buses, 61 DASH buses) that should be considered for inclusion in the Mirant settlement agreement. Another option is to apply for a grant from the EPA Clean Air Communities Program. The relocation of the DASH Bus facility may offer the opportunity to put needed facilities in place.

Expand market share for low emitting vehicles Tax assessment incentives and penalties are ways to encourage the use of low emitting vehicles. Virginia ranks second in the nation in the number of electric-hybrid vehicles, accounting for 7.8% of the registered fleet. Currently the area promotes hybrid and alternative fuel vehicles by giving vehicle owners access to HOV commuter lanes; however the state is considering dropping this exemption. Virginia also allows hybrids to be taxed at a different rate. The fiscal impact is contained in City Attorney April 2005 memo. Currently the City is limited in assessing penalties for high emitting vehicles to \$25/year. A Council resolution to the state legislative delegation could spur efforts to gain greater flexibility for Northern Virginia jurisdictions to address mobile source issues. Alternatively, two areas adopted old vehicle retirement programs.

Fuel specifications: A fuel specification initiative would have to be done for the entire Washington area and would be best encouraged through the Metropolitan Washington Council of Governments.

Reduce excessive engine idling—Trucks and buses often idle for long periods to keep air conditioning/heating on while waiting for the next trip or load. Education and enforcement are needed to curb excessive periods of idling.

### **8. Watershed, Stormwater and Flood Abatement Issues**

On March 20, 2006, EPC's water quality subcommittee briefed the full commission on City water quality issues. On April 10, 2006, EPC unanimously voted to designate May as Watershed Awareness month. On June 19, 2006, City staff briefed EPC on the King Street Flood Abatement Project. At the same meeting, City staff provided a Water Quality Management Supplement Update, which outlined the program for inspection of best management practices, outreach efforts, and continued activities by the City

related to the combined sewer system and other water management issues. City staff also provided an update on stormwater issues related to the heavy rainfall that occurred in late June / early July.

#### Four Mile Run Restoration Project:

City staff provided EPC with a briefing on the Four Mile Run Restoration Project on November 21, 2005. In a January 23, 2006 letter to Mayor Euille and the Members of Council, the EPC wholeheartedly endorsed the Master Plan and applauded the efforts of the individuals who produced the plan.

#### Water Quality Management Plan Update:

City staff provided the EPC with a briefing on the continuing efforts and new initiatives to maintain and improve the City's water resources and meet federal and state water quality regulations. Attachment II is the Water Quality Management Supplement Progress Report which outlines the FY06 efforts.

### **9. Open Space**

#### Monroe Avenue Bridge

At the request of EPC Chair Danielle Fidler, on February 27, 2006 City staff briefed the EPC on environmental and open-space aspects of the proposed Monroe Avenue Bridge straightening project.

### **10. Other Topics Addressed by EPC**

#### Recycling Ordinance:

City staff briefed EPC on September 19, 2005 and December 19, 2005 about the City's plan for mandatory recycling. Jill Bennis subsequently participated in Alexandria Recycling Committee meetings to develop a policy. On February 6, 2006, EPC submitted a letter to Mayor Euille and members of Council to encourage approval of the Recycling Ordinance. While the letter was favorable, it also encouraged greater public outreach and education than what was in the ordinance.

#### Green Building Policy

In June 2006, a resolution was introduced with regard to a green building policy for the City. The resolution recommended that the City join the "2030 Challenge" for all new and renovated buildings. It also recommended that the City encourage and facilitate the implementation and inclusion of green-building attributes for all new construction or facility upgrade and/or expansion requests, and to provide incentives encouraging the application of green building initiatives regardless of whether they are public or private. (This resolution was passed by the EPC at its July 17, 2006 meeting.)

2003 Population 135,000 (Alexandria 2003 Annual Report), Households 65,759  
 Median Income \$94,091 (2002)  
 Land area 15.75 sq-mi, Park & Open space 946.7 acres  
 Ranks as 179<sup>th</sup> largest incorporated city in US (2004- US Census Bureau)

<b>Employment</b>	<b>June '00</b>	<b>June '01</b>	<b>June '02</b>	<b>June '03</b>
Employed Residents	76,896	78,504	80,869	82,393
Unemployed Residents	1,298	2,178	3,032	2,282
Jobless Rate	1.7%	2.7%	3.6%	2.7%

**PERSONS WORKING IN ALEXANDRIA\***

4th Quarter 2002	90,087
4th Quarter 2001	91,183
4th Quarter 2000	94,195
4th Quarter 1999	90,093

\*Includes workers covered by State unemployment insurance.

**LARGEST PRIVATE EMPLOYER** (July 2003)

Alexandria Hospital	1,539
Institute for Defense Analysis	1,200
American Diabetes Assoc	900
Center for Naval Analysis.	600
Boat Owners Assoc. of the U.S	570
Public Broadcasting	500

**LARGEST PUBLIC EMPLOYER** (July 2003)

U.S. Department of Defense*	8,973
Civilian	4,606
Military	4,367
City of Alexandria	2,285
Alexandria Public Schools	2,099
WMATA (Metro)*	1,162
Northern Virginia Community College	952
U.S. Department of Agriculture	675
U.S. Postal Service	396

\* 2002



**Water Quality Management Supplement Progress Report  
for the Environmental Policy Commission  
June, 2006**

*New Initiatives:*

**City BMP Inspection Program and Software**

A BMP maintenance inspection program, along with initiating a new tracking software "Assist MS4 Pro," was implemented this year. Over 300 BMP's exist within the City and will soon be inspected. Within the next few months, owners of these systems will be receiving a letter reminding them of the BMP that resides on the property and advising them of their maintenance responsibilities. Maintenance will be required when necessary.

**Web Page**

The DEQ website was updated in 2004 and is continually being updated. Of note the Alexandria Supplement to the Northern Virginia BMP Handbook is now on the website – a valuable and necessary document that allows developers to understand the Environmental Management Ordinance phosphorous loading reduction requirements and calculation methodologies. The web site is much more user friendly, contains varied and up to date information, and is consistently used to provide current and timely information to citizens and developers alike.

**Outreach Efforts**

Staff has made a concerted effort to raise awareness of the City's aquatic assets. Stream crossing signs have been added to road crossings of our various runs. Bike trail stream crossing signs have also been added to guide the biker's eye to our natural amenities.

The City has contributed to a regional effort to reduce non-point source pollution through a stormwater radio campaign. This campaign targeted behaviors that contributed to Bay pollution from the eight contributing localities' storm drain systems. The radio messages ran from April 10 through 23, and then again May 8 through May 23.

A watershed stewardship program was initiated. This program leverages community goodwill asking neighbor to help neighbor understand their watersheds and determine, as a community, the improvement needs within their watershed.

Staff has been working with an ecology class at the Howard Gardner School providing guidance to initiate a monitoring program within Holmes Run to determine activities to reduce the fecal coliform levels.

The City has provided public service announcements (Riversmart) that were aired on Comcast channel 69 highlighting activities that negatively impact water quality.

The City sponsored the Holmes Run Cleanup on Saturday, May 6, from 10-1pm. There were over 50 participants who collected over 75 bags of trash and large items.

The "Only Rain in the Storm Drain" campaign was advertised through a press release and on the City website. The government access channel ran informational spots on stormdrain marking campaign promoting only water down storm drains.

The annual City Wellness Fair on May 18, 2006 included a booth designed to highlight City activities with regard to water and air quality initiatives.

The Potomac Watershed Cleanup in support of the Potomac Watershed Trash Treaty occurred at six sites in Alexandria on April 8, 2006. Pulled from the River and its buffer areas were 42 tires and over 100 bags of trash.

Earth Day, celebrated on April 29 sported a green roof display, a new green roof brochure, literature on our storm drain marking program and information on our budding stream monitoring program. The interactive display "Know your Native Fish" was the highlight of the fair according to the younger set.

#### **Four Mile Run Master Plan Effort**

Alexandria has been working with Arlington County to develop an environmental restoration plan for Four Mile Run from I-395 downstream to the mouth of the stream. This planning effort includes an engineering study of flow capacity, conceptual plans, and an environmental demonstration project.

Significant outreach occurred while developing the Four Mile Run Master Plan. On February 5, 2005 a visioning session was convened with approximately 150 citizens from both Alexandria and Arlington. Goals were developed and extensive direction given to the Master Planning Team. Two open houses were held (April and December) to provide review and comment on the Framework Plan to the planning team as planning progressed. The Master Plan was approved by the Arlington County Board and the Alexandria City Council in March of 2006.

This effort will be a foundation for future environmental restoration in Four Mile Run and an example of possible restoration efforts for other flood control channels

in the area.

The Agency Coordinating Group of the Four Mile Run Project is proceeding with a scope of work for the demonstration project within the run that was approved by Council in March. This project is to be located within the channel between the Mount Vernon Street Bridge and Route 1. The main focus of the project is to improve the biotic integrity of the run by restoring a low-flow channel with adjacent tidal bars, the removal of gabions, and associated buffer improvements.

### **Phase II Stream Assessment**

The Phase I portion of the Stream Assessment, to determine the perenniality of our streams was accomplished in 2004. The Phase II portion of the stream assessment was to visually assess the infrastructure and conditions within the City's streams. This was accomplished in the spring of 2006. Field work on the biological assessment was completed in April of 2006. The tool, an interactive GIS based application, has been delivered to the City which is now undertaking quality assurance/quality control activities to verify its efficacy and accuracy. At this point, the overall Phase II product is approximately 80% complete.

### **Article XIII of the City's Environmental Management Ordinance**

The City promulgated minor revisions to the Environmental Management Ordinance to make its language more compatible with the Chesapeake Bay Preservation Act and more user-friendly based upon developer and citizen suggestions.

### **Four Mile Run Maintenance**

Flood channel maintenance was performed on Four Mile Run in the spring of 2006. This activity was done in conjunction with Arlington County to maintain the flood flow capacity of the channel. This entailed removing trees, debris, and other foliage on the sides and from the base of the channel to allow unobstructed flow of water and debris during a storm event. The base of the channel was also dredged in places.

*Continuing Activities:*

### **DEQ's Active Role in City Projects**

DEQ is playing an active role in City projects to ensure that the projects comply with Article XIII, Environmental Management, of the City's Zoning Ordinance. This effort includes both DEQ's review of City projects prior to approval and education of the other City departments concerning what is required to meet Article XIII.

### **Combined Sewer Systems (CSS)**

The City has developed a CSS Area Reduction Plan that shows how connections

can be made to separate sanitary and storm sewers at specific locations. This plan is being implemented as new development or redevelopment takes place at those locations. Even before the plan was developed, redevelopment plans were required to consider separation. To help with this effort, digital maps of the sewer system within the combined sewer area (as well as for the rest of the City) have been developed. The City is now in the process of field verification of the GIS based inventory. To date, pipes in and around projects such as Samuel Madden, the Saul Center, Portner Brothers, the Prescott, Monarch and the Charles Houston Recreation Center are proposed to be separated.

### **Infiltration and Inflow (I/I) Reductions**

The City has already spent over \$6.4 million on the I/I reduction efforts, has an additional \$4.2 million of improvements under construction, and has budgeted \$6.63 million to conduct additional studies and construction for I/I removal.

### **Environmental Coordinating Group (ECG)**

This group was formed in late 2002 and scheduled to meet quarterly. The purpose of the ECG is to keep department representatives throughout the City informed of environmental activities occurring within each department. Representatives from Transportation and Environmental Services, Planning and Zoning, the Health Department, General Services, Code Enforcement, Parks and Recreation, Alexandria Sanitation Authority, and the City Attorney's Office attend the meetings.