


City of Alexandria, Virginia

MEMORANDUM

DATE: JANUARY 18, 2007

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: JAMES K. HARTMANN, CITY MANAGER 

SUBJECT: CONSIDERATION OF A PROPOSAL FOR THE DEVELOPMENT OF AN ENVIRONMENTAL ACTION PLAN FOR THE CITY OF ALEXANDRIA

ISSUE: Developing an Environmental Action Plan for the City in phases in cooperation with Virginia Tech and the Alexandria Environmental Policy Commission.

RECOMMENDATION: That the City enter into an agreement with Virginia Tech to work with City staff and the Environmental Policy Commission (EPC) to develop an Environmental Action Plan for the City and authorize the City Manager to:

1. Work with Virginia Tech to finalize a scope of work to complete Phase I of the development of the Environmental Action Plan that would focus primarily on two tasks: a) summarize and document existing environmental programs and policies, and b) research and collect information on environmental plans, model practices and programs from other jurisdictions that have the most relevance and importance for the City.
2. Allocate \$15,000 from the General Fund Contingent Reserve to fund Phase I of the Environmental Action Plan.
3. Develop a schedule and budget for implementing Phases II and III for the development of a supplemental request for the Environmental Action Plan that can be considered by Council for funding out of FY 2008 Contingent Reserves.
4. Execute all necessary documents that may be required under this program.

DISCUSSION: On September 7, 2006, Councilwoman Pepper and Councilman Krupicka sent a memorandum to the Mayor, Council and City Manager recommending that the EPC be directed to develop a draft Environmental Action Plan. A meeting was held on October 30, 2006, with representatives from Virginia Tech, the EPC, City staff, Councilwoman Pepper, and Councilman Krupicka. At this meeting City staff provided a summary of the City's environmental efforts since

the Quality of Life Summit and Report which were completed in 1998. At this meeting it was agreed to divide the development of an Environmental Action Plan into three phases.

- Phase I: Develop an inventory of existing programs and policies.
 Collect information on relevant plans, model programs and practices from other jurisdictions that may be applicable in the City.
- Phase II: Prepare a Draft Environmental Action Plan for the City.
- Phase III: Design and Facilitate an Eco-City Community Summit.

Funding Phase I with \$15,000 from the Council contingent reserve account allows Phase I to begin immediately and allows Virginia Tech to utilize the professors and graduate students available for the Spring 2007 semester for this effort. City staff and Virginia Tech will also explore grant opportunities for funding Phases II and III. A preliminary estimate for funding Phases II and III is approximately \$46,000 with an additional \$10,000 to \$15,000 to fund the actual summit itself.

FISCAL IMPACT: Phase I of the development of the Environmental Action Plan would be funded from the FY 2007 General Fund Contingent Reserve account in an amount not to exceed \$15,000. Phases II and III are estimated to cost approximately \$46,000 with an additional \$10,000 to \$15,000 to fund the actual summit itself. At this time only Phase I would be initiated with the scope of work for Phases II and III to be further refined and considered during the FY2008 City Budget process.

ATTACHMENTS:

Attachment I. Memo from Councilwoman Pepper and Councilman Krupicka dated September 7, 2006

Attachment II. Draft scope of work for Phase I to be completed by Virginia Tech

Attachment III. Proposal from Virginia Tech "A Green Action Plan for Alexandria"

STAFF:

Richard Baier, P.E., Director, T&ES

William Skrabak, Division Chief, Environmental Quality, T&ES



City of Alexandria, Virginia

301 King Street, Suite 2300
Alexandria, Virginia 22314



MEMORANDUM

DATE: SEPTEMBER 7, 2006

TO: THE HONORABLE MAYOR AND MEMBERS OF COUNCIL
JAMES HARTMANN, CITY MANAGER

CC: RICH BAIER, DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL
SERVICES
DEPARTMENT OF PLANNING, ACTING DIRECTOR
WILLIAM SKRABAK, STAFF PERSON, ENVIRONMENTAL POLICY
COMMISSION

FROM: COUNCILMAN ^{PK} ROB KRUPICKA AND COUNCILWOMAN DEL PEPPER ^{DP}

SUBJECT: AN ALEXANDRIA ENVIRONMENTAL ACTION PLAN

Alexandria has made significant progress in protecting the environment. Our new recycling ordinance and Chesapeake Bay laws, our efforts to add environmentally friendly technologies like green roofs and energy efficient systems to new City buildings, our work to develop an urban forestry plan, our open space activities and our work to improve the city sewer system all represent a solid commitment to the environment. Last year's Cool City award from the US Sierra Club further illustrates the progress we have made.

A few months ago, our Mayor supported a series of national resolutions geared toward the environment. These resolutions (attached) were approved at the most recent US Conference of Mayors meeting. We applaud the Mayor for his leadership. With pollution mounting, regional growth straining our resources, energy prices growing and recently published reports that raise questions about State water quality, now is the right time for Alexandria to develop a model Environmental Action Plan. Alexandria can and should be a city that integrates a respect for the environment into everything that we do.

We are asking the City Council to direct the Environmental Policy Commission to work with two Members of Council to create a draft Environmental Action Plan for the City Council to adopt. Building on the recommendations of the US Conference of Mayors and our own local energy, open space, green building, development, transportation, water quality, pedestrian, and bicycle experiences, this action plan should summarize current environmental activities in the City as well as identify additional areas for enhancement. As just one example, the region is moving forward to develop a regional Green Building policy – Alexandria should not just be a participant in this effort, it should be a leader. The final Environmental Action Plan should include specific actions with measurable outcomes.

building has a cost-effective impact beyond just the utility bill savings; and

7. WHEREAS, studies have indicated that student attendance and performance is higher in high performance school buildings; and

8. WHEREAS, recognizing that a building's initial construction costs represent only 20-30 percent of the building's entire costs over its 30 to 40 year life, emphasis should be placed on the "life cycle costs" of a public building rather than on solely its initial capital costs; and

9. WHEREAS, the construction industry in the U.S. represents a significant portion of our economy and a significant portion of the building industry is represented by small business and an increase in sustainable building practices will encourage and promote new and innovative small business development throughout the nation; and

10. WHEREAS, the American Institute of Architects (AIA), the national professional organization representing architects has adopted a position statement calling for the immediate energy reduction of all new and renovated buildings to one-half the national average for that building type, with increased reductions of 10% every five years so that by the year 2030 all buildings designed will be carbon neutral, meaning they will use no fossil fuel energy.

11. NOW, THEREFORE, BE IT RESOLVED that the U.S. Conference of Mayors will encourage its members to adopt the following "2030 Challenge" for building performance targets:

- New construction of City buildings shall be designed to and achieve a minimum delivered fossil-fuel energy consumption performance standard of one half the U.S. average for that building type as defined by the U.S. Department of Energy.

- Renovation projects of City buildings shall be designed to and achieve a minimum delivered fossil fuel energy consumption performance standard of one half the U.S. average for that building type as defined by the U.S. Department of Energy.

- All other new construction, renovations, repairs, and replacements of City buildings shall employ

2. WHEREAS, the Kyoto Protocol emissions target for the United States would have been to reduce greenhouse gas emissions by seven percent (7%) below 1990 levels by 2012; and

3. WHEREAS, a significant source of greenhouse gas emissions from local governments is methane produced and emitted from landfills where organic waste naturally biodegrades into methane; and

4. WHEREAS, capturing and destroying the methane produced by landfills can significantly reduce greenhouse gas emissions; and

5. WHEREAS, landfill gas extraction technology is available and in use across the country; and

6. WHEREAS, landfill gas-to-energy systems, such as microturbines which are used to convert landfill gas into power sources creating renewable energy, are available and in use across the country; and

7. WHEREAS, renewable energy sources are necessary to reduce our country's reliance on foreign energy sources;

8. NOW, THEREFORE, BE IT RESOLVED that the U.S. Conference of Mayors endorses landfill gas collection and gas-to-energy initiatives and urges the mayors from across the nation to join this effort.

9. BE IT FURTHER RESOLVED that the U.S. Conference of Mayors encourages its members to support federal and state legislative incentives to support further development of landfill gas-to-energy technologies and their use.

Project cost: Unknown

Resolution No.52

Submitted by:

The Honorable Richard M. Daley

Mayor of Chicago

**ENCOURAGING INCREASED INVESTMENTS IN WEATHERIZATION
TO BENEFIT THE NATION'S COMMUNITIES**

1. WHEREAS, the cost of energy to heat and cool homes,

Conference of Mayors urges the federal government to substantially increase the amount of federal resources to assist families, businesses and local governments with weatherization efforts, without jeopardizing LIHEAP; and

10. BE IT FURTHER RESOLVED that The U.S. Conference of Mayors encourages the nation's mayors to educate their communities, businesses and local governments on the benefits of weatherization and to works toward development and implementation local weatherization programs to help reduce energy costs and improve local economies.

Project cost: Unknown

Resolution No.53

Submitted By:

The Honorable Will Wynn The Honorable Greg Nickels
Mayor of Austin Mayor of Seattle

The Honorable Thomas Menino The Honorable Ardell Brede
Mayor of Boston Mayor of Rochester

The Honorable Robert Cluck The Honorable Martin J. Chavez
Mayor of Arlington Mayor of Albuquerque

The Honorable Patrick H. Hays The Honorable David Berger
Mayor of North Little Rock Mayor of Lima

The Honorable Rocky Anderson The Honorable Kitty Piercy
Mayor of Salt Lake City Mayor of Eugene

The Honorable Henry Garret The Honorable Miguel Pulido
Mayor of Corpus Christi Mayor of Santa Ana

The Honorable John Hickenlooper
Mayor of Denver

ENCOURAGING THE USE OF PLUG-IN HYBRID VEHICLES

1. WHEREAS, American over-reliance on foreign oil is a growing and serious threat to the national security and economic vitality of the United States;

2. WHEREAS, the United States of America, with less than five percent of the world's population, is responsible for producing approximately 25 percent of the world's global warming pollutants; and

3. WHEREAS, petroleum combustion accounts for about 40% of all U.S. CO2 emissions.

4. WHEREAS, oil is only used to generate 2% of American electricity;

urges mayors from around the nation to join this effort.

16. BE IT FURTHER RESOLVED that the U.S. Conference of Mayors urges automakers to manufacture flexible fuel plug-in hybrid vehicles;

17. BE IT FURTHER RESOLVED that the U.S. Conference of Mayors encourages its mayors to submit "soft" or "advance" fleet orders to the Plug-In Partners initiative, which only commit the City to seriously consider the purchase, but shows interest to automakers;

18. BE IT FURTHER RESOLVED that the U.S. Conference of Mayors encourages its members to support federal and state legislation that funds incentives, demonstration projects, and fleet orders for plug-in hybrid vehicles.

Project cost: Unknown

Resolution No.54

Submitted by:

The Honorable Martin Chavez

Mayor of Albuquerque

The Honorable Richard M. Daley

Mayor of Chicago

ENDORSES THE INCREASED USE OF RENEWABLE FUELS

1. WHEREAS, Transportation consumes a considerable amount of fossil fuel; and

2. WHEREAS, The burning of conventional fuel such as gasoline and diesel, by motor vehicles, contributes to air pollution, and increased carbon emissions that have been linked to global climate change; and

3. WHEREAS, Transportation fuel costs represent a substantial operating expense for municipalities and their citizens; and

4. WHEREAS, Gasoline and diesel fuel prices are at record highs and are likely to remain high or increase, aggravating the adverse impact that high fuel prices have already had on municipal budgets; and

PROGRAM (LIHEAP)

1. WHEREAS, The Low Income Home Energy Assistance Program (LIHEAP) is the primary federal program available to help low-income households, including families with children, the elderly and disabled individuals, pay their home energy bills; and

2. WHEREAS, LIHEAP provides financial assistance for home heating and cooling, energy crisis intervention and low-cost home weatherization to low-income households, including working poor households, senior citizens, and persons with disabilities; and

3. WHEREAS, LIHEAP prevents low-income families from having to choose between paying to heat or cool their homes or purchasing necessary medication and food; and

4. WHEREAS, unaffordable home energy can lead to homelessness and housing abandonment, health and safety problems, and a lack of educational opportunities for children; and

5. WHEREAS, The Department of Energy has predicated that natural gas prices in 2006 will be 44 percent higher than during the winter of 2001-2002, and that fuel oil prices will be 69 percent higher; and

6. WHEREAS, Higher energy prices are increasing the need for assistance while reducing the purchasing power of LIHEAP; and

7. WHEREAS, Low-income households are harder hit by increases in energy prices and less able to absorb fluctuations in fuel cost than medium to higher income households; and

8. WHEREAS, the Congress authorized \$5.1 billion for the LIHEAP program but only appropriated \$2.48 billion in regular funds and \$681 million in emergency funds; and

9. NOW, BE IT FURTHER, RESOLVED that the U. S. Conference of Mayors urges Congress to fully fund appropriations of the LIHEAP program to \$5.1 billion in the FY 2007 budget to accommodate the increase in eligible lowincome households and rising energy prices.

Project cost: Unknown

9. WHEREAS, the Arctic Refuge is the last piece of America's Arctic coastline not already open to oil exploration; and

10. WHEREAS, the Arctic Refuge is one of the world's last, true wilderness areas which coastal plain consists of a fragile swath of tundra teeming with staggering numbers of birds and animals, and a vital birthing ground for polar bears, grizzlies, Arctic wolves, caribou and the endangered shaggy musk ox; and

11. WHEREAS, the findings through U.S. Geological Survey studies that the oil is not concentrated, but rather spread across the coastal plain in more than 30 small deposits, requiring vast networks of roads and pipelines that would fragment the habitat, disturb and displace wildlife; and

12. WHEREAS, the drive to drill the Arctic Refuge is about oil company profits and lifting barriers to future exploration in protected lands; and

13. WHEREAS, drilling in the Arctic Refuge will not lead the Country to energy independence; and

14. NOW, THEREFORE, BE IT RESOLVED that The U.S. Conference of Mayors does not support a budget resolution nor a National Energy Policy at any time in the future, which includes any language in support of drilling for oil in the Arctic National Wildlife Refuge.

Project cost: Unknown

Resolution No.56

Submitted By:
The Honorable Rocky Anderson
Mayor of Salt Lake City

PROMOTION OF CLEAN, RENEWABLE ENERGY SOURCES

1. WHEREAS, all people have a right to clean, reliable sources of energy; and,
2. WHEREAS, the health of the planet, including its oceans, wildlands, rivers, air, and climate, faces

12. NOW, THEREFORE, BE IT RESOLVED that The United States Conference of Mayors urges the United States government to develop, adopt, and implement a comprehensive energy policy focused on (1) reducing the United States' dependence on fossil fuels, (2) dramatically increasing the production of energy and fuel from clean, sustainable, and renewable sources, and (3) appropriate pricing of fossil fuels to reflect actual societal and environmental costs and to encourage conservation.

Project cost: Unknown

Eco-City 2007
A Green Action Plan for Alexandria

PHASE ONE INVENTORY

Designed by the
Urban Affairs and Planning Program at Virginia Tech, Alexandria Center

January 5th, 2006

Throughout 1998 city and community leaders engaged in a collaborative process to produce the City of Alexandria's first environmental strategic plan. Building on the Environmental Policy Commission's plan, more than 200 residents, business leaders, civic activists, and elected officials participated in the Environmental/Quality of Life Summit. The summit and the plan set forth dozens of ideas and recommendations to enhance existing, and develop new, environmental programs and policies. Alexandria adopted several of these ideas, including the formation of the current Environmental Services Department.

With the passage of more than eight years, the time seems ripe for Alexandria to design a new environmental action plan that sets forth goals and priorities for the next ten years:

- The city and the region confront new environmental challenges ranging from climate change and energy supply/demand to aging stormwater infrastructure and dwindling habitat/open space.
- Political support of the environment continues to grow. Mayor Euille endorsed a series of national resolutions on the environment that were formally adopted by the U.S. Conference of Mayors a few months ago.
- Alexandria, like many communities, has launched new environmental policies related to open space, urban forestry, Chesapeake Bay watershed protection, recycling, and green building design.
- Dozens of cities across the nation have also created model environmental programs. Several cities have devised holistic ecological plans that Alexandria could adapt to fit local needs.

The challenge is pulling together all of the community's individual programs into a cohesive plan.

Building on the legacy of 1998, a team of environmental planning professors and graduate students from Virginia Tech University's Urban Affairs and Planning program in Alexandria would design and manage a three-phase strategic planning process for the city called *Eco-City 2007*.

- Inventory Existing Programs/Policies and Collect Relevant Model Practices (Spring 2007)
- Prepare a Draft Eco-City Action Plan (TBA)
- Design and Facilitate an Eco-City Community Summit (TBA)

The content and ideas set forth in this proposal are the intellectual property of UAP Virginia Tech, Alexandria Center

The following proposal ONLY covers Phase I of *Eco-City 2007*. During the Phase I Inventory, Virginia Tech would work with city officials to explore funding opportunities (government and foundations) to support Phases II and III.

The Virginia Tech Team: Professors in Practice Joe Schilling and Shelley Mastran will lead the Virginia Tech effort and serve as the primary points of contact with the city and the community. Schilling teaches classes in Environmental Planning and Policy and Community Involvement. He holds a Masters of Environmental Law from George Washington Law School and has worked with dozens of local governments on land use, brownfields, and environmental management, and was co-instructor for the Commonwealth Avenue Studio project carried out last spring. Mastran teaches in both the Urban Affairs and Planning program and Natural Resources program at Virginia Tech. She is a national expert on urban and rural planning, main street revitalization, conservation, and historic preservation.

Schilling and Mastran will be assisted by Associate Professor Kris Wernstedt, formerly with the environmental policy think tank Resources for the Future, and Kathryn McCarty, adjunct community involvement professor, and co-director of ADR Vantage, Inc., a woman-owned community involvement and facilitation firm. For Phase I Wernstedt will lend a hand with the research of model environmental practices and draft action plan. For Phases II and III McCarty will work directly with the team in designing and facilitating the process for the proposed *Eco-City Summit*.

Together these four professors will form the core of the Virginia Tech team with assistance from a select pool of approximately ten graduate students in planning, natural resources, and landscape architecture. The students will help inventory existing Alexandria environmental programs and collect best practices. Unlike the typical graduate student body, the large majority of students from the Alexandria campus have extensive work experience in the field.

PHASE ONE INVENTORY: Scope of Work and Deliverables (January through June 2007).

Working closely with city officials, city staff, and local environmental groups (e.g., Alexandria's Environmental Policy Commission), Professors Schilling and Mastran, with guidance from Professor Wernstedt, will lead a spring *Eco-City Studio* of approximately ten students. Starting with the 1998 plan, the multidisciplinary team (planning, law, environmental policy, and landscape architecture) will inventory the city's current and past environmental activities and existing plans, such as the required state recycling plan. The inventory will catalogue city programs and policies according to an index of common environmental practices, such as green roofs, stormwater, recycling, etc. The inventory will also include any results (e.g., environmental benefits) to the extent data and information is available and serve as the foundation for the project's subsequent phases once they are approved.

The *Eco-City Studio* will focus on the collection of model practices and programs from other cities. With guidance from the professors, the students will search the various web sites of national and international organizations and environmental groups as well as telephone and email contact with the program leaders from a small sample of model initiatives. The team will identify those environmental topics and cities that seem to have the most relevance and importance for Alexandria. Professors Schilling, Mastran, and Wernstedt have dozens of contacts in the field they can draw upon. They will also review these model practices in light of legal limitations on local government powers as Virginia is a Dillon's Rule state as well as the program financial and staffing levels.

Throughout the spring studio the Virginia Tech team would work closely with city staff and city officials to get their feedback on the content and format of the inventory and compendium of model practices. Throughout the studio and during May and June, we anticipate holding:

- Regular meetings (once or twice a month) with city of Alexandria's designated studio liaison and other staff; and
- Two or three brainstorming sessions with the Environmental Policy Commission, city councilmembers, and other city leaders to share drafts of the inventory, compendium of model practices, action plan framework.

The Virginia Tech team would then integrate the comments from city leaders and staff from these meetings and brainstorming sessions. These working sessions will also help prepare the city and Virginia Tech for Phases II and III.

- *Deliverable:* Inventory of Alexandria's Environmental Programs and Policies (25-35 page PDF document)
- *Deliverable:* Eco-City Model Practices—a compendium of relevant programs and policies from other cities (25-35 page PDF document)
- *Deliverable:* Preliminary Action Plan Framework and Recommendations for Next Steps

Towards the end of the semester Schilling and Mastran will hire a part-time graduate assistant (probably one of the students from the studio) to format and summarize the deliverables from the spring studio and work with the professors on planning for next steps.

Preliminary Budget—PHASE ONE

**(Subject to Final Approval by the City and
Virginia Tech’s Office of Sponsored Programs in Blacksburg)**

Spring 2007—Eco City Studio (January—June 30th, 2007)

Schilling and Mastran	\$ 8,000 ¹
Graduate Researcher	3,200 ²
Direct Costs (long distance phone charges Publications and research fees) (V-Tech Overhead 26%)	550 3,575 ³
TOTAL	\$14,805

¹ Professor Wernstedt contributions for the Studio will be covered by Virginia Tech accounts. The hourly rate for Schilling and Mastran’s academic salary translates to approximately \$75.00 per hour with a combined total of 106 hours . For the studio, the city’s funds would cover a small portion of the studio and drafting of the reports during the summer. Virginia Tech will cover the remaining hours.

² The hourly wage for graduate student researchers range from \$15.00 to \$20.00 depending on experience, so approximately 213 to 160 hours allocated for this project. Most of the graduate researcher’s work would happen after the studio, during the first part of the summer.

³ Virginia Tech’s Office of Sponsored Projects in Blacksburg requires overhead for any grant or contract work done by university faculty and students unless the entity has an official policy or resolution passed by its board that prohibits the payment of overhead. 26% is the off site overhead rate and is approximately half of the on-campus overhead rate.

Eco-City 2007 A Green Action Plan for Alexandria

**Designed by the
Urban Affairs and Planning Program at Virginia Tech
Alexandria Center**

December 27th, 2006

Throughout 1998 city and community leaders engaged in a collaborative process to produce the City of Alexandria's first environmental strategic plan. Building on the Environmental Policy Commission's plan, more than 200 residents, business leaders, civic activists, and elected officials participated in the Environmental/Quality of Life Summit. The summit and the plan set forth dozens of ideas and recommendations to enhance existing, and develop new, environmental programs and policies. Alexandria adopted several of these ideas, including the formation of the current Environmental Services Department.

With the passage of more than eight years, the time seems ripe for Alexandria to design a new environmental action plan that sets forth goals and priorities for the next ten years:

- The city and the region confront new environmental challenges ranging from climate change and energy supply/demand to aging stormwater infrastructure and dwindling habitat/open space.
- Political support of the environment continues to grow. Mayor Euille endorsed a series of national resolutions on the environment that were formally adopted by the U.S. Conference of Mayors a few months ago.
- Alexandria, like many communities, has launched new environmental policies related to open space, urban forestry, Chesapeake Bay watershed protection, recycling, and green building design.
- Dozens of cities across the nation have also created model environmental programs. Several cities have devised holistic ecological plans that Alexandria could adapt to fit local needs.

The challenge is pulling together all of the city's and community's individual programs into a cohesive plan.

Building on the legacy of 1998, a team of environmental planning professors and graduate students from Virginia Tech University's Urban Affairs and Planning program in Alexandria propose to design and manage a three-phase strategic planning process for the city called *Eco-City 2007*:

- One: Inventory Existing Programs/Policies and Collect Relevant Model Practices (Spring 2007)
- Two: Prepare a Draft Eco-City Action Plan (Summer-Fall 2007)
- Three: Design and Facilitate an Eco-City Community Summit (Fall 2007 or Spring 2008)

The content and ideas set forth in this proposal are the intellectual property of UAP Virginia Tech, Alexandria Center

Currently the city and the university are making final arrangements to launch Phase I for the spring of 2007 and will jointly explore other opportunities for funding Phases II and III.

The Virginia Tech Team: Professors in Practice Joe Schilling and Shelley Mastran will lead the Virginia Tech effort and serve as the primary points of contact with the city and the community. Schilling teaches classes in Environmental Planning and Policy and Community Involvement. He holds a Masters of Environmental Law from George Washington Law School and has worked with dozens of local governments on land use, brownfields, and environmental management, and was co-instructor for the Commonwealth Avenue Studio project carried out last spring. Mastran teaches in both the Urban Affairs and Planning program and Natural Resources program at Virginia Tech. She is a national expert on urban and rural planning, main street revitalization, conservation, and historic preservation.

Schilling and Mastran will be assisted by Associate Professor Kris Wernstedt, formerly with the environmental policy think tank Resources for the Future, and Kathryn McCarty, adjunct community involvement professor, and co-director of ADR Vantage, Inc., a woman-owned community involvement and facilitation firm. Wernstedt will lend a hand with the research of model environmental practices and draft action plan. McCarty will work directly with the team in designing and facilitating the process for the proposed fall 2007 Summit.

Together these four professors will form the core of the Virginia Tech team with assistance from a select pool of approximately ten graduate students in planning, natural resources, and landscape architecture. The students will help inventory existing Alexandria environmental programs, collect best practices, and facilitate working groups or sessions at the fall environmental summit. Unlike the typical graduate student body, the large majority of students from the Alexandria campus have extensive work experience in the field.

Environmental Action Plan Process and Deliverables: Based on preliminary conversations with the city, Virginia Tech proposes a three-phased project that would span most of calendar year 2007. The following draft framework can easily be modified and tailored to fit more closely the city's goals and objectives.

- PHASE ONE: Inventory Existing Environmental Programs, Collect Relevant Model Practices, Perform Preliminary Stakeholder Assessment (January-June 2007): working closely with city officials, city staff, and local environmental groups (e.g., Alexandria's Environmental Policy Commission), Professors Schilling and Mastran will lead a spring *Eco-City Studio* of approximately ten students. Starting with the 1998 plan, this multidisciplinary team (planning, law, environmental policy, and landscape architecture) will inventory the city's current and past environmental activities and existing plans, such as the required state recycling plan. The inventory will catalogue city programs and policies according to an index of common environmental practices, such as green roofs, stormwater,

recycling, etc. The inventory will also include any results (e.g., environmental benefits) to the extent data and information are available and serve as the foundation for the project's subsequent phases.

The *Eco-City Studio* will also collect model practices and programs from other cities. With guidance from the professors, the students will search the various web sites of national and international organizations and environmental groups as well as telephone and email contact with the program leaders from a small sample of model initiatives. The team will focus on those environmental topics that seem to have the most relevance and importance for Alexandria. Professors Schilling, Mastran, and Wernstedt have dozens of contacts in the field they can draw upon.

- *Deliverable*: Inventory of Alexandria's Environmental Programs and Policies (25-35 page PDF document)
- *Deliverable*: Eco-City Model Practices—a compendium of relevant programs and polices from other cities (25-35 page PDF document)
- *Deliverable*: Preliminary Action Plan Framework and Recommendations for Next Steps
- **PHASE TWO: Prepare Draft Environmental Action Plan and Design of the *Eco-City Environmental Summit* (TBA 2007)**: Based on the inventory and model practices, the professors would prepare a draft environmental action plan. They would also hire a full-time graduate assistant (probably one of the students from the studio) to work with the professors on phase two and three of the project. The draft plan would be based on model ecological plans from relevant cities and set forth a cohesive format that includes long range goals, concrete objectives, and specific suggestions for policies and programs.
 - **Internal Feedback Process**: The Virginia Tech team would also vet the draft action plan with city staff and city officials. This may entail two or three internal feedback sessions with the Environmental Policy Commission, city staff, city councilmembers, and other city leaders throughout the summer. Virginia Tech would then integrate the comments and ideas into a final draft action plan and prepare the draft for the city to release to the public prior to the fall summit.
 - **Citizen Feedback Process**: Professors Schilling and McCarty will work with several students to prepare a preliminary stakeholder assessment. The stakeholder assessment will identify key groups and individuals within the community that should participate in the fall summit. The instructors and students would conduct preliminary focus group interviews with different community organizations to get their ideas and thoughts about the elements of a city-wide environmental action plan. The results from this community outreach will assist in the process design of the draft action plan and *Eco-City Summit*.
 - **Eco-City Summit Planning**: Professors Schilling and McCarty, working with city leaders and staff, would also prepare for the summit. One idea is

for the city, under the auspices of the Environmental Policy Commission, to charter an *Eco-City Summit Steering Committee* to guide program preparations. Schilling and McCarty would suggest a collaborative process that includes interactive tools and techniques to encourage community input and feedback on the draft environmental action plan. They would prepare a final agenda and format for the summit. Perhaps the city can sponsor a special web page for the community to gather information about the summit; Virginia Tech students could lend a hand with the design and posting of information. Schilling and McCarty have designed and facilitated several community consensus building processes and would ensure the final design works for Alexandria's diverse community.

- Phase Two Deliverables:
 - *Deliverable:* Final Draft Environmental Action Plan (35 page PDF document)
 - *Deliverable:* Preliminary Stakeholder Assessment and Summary from Focus Group Interviews
 - *Deliverable:* Agenda and Format for the Summit
- Facilitate the *Eco-City Environmental Summit (TBA)*: The summit's primary goal is to engage a broad cross section of the community and representatives from different interest groups in a collaborative goal-setting process. Schilling and McCarty would propose starting with two informational briefings (90 minute meetings) in two different parts of the city a few weeks before the summit. These briefings could be set during weekday evenings. Participants in these briefings and during the Summit would have the opportunity to comment on the draft environmental action plan. The city would have the option to modify the document and/or note the citizen comments as an annotation to guide the action plan's implementation.

The Virginia Tech proposal assumes the Summit would likely be a half day event on a Saturday for 150-200 participants. The Summit could be structured as a policy charrette that spans several days over the course of two or three weeks, but that would require additional resources. The Summit could include a blend of formal presentations from well known environmental leaders from other cities along with interactive, table top discussions. Much depends on the direction and guidance from city officials and city staff.

The city would be responsible for hosting and managing the summit logistics (e.g., sending out invitations, providing meeting space, food, AV, flip charts, and copies of the draft report, etc.). Virginia Tech would propose that Schilling and McCarty act as the lead facilitators (process managers) for the event. They would essentially organize and manage the facilitation process with city staff, professors, and graduate students forming table top facilitation teams for small group discussions. Each team would capture the results from the working groups and those results would then be presented at the end of the Summit. Virginia Tech

would prepare the results or proceedings from the Summit. Another option to consider is Virginia Tech students enrolled in the fall 2007 Research Methods course could design a web-based survey to gain additional feedback on the Action Plan before and after the Eco-City Summit.

- *Deliverable:* Facilitation Work Plan for the Eco-City Summit and Community Briefings
- *Deliverable:* Summit Proceedings (25-35 page PDF document)

Preliminary Budget
**(Subject to Final Approval by the City and
Virginia Tech's Office of Sponsored Programs in Blacksburg)**

Spring 2007—Eco City Studio (January—June 30th, 2007)

Schilling and Mastran	\$ 8,000
Wernstedt	1,000
Direct costs: (Phone, publications, research fees)	750
Graduate Researcher	4,000
(V-Tech Overhead 26%)	3,575
TOTAL	\$17,325

Summer 2007—Planning and Prep


Schilling and Mastran	\$ 6,000
McCarty	5,000
Graduate Assistant (40 hours)	8,500
 (Overhead 26%)	 4,550
TOTAL	\$24,050

Fall 2007—Eco-City Summit

Schilling and McCarty	\$10,000
Mastran and Wernstedt	3,000
Graduate Assistant (10 hours)	4,500
 (Overhead 26%)	 4,550
TOTAL	\$22,050

City of Alexandria, Virginia

MEMORANDUM

DATE: JANUARY 23, 2007
TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL
FROM: JAMES K. HARTMANN, CITY MANAGER 
SUBJECT: PROGRESS IN ALEXANDRIA'S PURSUIT OF ENVIRONMENTAL QUALITY

The City's 2004-2015 Strategic Plan, first adopted by City Council in 2004 and amended just one year ago in January 2006, establishes environmental quality as one of Alexandria's top priorities. Goal #2 of the Alexandria Plan for 2004-2009 commits the City to being "A City That Respects, Protects, Preserves and Enhances the Natural Environment and Historic Resources."

Toward that goal, the City is pursuing a multi-faceted strategy that includes:

- A. Sound planning that promotes environmentally conscious development
- B. Greater energy conservation and reliance on clean-burning vehicles throughout City departments
- C. Promotion of environmentally friendly transportation alternatives
- D. Acquisition of open space throughout the City
- E. Proactive efforts to upgrade aging infrastructure that can harm the environment, and
- F. Aggressive environmental enforcement.

Together, these initiatives are having an ever-greater impact on reducing unnecessary energy consumption and improving water and air quality in the City.

A. Promoting Environmentally Conscious Development through the Planning Process

The City of Alexandria continues to lay the groundwork for an environmentally friendly future through the land-use planning process by providing for greater density near our Metrorail stations and by working with responsible developers to create other mixed-use communities that can reduce reliance on passenger cars.

Eisenhower East Small Area Plan creates a vision for this strategically located 230-acre area that maximizes use of existing mass transit, reduces reliance on the automobile, coordinates design, and integrates public amenities. When completed, this vibrant, pedestrian-oriented urban village will feature distinctive architecture and a healthy mix of jobs, residences, and retail – all linked by a network of plazas and parks. Plans call for 23.3 acres of parks and open space by 2015.

Braddock Metro Neighborhood Plan will establish a community vision for a vibrant urban village with safe and attractive streets and redevelopment that respects the character and scale of existing residential areas and the historic assets of the Parker-Gray Historic District. The Plan identifies sites for new public open space and encourages the clustering of shops and restaurants on key pedestrian routes and intersections. It also provides for more efficient bus and rail service, and addresses the key community concern that improved transit be accompanied by an improved and safe pedestrian environment.

Potomac Yard – Following extensive planning and public input, development is now underway on the first phase of transforming this 165-acre portion of the former railroad yard into a high-quality, mixed use development, with 1.9 million square feet of office space, 135,000 square feet of retail (in addition to the existing 600,000 square foot Potomac Yard Shopping Center), and 1700 residential units. Potomac Yard will include 40 acres of park and open space – in addition to the 21.5 acres previously set aside during development of the Potomac Greens and Potomac Plaza portions of the overall railroad property. The project is planned to promote north-south traffic flow via two new arterial streets and will be readily accessible to future transit along the Jefferson Davis Highway right-of-way.

The City continues to encourage environmentally conscious and sustainable buildings through of the development process and its “Green check list.” Resulting Green buildings include the new T.C. Williams High School – the first Leadership in Energy and Environmental Design (LEED)-certified high school in Virginia; Episcopal High School building; the Diamond property (Nordic Press site) on Slaters Lane, the Prescott Property at Henry and Cameron Streets; and the Hennage-Monarch property on Henry St.

In addition, “Green” roofs are in place at the Duncan Library and Health Department Building; the Charles Houston Recreation Center and DASH Bus Facility will be LEED-registered projects; and the New Police Department building and Potomac Yard Fire Station are expected to be LEED-certified.

Additional ongoing pro-environment development programs include:

- Reduced Site Disturbance at Development Sites, resulting in greater tree preservation
- Greater Recycling of Building Materials and Content
- Low Emitting Building Materials – e.g., utilize paints with low Volatile Organic Compound (VOC) concentrations
- Maximization of natural light daylight-views, and
- Use of High Efficiency mechanical equipment

B. Energy Conservation Programs

The City’s commitment to conserving energy is being realized through many initiatives that add up to significant savings:

- \$1.27 million Energy CIP projects
- Retrofitting energy-wasting incandescent fixtures with florescent bulbs
- Purchasing variable frequency drives for fans
- Transitioning to other environmentally friendly equipment when possible

- Vehicle fleet – An ever-increasing proportion of low-emission vehicles (currently 55 low-emission vehicles, including 14 Hybrids)
- Fleet downsizing - sedans and SUV's are being replaced with more efficient vehicles where appropriate
- Inefficient traffic signals are being retrofitted with light-emitting diode (LED) technology.
- Other efforts -- insulation, bulbs, Air Quality Action Day – are ongoing.

C. Promoting Environmentally Friendly Transportation Alternatives

While promotion of “smart-growth” development near existing and planned transit lines is the most significant contributor to utilization of pro-environment transportation modes, the City continues to promote use of transportation alternatives in a number of ways.

Pedestrian and Bicycle Program Coordinator – In 2006, the City of Alexandria hired its first First Pedestrian and Bicycle Program Coordinator, Yon Lambert. The Coordinator works with local employers, groups and schools to promote healthy and safe pedestrian and bicycle routes and programs. Recent improvements have included installation of distinctive “Sharrow” lane markings and placing portable warning flags at hazardous pedestrian crossings.

DASH – The City’s commitment to transportation alternatives is evident in the success of DASH transit – ridership up 7.3%. DASH continues to set a very high standard and project a positive, high-quality image for surface transit programs.

Telework – The City promotes telework alternatives among small employers and is conducting pilot telework programs within several City departments.

D. Acquisition of Open Space throughout the City

Since the inception of the Open Space Master Plan in 2003, City staff has continued to work with the Open Space Steering Committee and the public to achieve plan goals. A number of goals have been met, with significant achievements that include:

- Acquisition of eight parcels shown in the Open Space Master Plan, including key Waterfront and Four Mile Run properties;
- Additional open space acreage achieved through the development process, including voluntary dedication properties and public access/preservation easements on development sites;
- Three significant voluntary conservation easements in partnership with the Northern Virginia Conservation Trust.

A total of 64 acres out of the 100-acre goal has been acquired, dedicated or put in conservation easements since the plan's inception in 2003.

In addition, the City has actively pursued outreach opportunities throughout the year to increase public awareness of open space preservation. Activities include conservation easement workshops, continued participation in civic association meetings, and regular updates in City and RP&CA media outlets.

Urban Forestry. The City promotes Environmental Quality through the planting and maintenance of trees on public rights of way and other public properties. The City plants approximately 300 trees annually and maintains public trees along streets and in City parks.

The Urban Forestry Steering Committee is completing an Urban Forestry Master Plan for consideration by City Council. The goal of this plan will be to protect and preserve the City's existing tree canopy cover and promote its expansion through the implementation of a plan to plant more trees along public rights-of-way and on public properties, and to improve the health and longevity of the City's existing public trees through improved management and an expanded tree maintenance program.

The Urban Forestry Master plan will also recommend stronger enforcement and improved implementation of tree preservation and landscape installation on development sites, including the use of innovative planting techniques to improve the healthy development of trees on these sites.

Additionally, the Urban Forestry Plan will encourage the preservation, planting and maintenance of trees on private property through expanded public outreach programs designed to educate the public on the important contributions trees make to improve water and air quality, and by providing resources to assist property owners when they have questions about tree selection, health and maintenance.

Other Initiatives:

- New Four Mile Run Stream Restoration Master Plan includes environmentally sensitive stream and habitat restoration as well as a future recycling center.
- Cameron Run/Holmes Run Feasibility Study with Fairfax County and the US Army Corp of Engineers will include strategies for habitat restoration and stream restoration.
- Improved field and park conditions through increased maintenance, guidelines and standards.
- Potomac River stream bank re-stabilization within the Windmill Hill Park Approved Concept Plan, bulkhead renovation.
- Potomac Heritage Trail designations and improvements through Alexandria's trail segments.
- City-wide bicycle trail improvements including Eisenhower Ave./Holmes Run Greenway Plan.

E. Upgrading Aging Infrastructure

Infiltration and Inflow (I&I). The City has to date invested \$7.2 million on the first two phases of its program to address excessive infiltration and inflow into sanitary sewers throughout the City. "Infiltration" is groundwater that enters sanitary sewers through leaks in pipes. "Inflow" is storm water that is directed to the sanitary sewers through connections such as roof downspouts, driveway drains and groundwater sump pumps. During wet weather, infiltration and inflow can increase the flow to sanitary sewers to the point of overload. When this occurs, the excess water can cause sewers to overflow, releasing pollutants into our waterways and damaging private property by creating backups into basements.

To date, the City has completed a significant I&I project on Four Mile run and has begun I&I construction on Commonwealth Avenue. Further I&I projects are in the planning stages. When completed, these projects will have a significant impact on improving water quality in City streams and runs, as well as the Potomac River.

Combined Sewer System (CSS) Area Reduction Plan. Storm and sanitary sewer pipes in and around areas such as Samuel Madden Homes, Saul Center, Portner Brothers, Prescott Monarch and Charles Houston Recreation Center are now required to be separate.

Oronoco Outfall Corrective Action Plan (pipe relining) – This plan is now being implemented.

Other Initiatives

- Completed Phase II Stream Assessment Study
- Installed particulate air monitoring station in West End
- City re-certified as Chesapeake Bay Partner Community Gold Award Winner by Chesapeake Bay Program
- Environmental Action Plan – presented to Council on January 23
- Major stream cleanup activity, including
- Annual Potomac Watershed Cleanup
- International Coastal Cleanup
- Over 200 volunteers removed over 10 tons of trash from sections of Four Mile Run, Holmes Run, Cameron Run, Hunting Creek, and the Potomac River
- New DEQ website: <http://alexandriava.gov/tes/DEQ/>. provides electronic versions of many of the division's forms, brochures, handbooks, and fact sheets.
- New stormwater Best Management Practice (BMP) inspection program
- Color brochure developed
- Over 150 inspections conducted
- Staff raising awareness of stormwater management facilities and maintenance needs
- City partnered with the Northern Virginia Regional Commission and other jurisdictions on the 2006 Stormwater Pollution Prevention Education Campaign

F. Enforcement

Mirant Potomac River Generating Station (PRGC). The City's efforts to close the outmoded, five-stack coal-fired Mirant plant are ongoing. Ending operations at this facility will have an immediate and dramatic effect on air quality in the City and throughout the region that will be far greater than any other single action taken by any other local government in the Virginia-DC-Maryland area.

The City's recent withdrawal of its "nuisance" suit against Mirant was a strategic move that allows the City more time to evaluate the additional data being generated by increased monitoring that is a result of greater enforcement efforts by federal and state authorities. The City retains the right to re-file the lawsuit if necessary.

Recent enforcement activities undertaken by the City include 1) a presentation to the Virginia Air Pollution Control Board, 2) submission of comments on Mirant's Wind Tunnel Study provided to the Environmental Protection Agency, and 3) comments on the Department of Energy's Draft Special Environmental Assessment of the order governing operation of PRGC.

Virginia Paving Company. The 2006 SUP approved by City Council incorporates significant environmental controls that would not otherwise have been possible under existing state and federal regulations, including:

- Control measures to reduce particulate matter (soot) emissions from both asphalt plants, as well as fugitive dust controls (such as enclosures, water sprays, and vacuum sweeping) from aggregate storage and handling;
- Installation of several state-of-the-art controls to reduce emissions of nitrogen oxides, sulfur dioxide, volatile organic compounds (VOC), particulate matter, and toxic air pollutants that are typically not required for minor sources of air pollution in Virginia;
- Reduction of emissions of nitrogen oxides, VOC and PM-2.5 (particulate matter less than 2.5 micron in size). The SUP prohibits operation on Code Purple and Code Maroon action days and imposes clean-burning requirements and production restrictions on Code Red and Code Orange days; and
- Additional measures including installation of odor controls, burning of cleaner fuels, installation of a new Storm Water Management Facility (SWMF) to treat all Virginia Paving contact water and storm water runoff prior to discharge, and creation of a new full-time position, funded by the applicant, to ensure compliance with SUP conditions.

Other: The Department of Planning & Zoning's SUP Reinspection Program will result in ongoing improvements to air and water pollution controls throughout the City.

CONCLUSION

The City's commitment to environmental stewardship has never been greater. The myriad demonstrations of this commitment continue to provide ongoing, and ever increasing, benefits to our residents, our visitors, our businesses and our natural resources.

A scenic photograph of a riverbank. The water is a mix of brown and blue, reflecting the sky. A single bird, possibly a heron or egret, stands in the shallow water near the shore. The background shows a dense line of trees and foliage. The overall tone is natural and serene.

*Overview of Environmental
Progress & Accomplishments
Since Environmental/
Quality of Life Summit 1998*

January 23, 2007

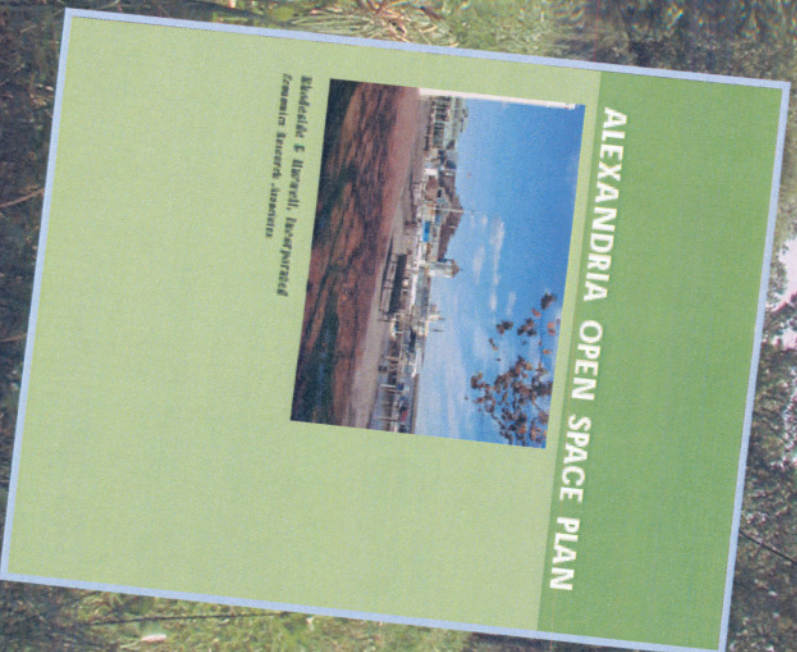


Environmental/Quality of Life Issues identified in 1998

- Open Space
- Transportation
- Solid Waste
- Water Resources
- Urban Development Issues
- Visual Impacts / Aesthetic Issues
- Historic / Cultural Resources

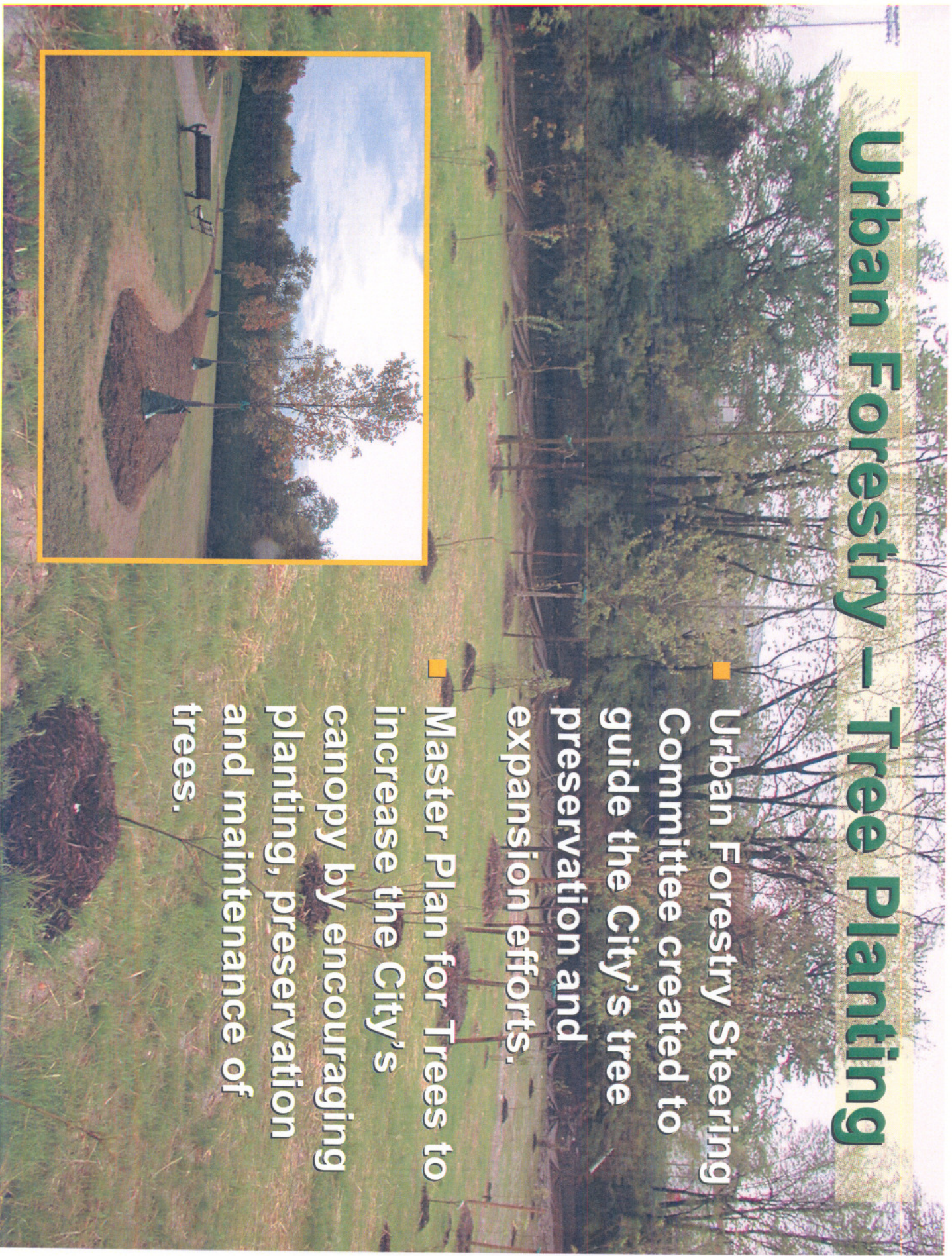
Open Space

- Open Space Plan, adopted in 2003
- Open Space Committee
- Significant gains
- Prior to 2004:
 - 60.0 ac. to be obtained from Potomac Yard development
- Since 2004:
 - 21.4 ac. Purchased or dedicated
 - 26.6 ac. Planned future



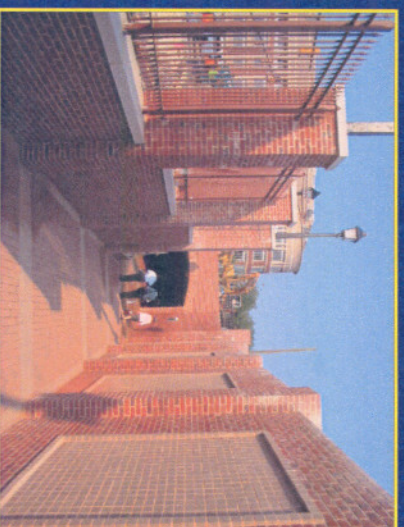
Urban Forestry – Tree Planting

- Urban Forestry Steering Committee created to guide the City's tree preservation and expansion efforts.
- Master Plan for Trees to increase the City's canopy by encouraging planting, preservation and maintenance of trees.



Encouraging Increased Use of Transit

- Transportation Master Plan Update
- King Street Station North Entrance and Platform Extension
- DASH Service Improvements and Bus Maintenance Facility
- Crystal City/Potomac Yard Transit Corridor
- Pedestrian Access to Transit Stations and Stops



Improving Pedestrian and Bicycle Accommodations

- Neighborhood Traffic Calming
- Eisenhower Valley Multi-Use Trail
- Mount Vernon Trail Improvements – Jones Point and Oronoco
- Improved Bicycle Signing, Markings and Parking
- Pedestrian Connections - Ben Brenman Park to Holmes Run Trail
- Infill Sidewalks and Pedestrian Connections
- Pedestrian-Friendly Intersections (displays, crosswalks and signing)



Reducing Congestion

- Street Improvements – King at Beaugard, Eisenhower Avenue



- Signal Retiming and Coordination (Old Town, Route 1, Duke Street corridor)



Solid Waste

- Solid Waste Plan (2004)
- S.T.O.P. (Stop Throwing Out Pollutants)
 - Household Hazardous Waste and Electronics
- New Multi-family Residential and Business Recycling Program (2006)
- Expanded Leaf Collection / Mulch Programs
- Spring Clean-up
- Composting Program
- Potomac River Watershed Trash Treaty Clean-up

Hazardous Waste Information



City of Alexandria, Virginia
Department of Transportation and Environmental Services
Office of Recycling

S.T.O.P. Program Stop Throwing Out Pollutants

Improper disposal of the products listed below pollutes our environment and could cause injury to collection workers. City of Alexandria residents will now be able to take these products to a site in Alexandria for environmentally-safe disposal by a licensed hazardous waste disposal firm. Starting June 4, 2001, the site at 3600 Wheeler Avenue will be open every Monday (except for holidays), from 10 a.m. til 6 p.m. Please bring products in the originally labeled containers only. Containers should be sealed and properly packaged for safe transportation. Proof of residency is required. Waste from Conditionally Exempt Small Quantity Generators will be accepted by appointment only. For more information, call the Office of Recycling at 703-751-5872.



ACCEPTABLE Items		
Antifreeze	Fire Extinguishers	Lawn Care Products
Battery Acid	Household Cleaning Products	Garden Products
Gasoline	Flammable Waxes & Abrasives	Herbicides
Motor Oil	Driveway Sealer	Pesticides
Auto Cleaning Products	**Household Batteries	Ant Bait or Traps
Car Batteries	Drain Cleaners	Rodent Control Products
Oil-Based Paints	Propane Tanks	Insect Spray Cans
Flammable Caulks & Adhesives	Pet Supplies	Computers
Lacquers	Photographic Chemicals	Televisions
Spray Can Paint	Developers	VCRs
Varnishes	Fixers	Printers
Thinners		Cellular phones
Mineral Spirits		Other types of electronics



Water Quality In Alexandria

CITY OF ALEXANDRIA MASTER PLAN

*Water Quality Management
Supplement*



Adopted January 13, 2001

- City Council adopted and added the Water Quality Management Supplement to the City's Master Plan in January 2001.
- Serves as a road map for the City's efforts to protect and improve water quality.

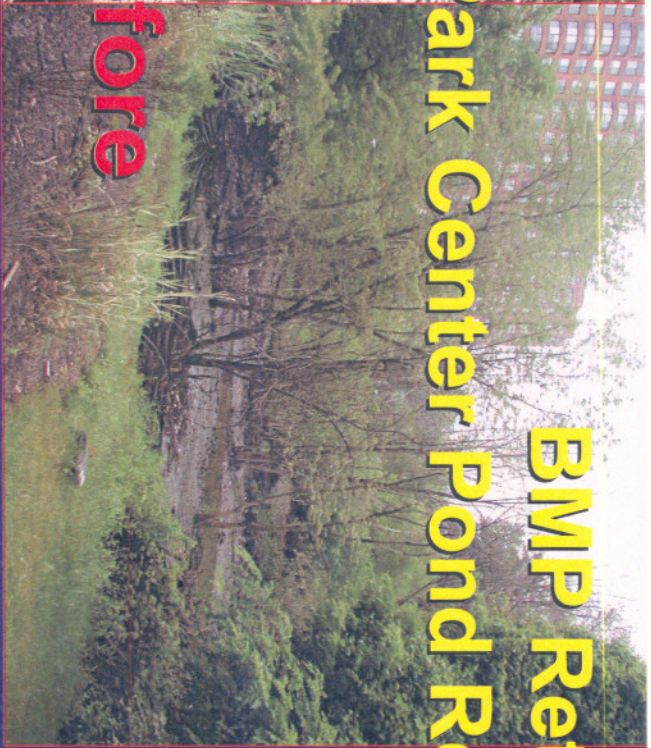
Chesapeake Bay Program



- Revised City Environmental Management Ordinance 2003
- Stream Assessment Ph I for Stream Classification
- Establishes hierarchy of required protection by establishing:
 - RPA (Resource Protection Areas
 - RMA (Resource Management Areas)

City's Chesapeake Bay Program

- Requirements more stringent than the state minimums
- Requires the “First Flush” of storm water from all impervious areas be treated through BMPs before discharging to our streams
- Protects perennial streams with a 100’ buffer and natural intermittent streams with a 50’ buffer
- Establishes Water Quality Improvement Fund
- Provides for “Tool Box” approach to address Alexandria’s needs



BMP Retrofits Park Center Pond Retrofit

Before



After



Stream Restoration with Redevelopment



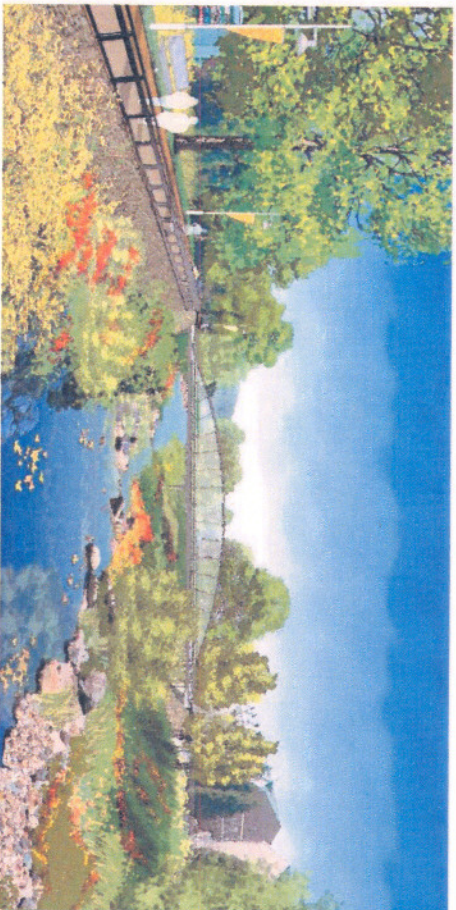
**Taft Avenue
Project**

Phase II Stream Assessment Study

- Inventories stream characteristics and evaluates for severity of impact
- Characterizes transition phase of stream
- Infrastructure inventory
- Photos of stream components for visual comparisons



Four Mile Run Restoration Master Plan



Four Mile Run Restoration Master Plan



Prepared for
ARLINGTON COUNTY &
CITY OF ALEXANDRIA

Consultants
RHODESIDE & HARWELL,
INCORPORATED
CHZMHILL

BIHABITAYS, INCORPORATED
WATERSCAPES / DREISEITL

January 2006

DRAFT

Partnership project to "restore" a two mile section of Four Mile Run which is highly degraded and impacted

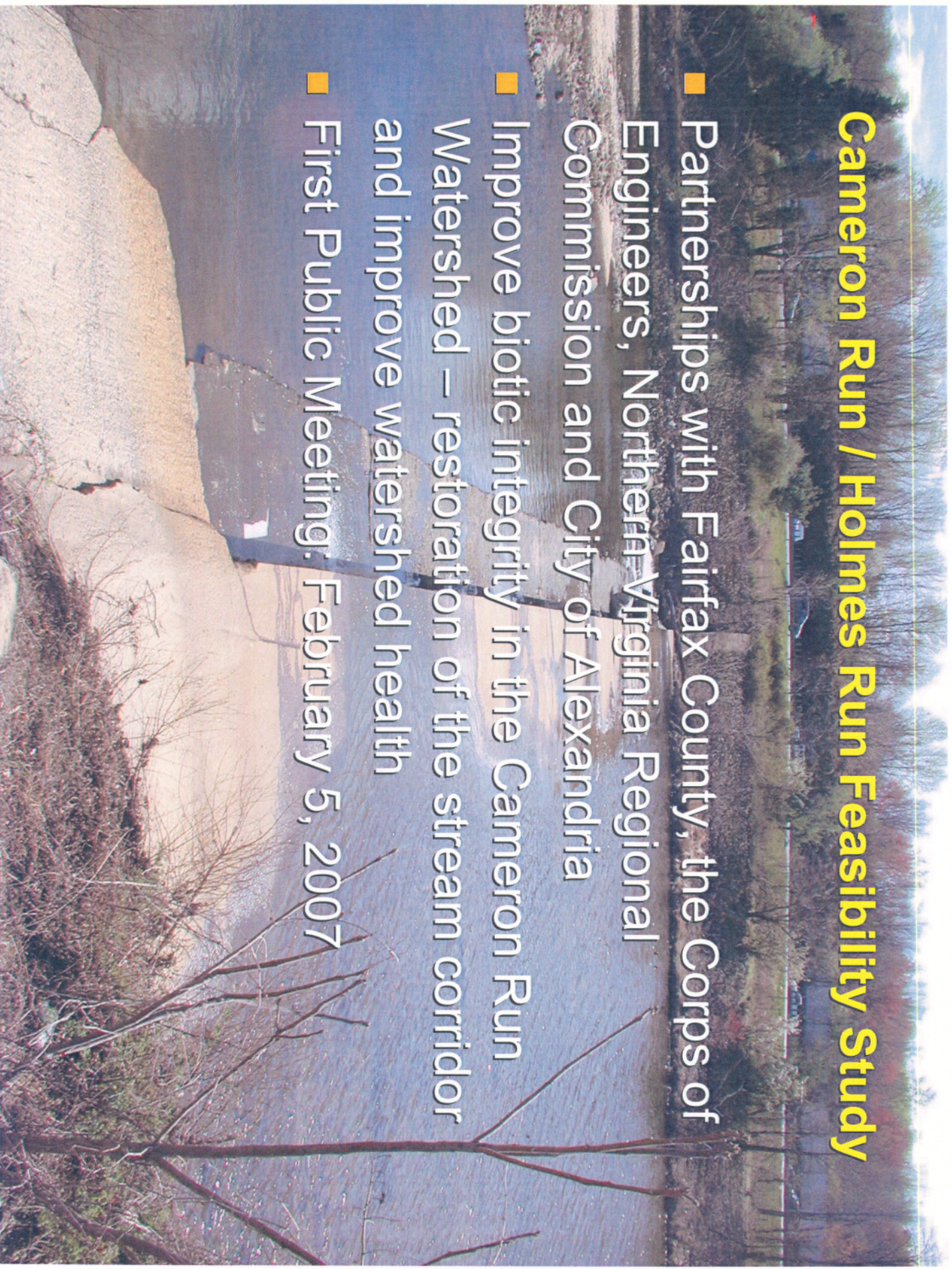


Four Mile Run Wetlands & Buffer



Cameron Run / Holmes Run Feasibility Study

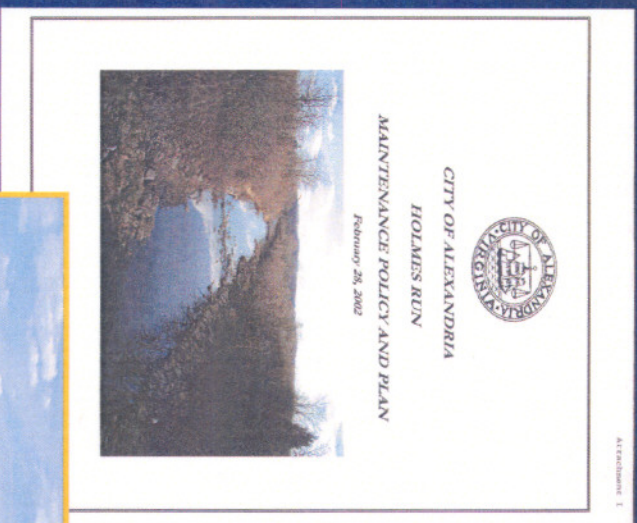
- Partnerships with Fairfax County, the Corps of Engineers, Northern Virginia Regional Commission and City of Alexandria
- Improve biotic integrity in the Cameron Run Watershed – restoration of the stream corridor and improve watershed health
- First Public Meeting: February 5, 2007



Floodway / Stream Maintenance

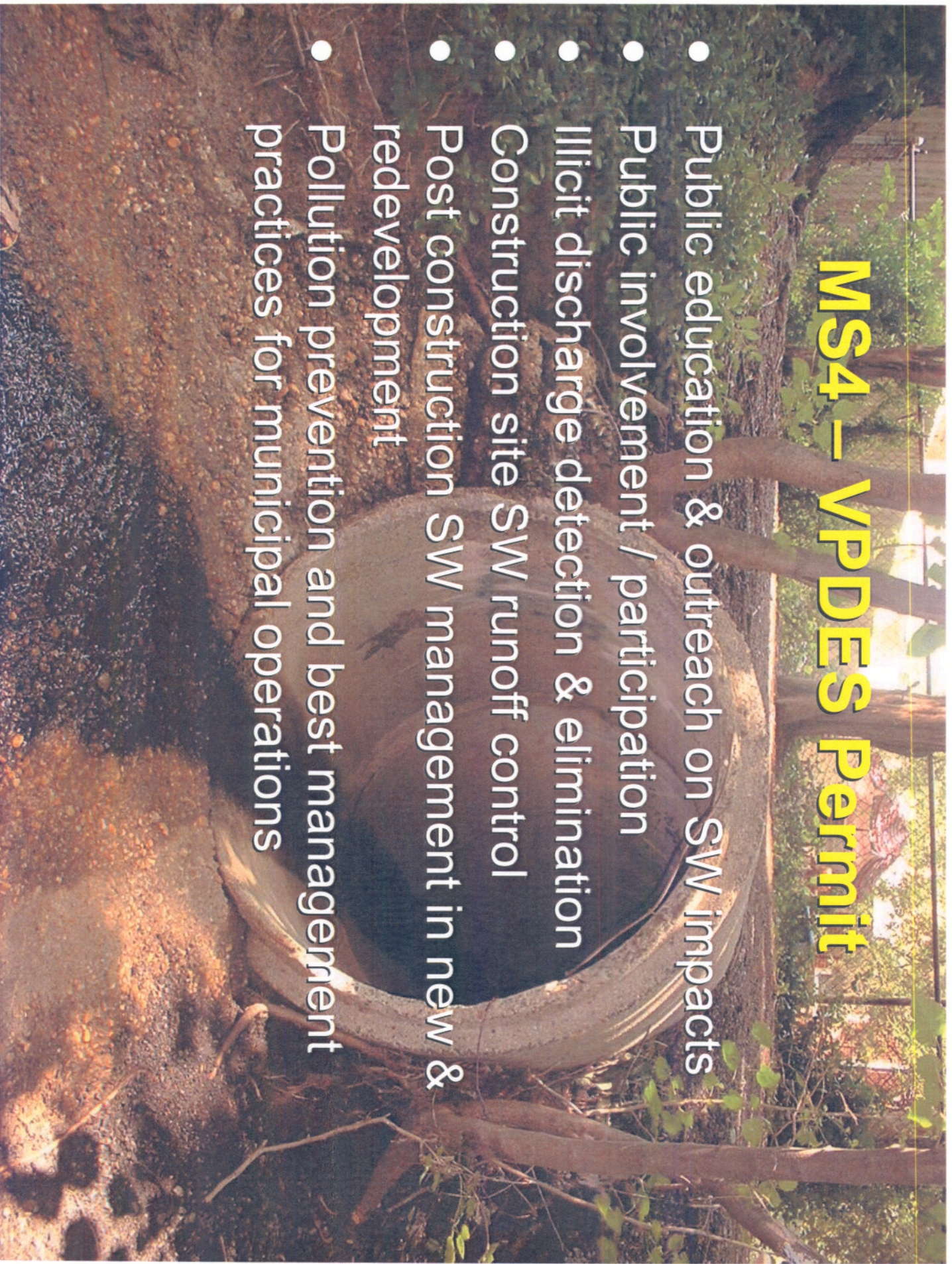
Development of Environmentally Sensitive Stream Maintenance Plan after extensive Public Outreach

- Cameron Run (2002)
- Holmes Run (2003/4)
- Four Mile Run Plan



MS4 – VPDES Permit

- Public education & outreach on SW impacts
- Public involvement / participation
- Illicit discharge detection & elimination
- Construction site SW runoff control
- Post construction SW management in new & redevelopment
- Pollution prevention and best management practices for municipal operations



Erosion & Sediment Control



- Virginia Law
- Alexandria Code
- Chesapeake Bay Program for projects > 2500 sq. ft of land disturbance
- Environmental benefits

Public Outreach



Department of
Transportation & Environmental Services

GENERAL INFORMATION | MAJOR PROJECTS | CALENDAR | COMPLAINT FORM | IMPORTANT PHONE NUMBERS

CONSTRUCTION & INSPECTION	ENGINEERING & DESIGN	ENVIRONMENTAL QUALITY	MAINTENANCE DIVISION	SOLID WASTE DIVISION	TRANSIT SERVICES	TRANSPORTATION DIVISION
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Division of Environmental Quality

Home

The Division of Environmental Quality (DEQ), located in Room 3900 in City Hall, administers the City's **air, water, and noise** improvement programs, which help preserve and protect the environment and public health and welfare.

Programs

Forms & Publications

News & Events

Lodge a Complaint

Related Links

Contact Us

The DEQ implements environmental programs to achieve the goals established in the City Council's Strategic Plan (2004-2009) which states that all residents of Alexandria experience "a city that respects, protects, and enhances the natural environment."

DEQ performs the following tasks in an effort to achieve the City's environmental goals:

- Monitors air and water quality.
- Investigates pollution complaints.
- Reviews development plans with regard to water quality impacts.
- Ensures compliance with the Chesapeake Bay Preservation Act.
- Issues noise variance permits.



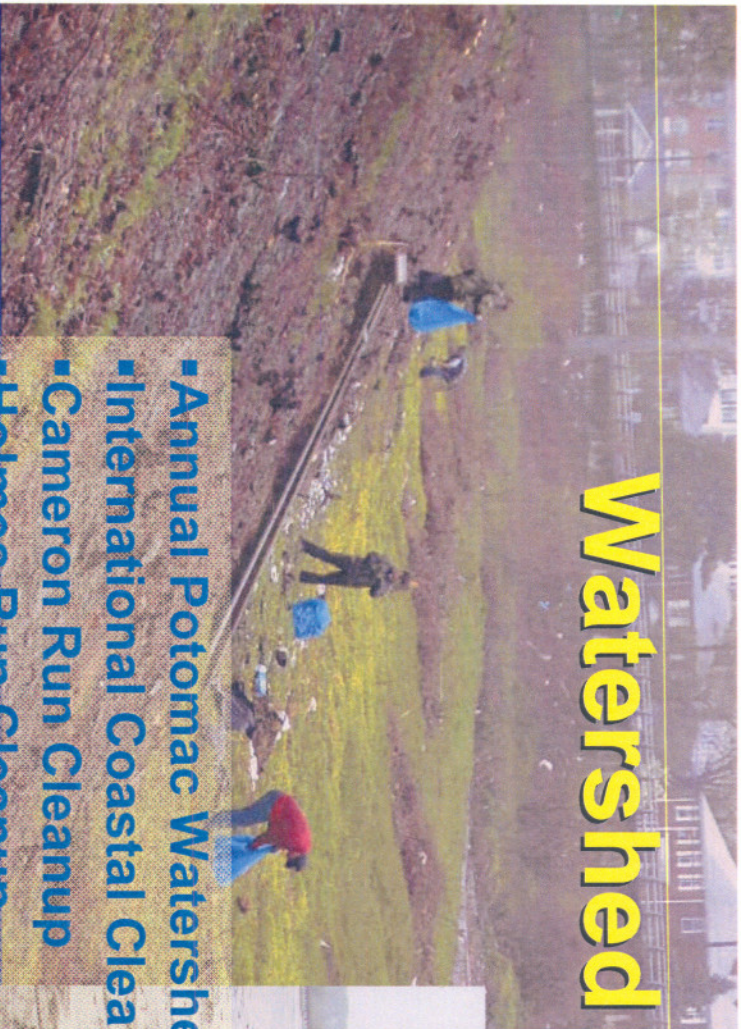
Earth Day 1998 - 2006



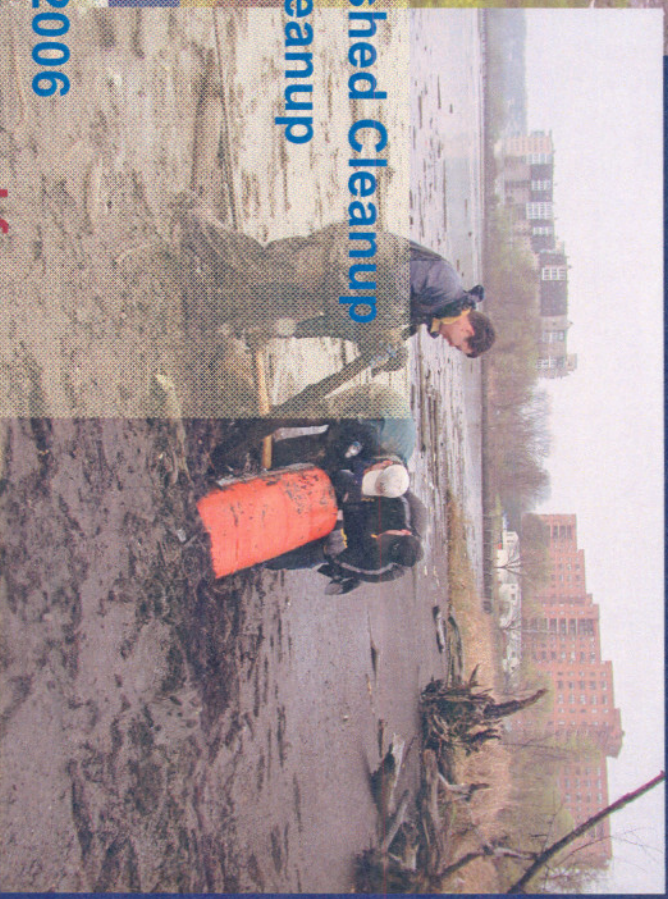
Public Outreach & Participation



Watershed Cleanups

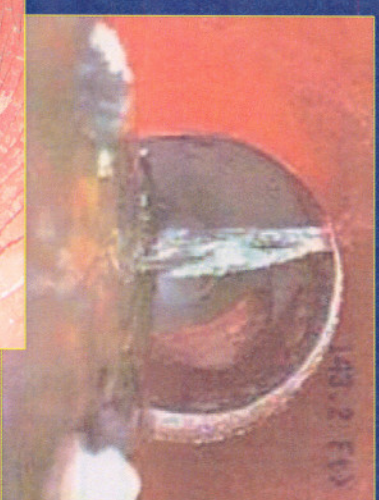


- Annual Potomac Watershed Cleanup
- International Coastal Cleanup
- Cameron Run Cleanup
- Holmes Run Cleanup
- Four Mile Run Cleanup
- Over 250 volunteers in 2006
- Est. 10-12 tons of trash removed from Alexandria streams

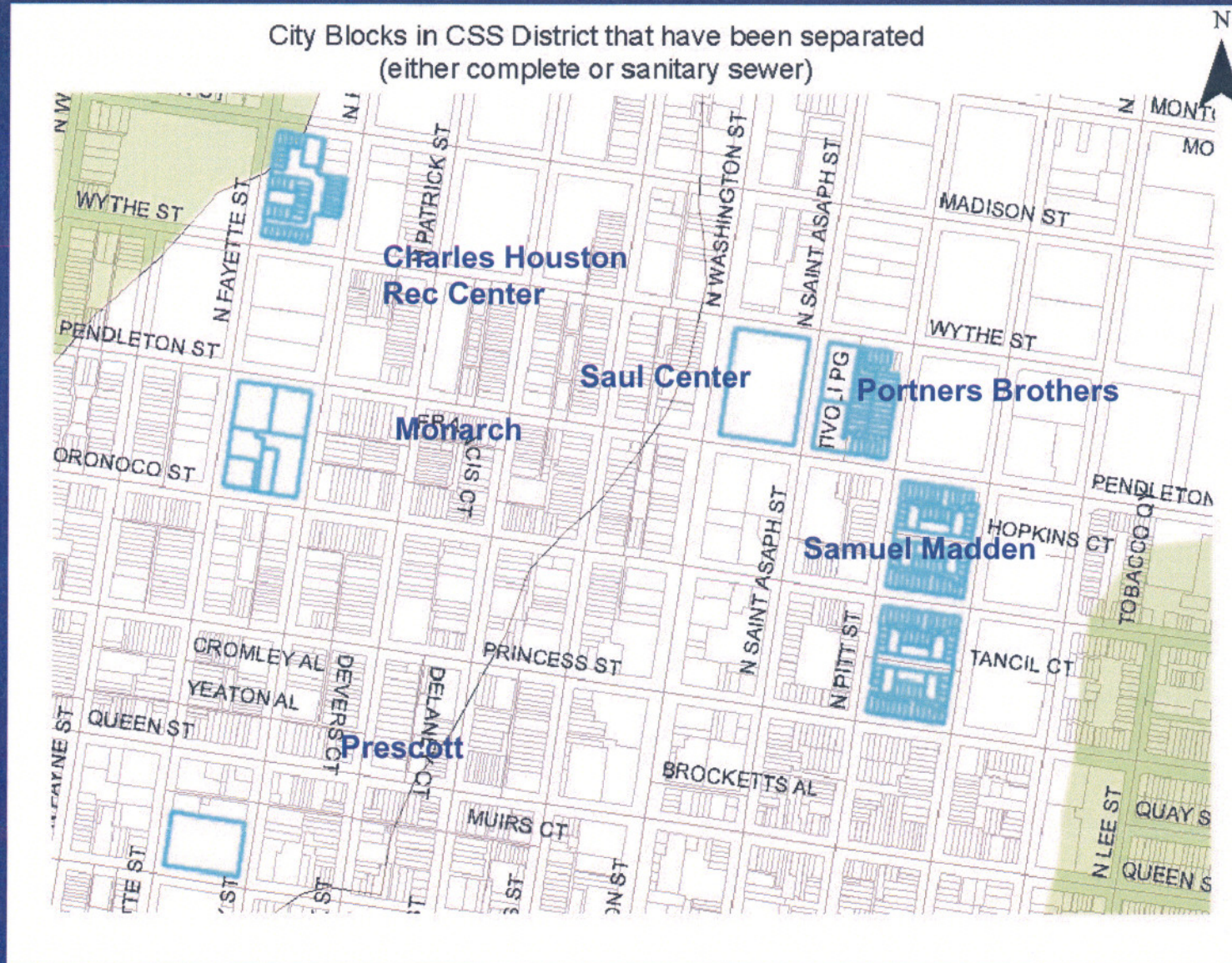


Sewer Improvements – I / I Studies

- Infiltration / Inflow Studies and Rehabilitation
 - Four Mile Run (57,000 linear ft)
 - Commonwealth (71,000 linear ft)
 - Taylor Run (on-going)
- Sanitary Sewer Inspection
- Sewer Mapping Project



Combined Sewer System Area Reduction Plan



Storm Water Utility Study

- Per Council's direction
 - Process fast tracked
 - Funding identified
- Scope for RFP complete
 - Contracting options currently being evaluated
- Elements of the Study
 - Utility Feasibility
 - Program Implementation

Air Quality

- Environmental Enforcement
 - Mirant
 - VA Paving
- Particulate Air Monitoring Station in West End
- Air Quality Action Day Program
- Incorporation of Low Emission / Hybrid Vehicles into City Vehicle Fleet
- Energy Efficiency
- Promote Environmental Friendly Transportation
- School bus retrofit grant
- Participation in regional air quality planning efforts



Mirant

- Established and support Mirant Community Monitoring Group
- Closely monitoring and engaged in regulatory actions at agencies, state and federal level
- Succeeded in having VDEQ require PM2.5 and air toxics stack testing at Mirant
- City actions resulted in VDEQ to initiating an NSR review/analysis
- Succeeded in convincing Air Pollution Control Board to assert its oversight of Mirant permitting issues

Alexandria/Arlington Waste-to-Energy Facility

- 25 MW clean, renewable energy: Meets needs of 23,000 homes
- Consistent with by US Mayors Climate Protection Agreement
- Installed MACT (Maximum Achievable Control Technology) Pollution Controls
 - Completed in December, 2000
 - Total cost approx. \$ 46 million
 - Fabric Filters for particulate control
 - Scrubbers with lime injection for control of acid gases
 - Carbon Injection for reducing metal emissions
 - Continuous Emissions Monitoring and computer controls

Green Initiatives (including Climate Change)

- U.S. Mayors Climate Protection Agreement, Feb 2005
- Potomac River Watershed Trash Treaty, Nov. 2005
- Sierra Club recognizes City as a “Cool City”, Nov. 2005

Green Building - What is Alexandria Doing?

- **New developments in the City must provide information on how it will voluntarily comply with LEED requirements**
 - **LEED assessment checklist included on all site plan submissions**
- **Development of Green and Sustainable Building Checklist**
- **The City's goal is to obtain a LEED – Silver rating or equivalent for all new City facilities**

Green Building - What is Alexandria Doing?

- Department of General Services adopted program for incorporating “Green” building measures in City facilities
- Green roofs on several City facilities
- T C Williams High School Project
- USGBC registered projects:
 - Charles Houston Community Center
 - DASH Bus Maintenance Facility
 - total > \$50 million in sustainable construction.
 - Fire Station 209, City Sports Facility and new Police Facility to pursue LEED certification totaling \$75 million.

Urban Development & Infrastructure Upgrades

- Green Building / Green Roof
- Low Impact Development techniques in Site Design



Beatley Library Bioretention Filter



Duncan Library Green Roof

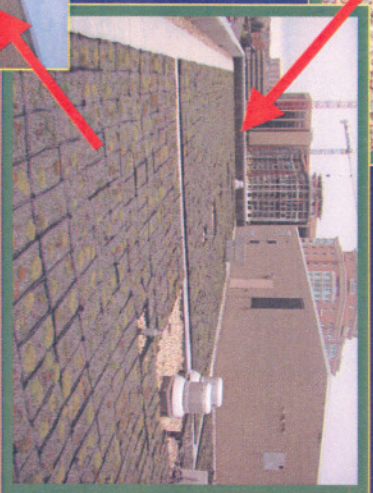


Health Department Green Roof

Alexandria Health Dept - Green Roof Project



The green roof system was constructed over the existing ballast stone roof.



Re-vegetated modules were installed over foam matting and filter fabric.



- ❑ Six story, 60,000 square foot building, built in 1986
- ❑ Site covers 34,840 square feet. Approximately 96% of the site was originally impervious and the building components offered no storm water retention/rate release system
- ❑ Retrofitting the roof with a green roof system increased the site's pervious surface by 33% and reduced stormwater discharge by 10,000 gallons for a 1.5" rainfall per 24 hour period

Redevelopment of Contaminated Land / Brownfields

- Site Characterization (Sampling)
- Risk Analysis (Exposure pathways)
- Remediation Plan (Clean up or other corrective action)
- Health & Safety Plan

Redevelopment Successes



Cameron Station



Carlyle



Potomac Yard

Since Environmental/Quality of Life Summit/Report (1998)

- Significant Progress (*Achievements*)
 - Open Space
 - Water Quality
 - Solid Waste
- Significant Progress (*Planning*)
 - Transportation
 - Urban Forestry

Moving Forward

- Environmental Action Plan
 - Develop an action plan that is modeled after City Council's Strategic Plan
 - To be developed in 3 Phases
 - Recommend moving forward with Phase I tonight, in partnership with VA Tech.
 - Review & Summary of existing programs
 - Research and analysis of best practices, policies and programs from other model jurisdictions

Moving Forward

- Environmental Action Plan

Phase II

- Finalize scope of work
- Develop draft action plan
- Public outreach and input

Phase III

- Design and facilitate Eco-City summit
- Adoption of the Plan

Moving Forward

- **Environmental Action Plan**
 - **Areas of emphasis and Interest**
 - Air and Water Quality
 - Transportation
 - Green Building Technology
 - Low Impact Development
 - Sustainable development
 - Energy
 - Green
 - Renewable
 - Efficiency
 - **Global Climate Change**
 - **Public Education and Outreach**



Thank you

Questions?