

Northern Virginia Coastal Resources Technical Assistance Program

Annual Report

October 1, 2006 – September 30, 2007

NOAA Grant #NA06NOS4190241

Acknowledgments

The following individuals were instrumental in assisting and participating in NVRC's Coastal Resources Technical Assistance Program projects:

Northern Virginia Clean Water Partners – Kathy Allan, Jeanne Bailey, Holly Chu, Zoran Dragacevac, Adrian Fremont, Diana Handy, Deb Oliver, Fred Rose, Samantha Villegas, Randy Williford, and Aileen Winquist

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Virginia Coastal Zone Management Program – Kelly Price, Laura McKay, Rachel Bullene, Virginia Witmer, and Shep Moon



Virginia Coastal Zone
MANAGEMENT PROGRAM

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On the cover – Located just 10 miles upstream of the urban area of Washington D.C., the Potomac Gorge is celebrated for the unique animal and plant communities that inhabit the area and the recreational opportunities it provides.

Photo by Katherine Mull

Introduction & Summary

This report fulfills the product requirements set forth in the 2006 Virginia Coastal Zone Management Program Grant, Task 46 (NOAA Grant #NA06NOS4190241) for:

- Product #1 – Report on Technical Assistance and Training Provided: Local and Regional Implementation;
- Product #2 – Issue analysis / Special Project Report (Appendix A); and
- Product #3 – Report on outcomes regarding Virginia’s implementation of the Chesapeake Bay 2000 Agreement and related program.

Technical Assistance: NVRC hosted the following four workshops targeted toward individual homeowners, public and private planners and engineers, landscaping professionals, homeowner association board members, and property management companies.

- *Designing, Building, and Maintaining a Small-scale Rain Garden* introduced the basics of designing, building, and maintaining rain gardens to forty residents and landscaping professionals. The Northern Virginia Soil and Water Conservation District completed an analysis of rain gardens.
- *Mitigating for Stream and Wetland Losses in Northern Virginia* provided an overview of mitigation banking processes in Virginia. Presentations were given by representatives from DEQ – VWPP; VDOT; and Prince William County. Thirteen of the 30 participants stated that the information presented in this workshop will be useful in their work and three indicated that their organizations will be setting up a wetland or stream restoration bank in the near future.
- *Restoring Our Waterways – Case Studies in Northern Virginia* provided an opportunity to learn about three urban stream restoration and planning projects recently completed in Northern Virginia. Based on the discussion regarding the results of water quality monitoring data on Accotink Creek in the City of Fairfax, NVRC plans to write a white paper on the definition of stream restoration projects and the need for data necessary for designing projects in the western Coastal Plain of Northern Virginia.
- *An Introduction to Maintaining Stormwater Best Management Practices (BMP)* was a free workshop for public and private BMP owners and operators. Two of the most costly maintenance requirements for stormwater facilities – sediment removal and disposal and nuisance vegetation and algae management were presented, along with an overview of maintenance agreements and inspection requirements and a case study from Reston, VA. As part of NVRC’s budding Regional Stormwater Initiative, additional forums specifically for public stormwater maintenance managers will be arranged.

Special Project: For the third year in a row, nine local governments and two independent water and sewer authorities contributed approximately \$170,000 to the Northern Virginia Clean Water Partners - Regional Stormwater Education Campaign. The results of the pre- and post-surveys present promising results, especially the fact that respondents indicated that hearing the ad motivated them to change their behaviors with relation to fertilizer, pet waste, and motor oil. Local government staff use the data collected during the pre- and post-surveys in their annual MS4 permit reports and to support the direction of the campaign. This data is regularly shared with other organizations engaged in stormwater and watershed education efforts. A website, printed

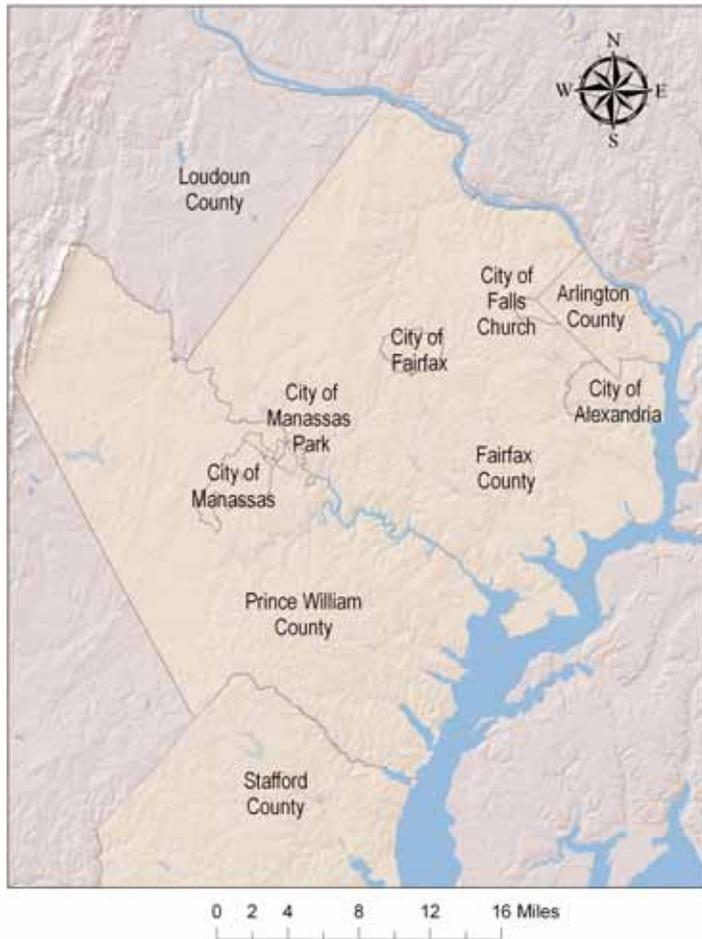
material, and action-specific taglines were created for the campaign this grant year. To view these products, visit: www.onlyrain.org.

NVironment Newsletter: The Fall 2007 NVironment newsletter focuses on climate change initiatives in Northern Virginia and features stories on local, regional, and statewide efforts. Approximately 1,100 planners, engineers, interested residents, and elected officials throughout the Commonwealth and the remaining mid-Atlantic region receive a hard copy of the newsletter. NVRC also posts it on their website at www.novaregion.org.

Chesapeake Bay Implementation: NVRC continues to serve on the Potomac Watershed and Northern Virginia Urban Forestry Roundtables and participate as requested in tributary strategies, watershed planning strategies, and related programs to protect water quality.

EA and Permit Review: NVRC continues to participate in the EA/EIS and permit intergovernmental review process.

Figure 1. Northern Virginia Jurisdictions located within Virginia's designated Coastal Zone.



Special Project Summary

Northern Virginia Clean Water Partners – Regional Stormwater Education Campaign

For the third consecutive year, “The Call” radio advertisement ran for a total of four weeks spanning March and April 2007. The advertisement, originally developed by the Texas Commission of Environmental Quality and modified slightly for use in Northern Virginia, is targeted to men age 35 – 59; the portion of the population with a higher likelihood of applying their own fertilizer, walking their pets, and changing their own motor oil. The ad ran a total of 926 times on nine radio stations, including a Spanish version on 99.1 (WLZL-FM). The taglines were revised to make them more action-oriented. The script and new taglines are on page 12 of Appendix A.

To expand the reach of the campaign, several complementing products were developed, including:

- A pet waste postcard highlighting the importance of picking up pet waste and properly disposing of it in a trash receptacle. Arlington County’s Department of Environmental Services took the lead in amending the postcard, which was originally developed by the North Carolina Office of Environmental Education¹. The postcard was distributed by the partners to homeowners associations, at county fairs, and other public events.
- A Public Service Announcement (PSA) accompanying the radio advertisement was generated in partnership with Fairfax County’s Channel 16 cable channel. Copies have been provided to each participating organization to run on their local cable networks. Opportunities to air the PSA on large cable networks continue to be explored.
- A website (www.onlyrain.org) serves as the clearinghouse for information about the partners; the repository for different products; and additional information regarding solutions for disposing of pet waste, reducing the amount of fertilizer used on lawns, and recycling motor oil.

A pre- and post-survey was conducted to determine the effectiveness of the ad and the overall awareness of Northern Virginia residents on stormwater and pollution issues. A total of 1,000 residents were surveyed throughout the region. The results will also be used to direct future campaign efforts and targeted messages.

Slight modifications were made to the survey in 2007 to retrieve specific information on why appropriate actions were not taken by respondents who stated they do not pick up their pet waste and do not recycle their used motor oil. When asked what they believe is the number one pollutant in the Potomac River and Chesapeake Bay, over a quarter of the respondents stated it is trash / litter dumped into the river (Figure 2). A summary of the survey results are found in the full report (Appendix A).

In 2007, Fairfax Water joined the Northern Virginia Clean Water Partners, increasing the number of participating organizations to 12. They are the second water and sanitary authority to join the effort.

¹ <http://www.eenorthcarolina.org>

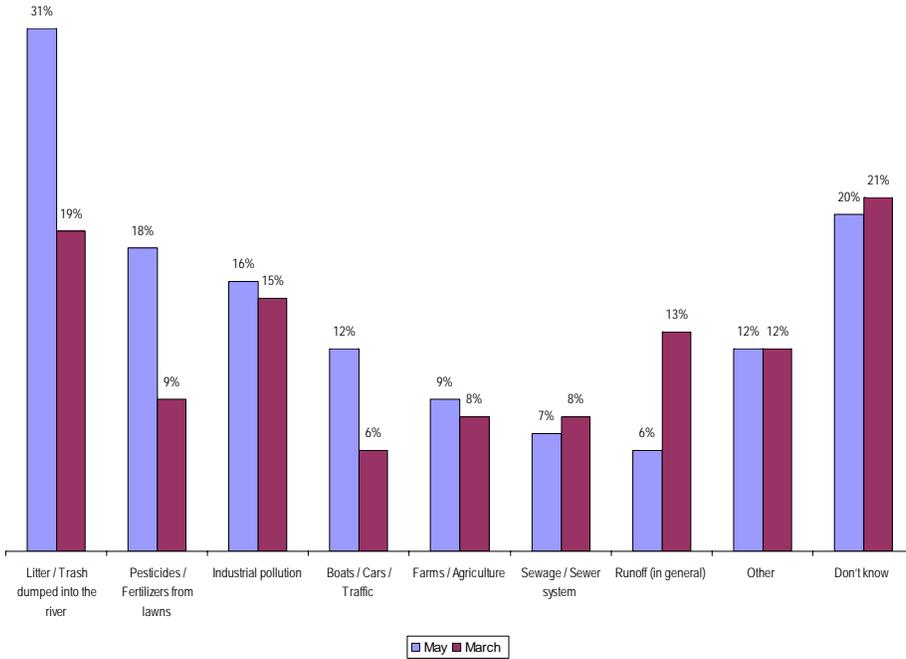


Figure 2. Responses on the number one cause of pollution in local streams, the Potomac River, and the Chesapeake Bay.

The development of printed and web products, the survey, and the purchase of radio time are funded by the participating local governments and authorities. The Partners meet on a quarterly basis to plan for campaign events, review results, and develop messages for products. Meeting summaries are presented in Appendix B.

Table 1. Budget Breakdown for 2007 Regional Stormwater Education Campaign

Item	Budget
Media Buying Services Media Vision	\$150,000
Pre- and Post-Survey of Residents American Viewpoint	16,000
Printed Materials – Postcards Zoom Printing	2,000
Webpage Domain Network Solutions	500
Total	\$168,500

Technical Workshops

NVRC is responsible for hosting four workshops annually. Past examples include: onsite wastewater systems operations and maintenance, blue/green infrastructure planning, factors affecting the delivery of pollutants to downstream waterways, and Chesapeake Bay Local Assistance trainings. Workshops hosted in fiscal year 2006 are listed below, with their corresponding agendas, attendance lists, and feedback responses, if available, included as Appendix C.

Beautifying Your Yard for Clean Water – Rain Gardens for Residents **April 15, 2007**

NVRC facilitated a “Rain Garden Seminar” that was hosted at Green Spring Gardens in Fairfax County. Rain gardens are becoming a common form of stormwater management Northern Virginia. Unlike traditional forms of stormwater management, in which runoff is slowly released into nearby streams and waterways, rain gardens incorporate native plant species into an area in order to infiltrate the first flush from a rain event. Not only do rain gardens help with runoff reduction, but they also increase habitat available for local fauna, improve a location’s aesthetic qualities, generate shade, and aid in groundwater replenishment.

The workshop was funded by the VA Coastal Zone Management Program, the National Oceanic and Atmospheric Administration, and Northern VA Soil and Water Conservation District. The Community Appearance Alliance also provided logistical support with registration and otherwise helping the day to run smoothly.

Approximately 40 individuals attended the 4-hour seminar, which featured presentations by the VA Department of Forestry, Northern VA Soil and Water Conservation District, and Arlington County. Presentation topics covered the following aspects of rain gardens: Introduction to Low Impact Development (LID); Designing and Building a Rain Garden/Desk Exercise on Sizing and Siting a Rain Garden; Selecting Plants and Landscaping a Rain Garden; and Maintaining a Rain Garden, Lessons-Learned. Seminar participants each received a folder with a *Rain Gardens* Technical Guide from the VA Department of Forestry, various lists on the types of plants that can be utilized in creating rain gardens, and a copy of each Power Point Presentation.

Following the lectures, Cindy Brown of Green Spring Gardens and a handful of attendees braved an April downpour to see the on-site rain gardens at work. Overall, feedback on the workshop was positive, and NVRC looks forward to collaborating with the participating partners in future, similar endeavors.

Mitigating for Stream and Wetland Impacts **August 7, 2007**

Thirty representatives from state and local entities and private organizations attended this free half-day workshop held on August 7, 2007 at NVRC’s office.

An overview of compensatory mitigation definitions, guidance, and trends across the U.S. were presented by Laura Grape, Senior Environmental Planner with NVRC. The presentation defined the three mechanisms for providing compensatory mitigation permittee-responsible, mitigation banks, and in-lieu fees. According to an Environmental Law Institute survey, there has been a significant increase in the number of active mitigation banks

throughout the U.S. Private Entrepreneurs and Companies make up the majority of mitigation bank sponsors (72.2 percent) while local government entities sponsor seven percent.

Bettina Rayfield, Stream Ecologist and Virginia Water Protection Permit Writer with the Virginia Department of Environmental Quality, presented an overview of Virginia's Water Protection Program (VWPP). This state program is responsible for issuing four general permits and an individual permit for any activity that alters the physical, chemical, or biological properties of state waters. The program also sits on the Mitigation Bank Review Teams throughout the state. In collaboration with the US Army Corps of Engineers (USACE), DEQ developed the Unified Stream Methodology to provide guidance for stream assessment and mitigation requirements. This methodology determines how much credit a project that impacts streams will be required to compensate for.

It was noted that getting involved in the early stages of the development planning process for those localities interested in identifying mitigation sites, is key. Working together with willing homeowners and developing mitigation banks or trust funds with third-party conservation organizations were a couple of key roles that were highlighted.

DEQ and USACE have several guidance documents available online for reference. Currently no locality in Virginia is the sponsor of an active mitigation bank.

To provide a local example of a local government working with mitigation banks, Tom Dombrowski and Patty Dietz of Prince William County's Watershed Management Branch provided an overview of their experience serving as stewards of the Julie J. Metz Wetland Bank. This bank was acquired by the county in 2000 from Wetland Studies and Solutions, Inc. It is used for educational purposes and is preserved in perpetuity. WSSI continues to conduct the monitoring.

Prince William County also developed three wetland mitigation sites during the summer of 2005 that were a result from impacts to due to the development of Innovation Drive and Discovery Boulevard. Several problems were encountered including geese predation, utility crossing conflict, vegetation mortality due to drought, and seepage.

The presentations wrapped up with lessons-learned from John Muse, District Environmental Manager, with the Virginia Department of Transportation. VDOT mitigates on-site, off-site, purchases credits from a private bank, uses VDOT banks, if located in the same HUC, or contributes to an in-lieu fee. The keys to successful VDOT projects include:

- Creation of a Compensation Bank Review Team (CBRT)
- Site Selection Criteria
- Mitigation Banking Instrument (MBI)
- Plans / Details
- Appropriate Contract / Equipment / Materials & Expertise
- Appropriate Construction Methods / E & S
- Monitoring and Remedial Action Plans

Feedback on the workshop was positive all around. Thirteen of the 30 attendees completed and returned a feedback form – all but one indicating that they would like future workshops to examine this topic in more detail,

particularly from the permitting and policy perspective. Additional testimonies from local governments that are going through the process also are of interest. All respondents stated that the information presented in this workshop will be useful in their work and three indicated that their organization will be setting up a wetland or stream restoration bank in the near future.

Restoring Our Waterways – Case Studies in Northern Virginia
September 19, 2007

With several local governments taking on the tremendous task of developing management plans for their watersheds, hundreds of stream restoration projects have or will be identified. For those localities that have completed projects, there are successes to celebrate, lessons to be learned, and opportunities for data to be refined. This workshop provided a forum for those discussions.

Tom O'Connor with the US Environmental Protection Agency's Office of Research and Development presented the Accotink Creek Stabilization Project, in the City of Fairfax, one of a few examples in the region where chemical water quality data is being collected after a completed restoration project. His presentation highlighted the results of the monitoring effort, stating that the restoration practices alone do not improve the quality of the instream water chemistry. However, the streambank stability significantly improved in this urban area, reducing instream contributions of sediment to downstream locations.

Jason Papacosma, Watershed Planner with the Arlington County Department of Environmental Services discussed the stream restoration efforts ongoing in Arlington County. Jason focused on the recently completed Donaldson Run restoration project, which included a significant public education and outreach component. Jason stated the keys to the successful completion of the project included the following:

- Stakeholder involvement, early and often
- Clear standards and specifications
- Construction oversight, construction oversight, construction oversight
- QA/QC
- Post-construction monitoring

Bill Hicks, Senior Water Resources Engineer with the Northern Virginia Regional Commission rounded out the presentations portion of the workshop with a discussion of the Four Mile Run Restoration Master Plan. The Four Mile Run Program is NVRC's longest running program. The goal of the Master Plan is to restore the tidal, flood control portion of Four Mile Run, which serves as the boundary between Arlington County and City of Alexandria. The restoration will not only include instream habitat and hydrologic restoration, but will work to restore a sense of pride in the underappreciated section of stream. NVRC is currently working toward acquiring funding for a demonstration project that will include a pedestrian bridge connecting the two jurisdictions and restoration of approximately 1,000 linear feet of stream channel.

Tom's presentation ignited a lengthy conversation regarding the definition and goals of stream restoration and stabilization projects. The current perception is that stream restoration projects improve water chemistry – "If it looks good, the water must be clean." Data used to design stream restoration projects comes from Maryland and North Carolina. Developing Virginia-specific regional curves (especially for the western coastal plain) are needed for project design and implementation in Northern Virginia. Based on this discussion, NVRC plans to write a white

paper on stream restoration and stabilization perspectives and definitions and seek funding for the research and/or development of Virginia-specific regional curve information.

An Introduction to Maintaining Stormwater Systems **September 26, 2007**

Under personal maintenance agreements, individual homeowners, homeowners associations, and property management companies are often required to maintain stormwater management facilities on their property. Unfortunately, these individuals or organizations do not realize that these facilities exist, let alone understand how to properly plan for costly maintenance needs in the future. *An Introduction to Maintaining Stormwater Best Management Practices* (BMPs) – a workshop for private owners and operators provided an opportunity for property management companies to get a basic understanding of why maintaining these facilities is important.

Approximately 50 people attended this workshop, which focused on the maintenance needs of 10 of the most common stormwater BMPs in the Northern Virginia region. The agenda was loosely based on the *Maintaining Stormwater Systems – A Guidebook for Private Owners and Operators*, published in January 2007. The half-day workshop included:

- an overview of maintenance agreements and the importance of frequent inspections;
- presentations on two of the most costly maintenance requirements for facilities in urban areas, sediment removal and disposal and nuisance vegetation and algae management; and
- a case study of the Reston, VA experience in maintaining their large stormwater facilities.

Participants received a folder of information including an agenda, a feedback form, a copy of the guidebook and a list of websites featuring online resources, including established vendor lists from the City of Alexandria (www.alexandriava.gov/tes/DEO/pdfs/BMP_Maintenance_Vendor_List.pdf) and the Virginia Department of Game and Inland Fisheries (www.dgif.state.va.us/FISHING/pondmanagement).

To reach out to the property management and landscaping companies, NVRC developed a list of their contact information, using internet searches and through requests from local government programs. Brochures were distributed to approximately 300 organizations.

The feedback for this workshop was resoundingly positive. Participants found the information presented to be particularly useful in their work and would be interested in attending more in depth discussions. The costs associated with dredging and sediment removal from ponds was especially alarming to participants, many of whom stated they would invest more time and energy in identifying and limiting sources.

The majority of the participants are interested in attending future workshops on this subject and perhaps having similar introductions for private owners and operators more frequently, even annually. One participant stated, "We believe that education of management companies and homeowners are important. Homeowners and management [companies] do not understand why and how to maintain ponds." Other suggestions for additional workshop topics include:

- Erosion controls
- Chesapeake Bay Preservation Ordinance requirements and what they mean for property owners
- Stormwater facility design - limitations and opportunities for improvements

- Pollution prevention practices / Good housekeeping techniques

Many of the workshops participants represented a local government. Many voiced an interest in regularly meeting to learn from each other's programs. The Regional Stormwater Initiative, an ongoing effort coordinated by NVRC, provides an excellent forum to have these discussions and assist in making stormwater management programs and facility design more efficient and effective at protecting local and regional waterways.

Intergovernmental Reviews

In FY2006, NVRC reviewed and responded to 30 documents as part of the intergovernmental review process. Most notably, the recent Base Realignment and Closure (BRAC) changes will bring thousands of new residents to the military installations in Northern Virginia. In FY2006, NVRC actively participated in the review of new buildings and roads for Fort Belvoir in Lorton, VA. NVRC staff attended presentations and discussion of specific projects that might increase the traffic burden and impact sensitive environments in and around the project area. One specific project of note was a Department of Defense building to be developed on the existing Engineer Proving Grounds in Springfield, VA, located adjacent to Accotink Creek. NVRC staff recognized the increase in daily traffic load at this site during peak rush hours and the impacts to the Resource Protection Area along Accotink Creek.

This project was eventually revised to limit the number of military and civilian staff from the site to reduce traffic impacts. An additional office building in Springfield, near the Metro and VRE will also be used. This additional building reduces the size of the facility on the EPG, thereby limiting the immediate impacts to Accotink Creek.

Chesapeake Bay Implementation

NVRC continues to support local groups engaged in watershed planning initiatives, tributary strategies, and other Chesapeake Bay-related efforts including the following projects:

- *Loudoun County Watershed Planning*
 - Stakeholder Meeting on January 18, 2007
- *Fairfax County Watershed Plan Implementation*

Planning meetings for the Falls Hill/Poplar Heights Residential LID Demonstration Project

 - September 4, 2007
 - September 11, 2007
 - September 20, 2007
 - September 27, 2007

NVRC staff participates in and supports the implementation of meetings and conferences for the following organizations that meet quarterly:

- *Potomac Watershed Roundtable*

A regional government – citizen forum whose purpose is to promote collaboration and cooperation on environmental concerns, especially water quality issues, among the various local governments and

stakeholder interest groups residing within the Virginia side of the middle and lower Potomac River watershed. Meetings attended include:

- January 5, 2007
 - June 15, 2007
 - August 10, 2007 – Potomac Forum
-
- *Northern Virginia Urban Forestry Roundtable*
Citizen members of tree boards and commissions, elected officials, urban foresters and arborists, landscape architects, builders, developers, and planners desiring to enhance and protect Virginia's urban forest. Meeting attended include:
 - October 2, 2006
 - December 12, 2006
 - May 18, 2007

NVironment Newsletter

Every year, the Commission produces the NVironment newsletter highlighting environmental topics of interest to Northern Virginia jurisdictions. Approximately 1,100 planners, engineers, interested residents, and elected officials throughout Virginia and the remaining mid-Atlantic region receive a copy of the newsletter. NVRC also posts it on their website at www.novaregion.org.

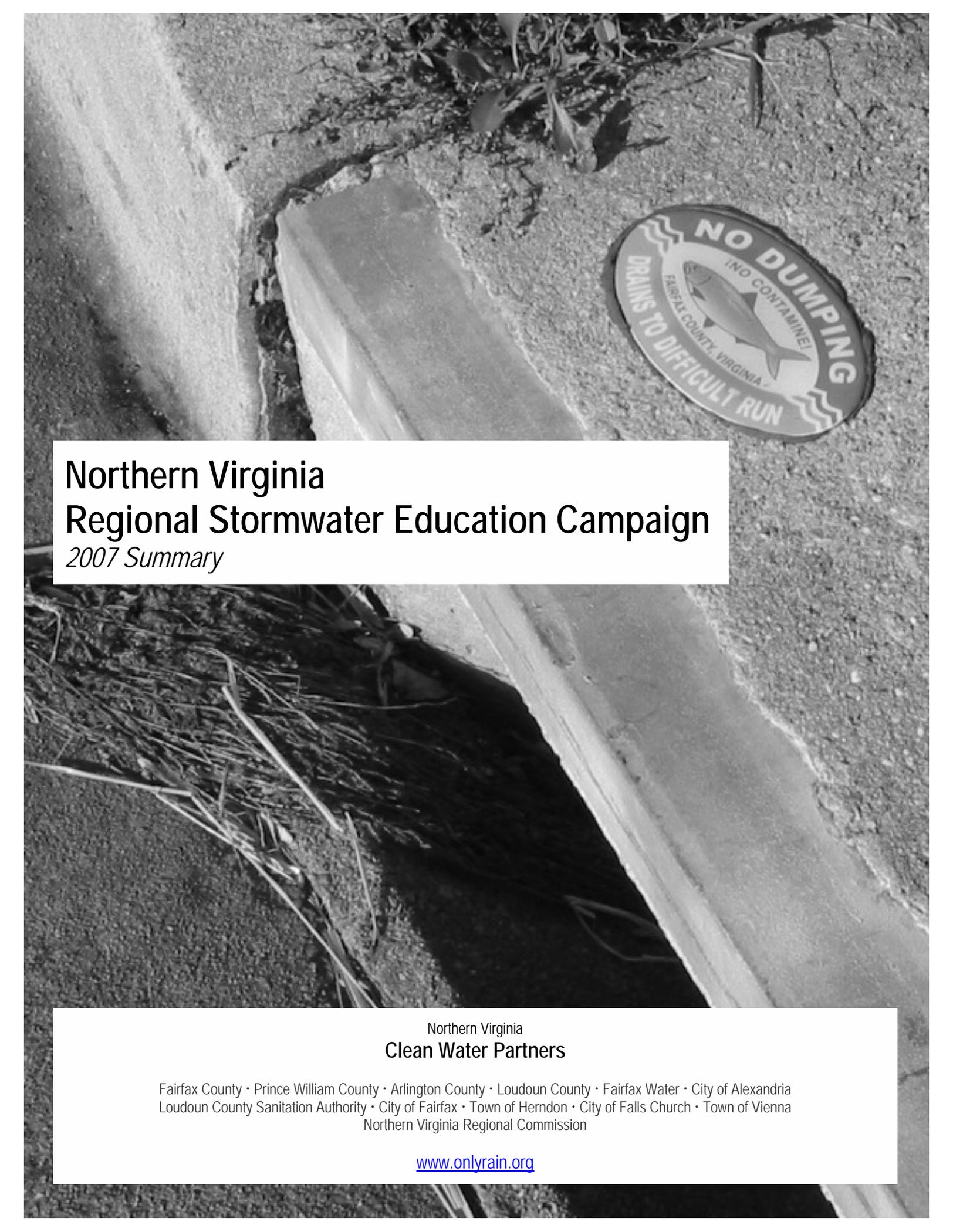
The 2007 edition includes articles on:

- NVRC's new Energy and Environmental Policy Committee
- Virginia's progress towards meeting Governor Timothy Kaine's land conservation goal
- Northern Virginia's regional drinking water supply planning
- The Northern Virginia Clean Water Partners – Regional Stormwater Education Campaign
- An international conference to be co-hosted by NVRC
- A new guidebook for private owners and operators on maintaining stormwater systems
- Virginia's Clean Marina Program
- And more!

NVRC houses past issues of the NVironment from 2003 in electronic and paper format. Prior issues are available in PDF format, upon request. A copy of the Fall 2007 NVironment is included as Appendix D.

Appendix A

Northern Virginia Clean Water Partners – Regional Stormwater Education Campaign 2007 Summary



**Northern Virginia
Regional Stormwater Education Campaign**
2007 Summary

Northern Virginia
Clean Water Partners

Fairfax County • Prince William County • Arlington County • Loudoun County • Fairfax Water • City of Alexandria
Loudoun County Sanitation Authority • City of Fairfax • Town of Herndon • City of Falls Church • Town of Vienna
Northern Virginia Regional Commission

www.onlyrain.org

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The following individuals were instrumental in planning and carrying out the 2007 Regional Stormwater Education Campaign:

Kathy Allen, Jeanne Bailey, Holly Chu, Zoran Dragacevac, Adrian Fremont, Barbara Gordon, Laura Grape, Diana Handy, Deb Oliver, Doug Pickford, Marshall Popkin, Fred Rose, Samantha Villegas, Randy Williford, and Aileen Winquist

The Northern Virginia Clean Water Partners would also like to thank Media Vision and American Viewpoint who provided their services to purchase radio air time and conduct the pre- and post-surveys, respectively.

This project was funded in part by the Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant #NA06NOS4190241 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.

The views expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Department of Commerce, NOAA, or any of its subagencies.



On the cover: Storm drain marking is a popular way of promoting the direct connection between land and water. This particular storm drain marker was placed by volunteers in the main parking lot of the Fairfax County Government Center, through the Northern Virginia Soil and Water Conservation District's Storm Drain Marking Program.

I. Background

The Regional Stormwater Education Campaign began in 2004, from a realization that Northern Virginia jurisdictions face numerous regulatory and policy programmatic objectives to reduce nutrients and sediment in stormwater runoff. Chesapeake 2000 Bay Agreement Commitments, Total Maximum Daily Loads (TMDLs), Municipal Separate Storm Sewer (MS4) permits, Middle Potomac Tributary Strategies, and watershed management plans stipulate public outreach and education as a required component, with behavior change as the goal in support of meeting water quality standards.

To better meet these requirements and improve the effectiveness of pollution-prevention messages, several localities suggested that jurisdictions pool outreach funds to take advantage of the reach and impact of mass media. NVRC was tasked to identify issues, target markets, messages and media for regional pollution prevention campaign. In addition to improved effectiveness, a combined campaign saves localities time, money, and effort.

The Northern Virginia Regional Stormwater Education Campaign is a regional initiative, crafted by and for Northern Virginia jurisdictions. By participating in the program, local jurisdictions have an unprecedented opportunity to pool local outreach dollars to collectively target pollution-causing behaviors for greater impact at less cost and effort. In addition to taking advantage of mass media, the strategy provides for community engagement and the production of outreach materials that can be customized and used by each locality again and again.

Nutrients in stormwater runoff have been identified as the number one threat to the health of the ecosystems of the Potomac River and Chesapeake Bay. Contributing to this pollution are watershed residents who appear to be unaware of any link between their daily behavior and the quality of water downstream. Behaviors contributing to nutrient oversupply include:

- Over-fertilization of lawns;
- Car washing, where soapy water drains to storm drains and streams; and
- Poor dog walking practices, where dog owners neglect to pick up after their dogs; also contribute to bacteria impairments.

The Center for Watershed Protection (CWP) found that “messages sent by television, radio and local newspapers are consistently more influential in reaching residents than any other technique, with up to 30 percent recall rates by the watershed population for each medium. In contrast, messages transmitted through meetings, brochures, local cable and videos tend to be recalled by only a very small segment of the watershed population.”¹

The Regional Stormwater Education Campaign, by its very nature, lends itself to “earned” or free media coverage in the form of talk shows, interviews and other opportunities for exposure. The campaign will place a priority on coordinating with agencies, organizations and community groups throughout the region for additional exposure and reinforcement of messages.

II. Overview of 2007 Campaign

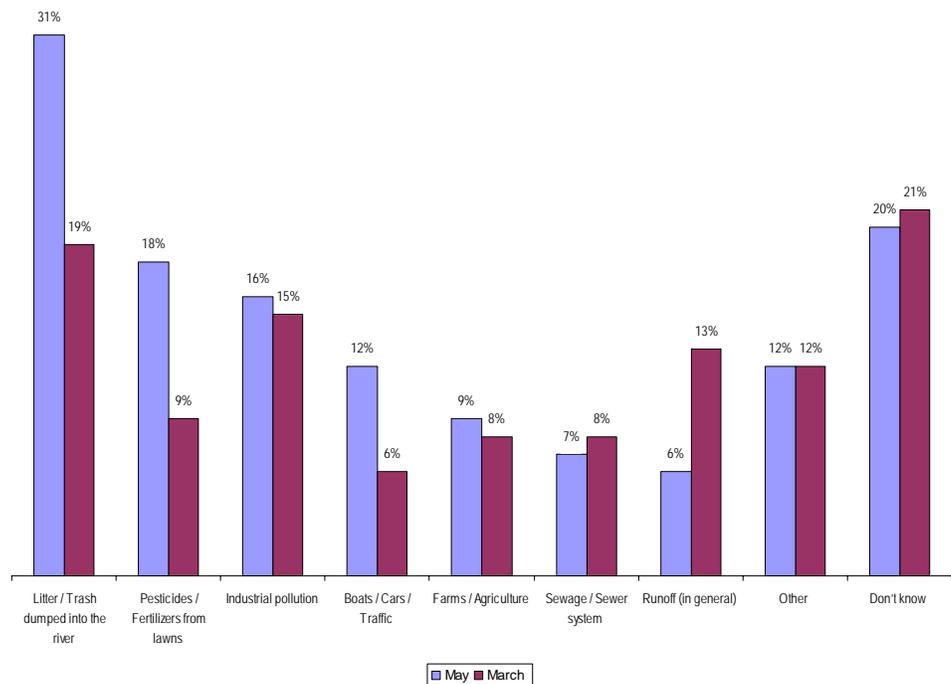
For the third consecutive year, “The Call” radio advertisement ran for a total of four weeks spanning March and April 2007. The advertisement, originally developed by the Texas Commission of Environmental Quality and modified slightly for use in Northern Virginia, is targeted to men age 35 – 59; the portion of the population with a higher likelihood of applying their own fertilizer, walking their pets, and changing their own motor oil. The ad ran a total of 926 times on nine radio stations, including a Spanish version on 99.1 (WLZL-FM). The taglines were revised to make them more action-oriented. The script and new taglines are on page 11.

¹ *A Survey of Residential Nutrient Behavior in the Chesapeake Bay*, July 1999, Center for Watershed Protection.

To expand the reach of the campaign, several complementing products were developed, including:

- A pet waste postcard highlighting the importance of picking up pet waste and properly disposing of it in a trash receptacle. Arlington County's Department of Environmental Services took the lead in amending the postcard, which was originally developed by the North Carolina Office of Environmental Education¹. The postcard was distributed by the partners to homeowners associations, at county fairs, and other public events. A copy of the postcard may be found on page 13.
- A Public Service Announcement (PSA) accompanying the radio advertisement was generated in partnership with Fairfax County's Channel 16 cable channel. Copies have been provided to each participating organization to run on their local cable networks. Opportunities to air the PSA on large cable networks continue to be explored.
- A website (www.onlyrain.org) serves as the clearinghouse for information about the partners; the repository for different products; and additional information regarding solutions for disposing of pet waste, reducing the amount of fertilizer used on lawns, and recycling motor oil.

A pre- and post-survey was conducted to determine the effectiveness of the ad and the overall awareness of Northern Virginia residents on stormwater and pollution issues. A total of 1,000 residents were surveyed throughout the region. The results will also be used to direct future campaign efforts and targeted messages. Slight modifications were made to the survey in 2007 to retrieve specific information on why appropriate actions were not taken by respondents who stated they do not pick up their pet waste and do not recycle their used motor oil. When asked what they believe is the number one pollutant in the Potomac River and Chesapeake Bay, over a quarter of the respondents stated it is trash / litter dumped into the river. A summary of the survey results may be found on page 7 and in appendices A and B.



Responses on the number one cause of pollution in local streams, the Potomac River, and the Chesapeake Bay.

In 2007, Fairfax Water joined the Northern Virginia Clean Water Partners, increasing the number of participating organizations to 12. They are the second water and sanitary authority to join the effort.

¹ <http://www.eenorthcarolina.org>

The development of printed and web products, the survey, and the purchase of radio time are funded by the participating local governments and authorities. The budget is presented on page 6. The Partners meet on a quarterly basis to plan for campaign events, review results, and develop messages for products.

III. 2007 Media Strategy – February 22, 2007

Media Objective

Create awareness of pollution prevention with residents in the target demographic who engage in lawn care, dog walking, or oil changing throughout the Northern Virginia Area (City of Alexandria, Arlington County, City of Fairfax, Fairfax County, City of Falls Church, Herndon, Loudoun County, Prince William County, Vienna).

Target Demographic

- Males 35-64
- Homeowners in the above geographic area
- Cut their own grass and tend to other lawn and outside maintenance items

Media Strategy

Use radio in order to reach audience with a frequency message.

- Radio will be scheduled to run primarily Monday – Friday 6 a.m. – 7 p.m. – with some spots running during weekend dayparts to increase timely reach and frequency of the message.
- If brochures or other collateral is available, our partner radio stations would distribute it at appropriate station events in order to get the message in front of the target audience.
- In addition to paid advertising schedule, radio stations will air PSA's. These spots may be in the form of :60s, :30s, :15s, or :10s. Production for these no charge spots is not necessary. Any :60 PSAs can use the produced spot and scripts can be developed for the other lengths to be read live by the announcer.
- Interview opportunities may be available for a spokesperson on radio public affairs shows.

Campaign Dates

- March 19 – April 2, 2007 (2 weeks)
- April 16 – April 30, 2007 (2 weeks)

Media Tactics

4-week schedule of radio. Stations to be considered:

WARW-FM Classic Rock	WLZL-FM Hispanic
WJFK-FM FM Talk	WMZO-FM Country
WMAL-AM News/Talk	WBIG-FM Oldies
WTEM-AM Sports/Talk	WTOP AM+FM News
WJZW-FM Smooth Jazz	

6 – 7 Stations per week

20 – 25 Spots per station per week

200 Total Rating Points (TRPs) per week

800 TRPs over 4 weeks

4 Week Radio Delivery (Men 35-64): 65% reach, 12.3 Frequency

Total Radio Cost: \$150,000

IV. Budget

Local Government Contributions

Product development, radio air time purchase, and survey of residents are funded by the partnering organizations. Contributions are distributed proportionately among the participating nine jurisdictions based on their population using 2000 U.S. census data. The goal was to raise \$175,000. Contributions for the 2007 campaign are as follows:

Local Government and Authorities Contributions 2005 – 2007

Locality		2000 Population	# of Residents Served	Percentage of the Region	Contributions			
					Goal	2005	2006	2007
Cities	City of Alexandria	128,283	----	7.1	\$ 12,425	\$ 2,500	\$ 3,000	----
	City of Fairfax	21,498	----	1.2	2,100	1,700	2,100	2,100
	City of Falls Church	10,377	----	0.6	1,050	800	1,050	1,050
Counties	Arlington County	189,453	----	10.4	18,200	14,500	18,200	18,200
	Fairfax County	969,749	----	53.4	93,450	74,700	93,450	93,450
	Loudoun County	169,599	----	9.3	16,275	13,000	16,275	16,275
	Prince William County	280,813	----	15.5	27,125	22,000	27,125	27,125
Towns	Town of Vienna	14,453	----	0.4	1,000	----	1,000	1,000
	Town of Herndon	21,655	----	0.6	1,800	1,700	1,800	1,800
Authorities	Loudoun County Sanitation Authority (LCSA)	----	130,000	----	5,000	----	2,500	2,500
	Fairfax Water	----	1,300,000	----	----	----	----	5,000
Total		1,805,880	1,460,000	100%	\$175,000	\$130,900	\$166,500	\$168,500

Budget Breakdown for 2007 Regional Stormwater Education Campaign

Item	Budget
Media Buying Services Media Vision	\$150,000
Pre- and Post-Survey of Residents American Viewpoint	16,000
Printed Materials – Postcards Zoom Printing	2,000
Webpage Domain Network Solutions	500
Total	\$168,500

V. Survey Summary

For the second year in a row, pre- and post-surveys were conducted, to continue to collect data on a regional basis. This data is used to:

- Determine the effectiveness of the advertisement in changing behaviors of our target audience
- Determine the overall awareness of pollution and where stormwater eventually goes
- Direct future campaign endeavors and individual efforts by the localities.

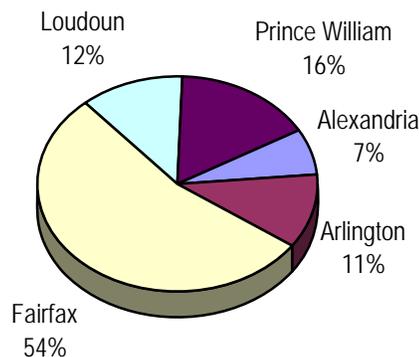
Over time, this data will be able to identify trends in the effectiveness of the campaign, behavioral changes, and general awareness of stormwater and pollution.

One thousand Northern Virginia residents were surveyed between the two surveys providing a 95 percent confidence interval. The demographics along with specific responses by the target audience (Men, age 35 – 59) are included in subsequent sections for both the pre- and post-survey.

Demographics of Respondents

Total Number of Respondents – 1,000

Distribution of Respondents by Jurisdiction



The mass majority of the respondents speak English as their primary language in their household. However, the other languages represented include Spanish, Vietnamese, Korean, and Middle Eastern.

The survey was evenly distributed between male and female respondents and the various age groups.

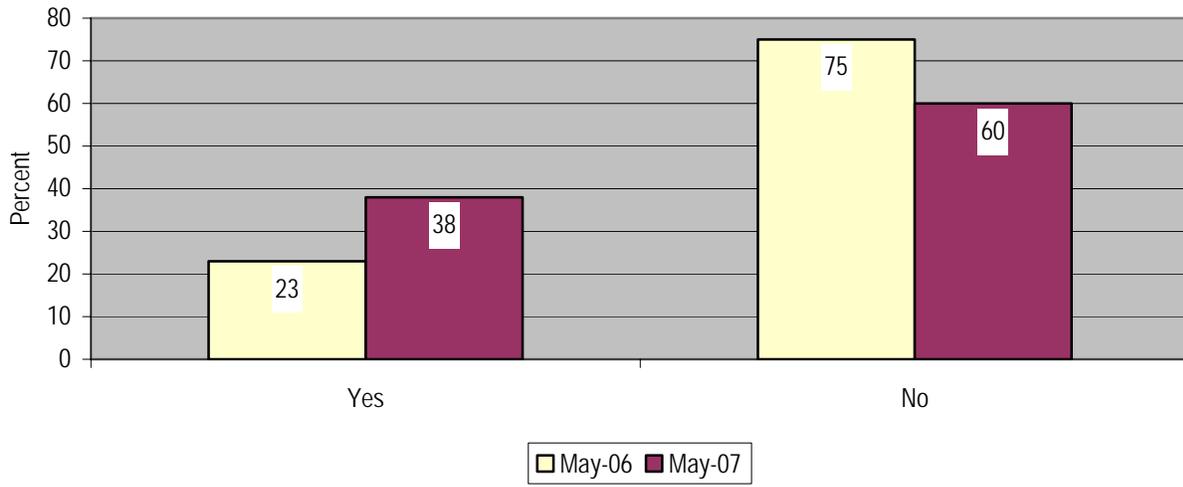
Key Findings

Topline reports provide a summary of the responses of the participants with each question that was asked. The topline reports for the pre- and post-surveys are provided in Appendix A and B, respectively.

The surveys conducted for the 2007 campaign, revealed:

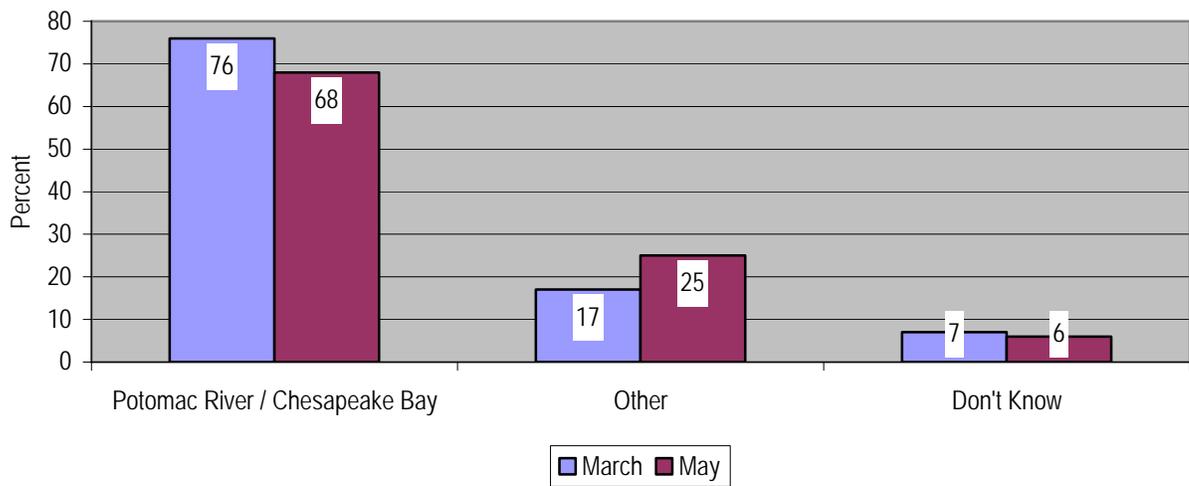
- The survey revealed that there was a 15 percent increase in the number of people who heard the ad this spring versus last year (38 percent versus 23 percent).

Number of respondents in 2006 and 2007, who heard the radio ad



- Seventy-two percent of those that heard the ad believe that it will be effective in getting people to change their behavior in regards to the campaigns three targeted pollutants.
- Awareness of where stormwater goes remains high with 70 – 75 percent of respondents correctly stating that it goes into the Potomac River or Chesapeake Bay.

Response to the survey question: *Where do you think stormwater eventually ends up?*

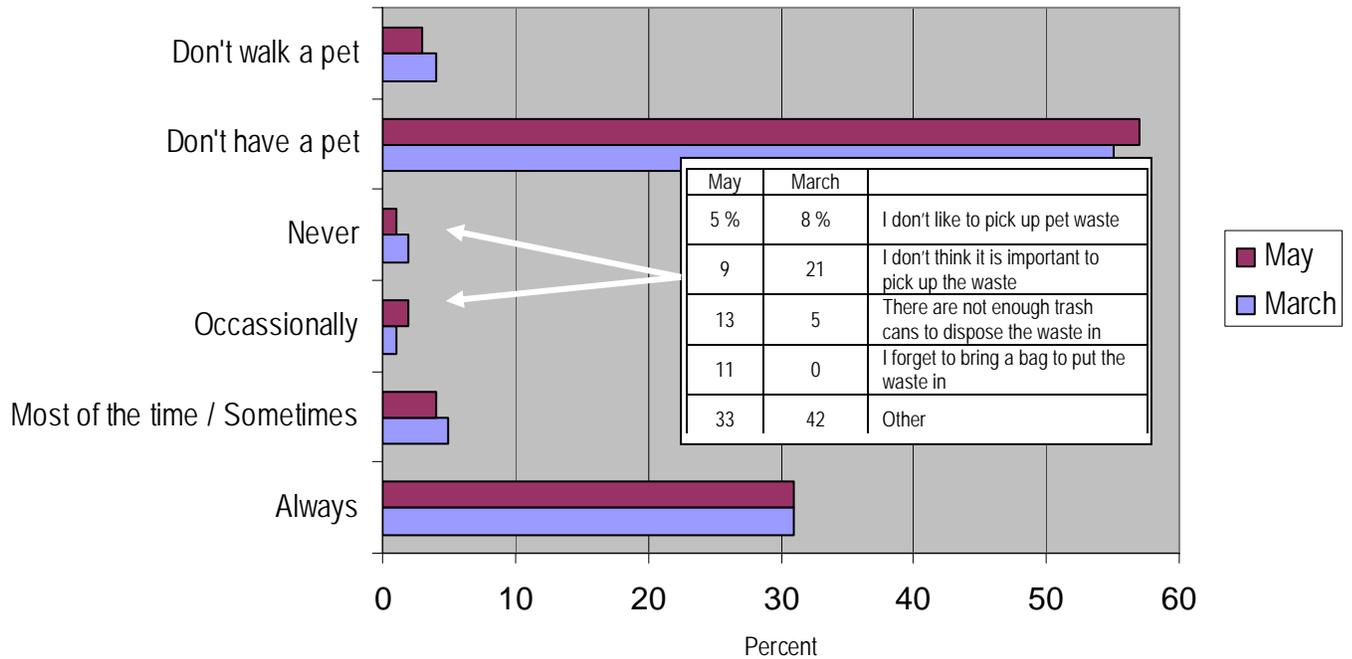


- When asked if the ad made the respondents change their behavior,
 - 12 percent will be more careful with fertilizer
 - 9 percent will pick up pet waste more often
 - 9 percent will either recycle and/or no longer dump motor oil
 - 41 percent will not change any behaviors.

*Note: This question was asked only during the May post-survey

- Additional questions were added to the post-survey to measure any behavior changes for those respondents who heard the ad.
 - In May, fewer people stated that they thought picking up after your pet was **not** important, as compared with the pre-campaign survey in March (21 percent felt it was not important in March and 9 percent felt it was not important in May!)

Response to the question: *Would you say that you always, most of the time, sometimes, occasionally, or never pick up after your pet?*



- The majority of those responding that did not recycle their used motor oil stated that they were not sure where to take their used motor oil (32 percent in March versus 35 percent in May). The May survey also revealed that many of the respondents find that recycling used motor oil is inconvenient or their local stations charge a fee and they don't want to pay it.
- Approximately half of the respondents stated that they fertilize once or more per year, with 1/5 of the total respondents employing a lawn care service.

Overall, the results from the surveys present promising results, especially the fact that respondents indicated that hearing the ad motivated them to change their behaviors with relation to fertilizer, pet waste, and motor oil. However, it is difficult to determine trends based on just two years worth of data. The current data may be used to better define what messages the partners or individual jurisdictions ought to promote (locations of participating motor oil recyclers, for example) as well as particular demographics to target and produce complementing products for.

General Perceptions

	Pre-Survey (March)	Post-Survey (May)
Importance of Individual Roles in Maintaining Water Quality		
Very	75 %	76 %
Somewhat	19	19
Not too much at all	3	4

Where Stormwater Ends Up		
Potomac River / Chesapeake Bay	76 %	68 %
Other	17	25
Don't know	7	6

Heard the Radio Ad		
Yes	22 %	38 %
No	76	60

Likelihood of Taking Action to Reduce Pollutants They Personally Place in Storm Drains		
Much more likely	57 %	48 %
Somewhat more	15	19
No Difference	20	25

Engage in the Following Personal Activities		
Walk your dog	28 %	27 %
Fertilize lawn	39	37
Change own oil	15	11
None	n/a	n/a

How Often They Pick Up After Their Pet		
Always	31 %	31 %
Not always	6	7
Never	2	1

Recycle Used Motor Oil		
Recycle	62 %	73 %
Don't Recycle	7	7

How Often They Fertilize Their Lawn		
Once	13 %	17 %
Twice	15	19
More that two	7	10
Never	31	25

Ad Effectiveness		
Very Somewhat	This question was only asked during the post-survey	72 %
Not at all		16

Ad Effect on Behavior		
Yes	This question was only asked during the post-survey	20 %
Already Doing		9
Don't Apply		16
No		49

Responses by Target Audience (Men, age 35 – 59)

	Pre-Survey (March)	Post-Survey (May)
Importance of Individual Roles in Maintaining Water Quality		
Very	69 %	74 %
Somewhat	24	17
Not too much at all	4	6

Where Stormwater Ends Up		
Potomac River / Chesapeake Bay	76 %	69 %
Other	21	26
Don't know	3	6

Heard the Radio Ad		
Yes	25 %	40 %
No	72	27

Likelihood of Taking Action to Reduce Pollutants They Personally Place in Storm Drains		
Much more likely	47 %	44 %
Somewhat more	16	18
No Difference	26	27

Engage in the Following Personal Activities		
Walk your dog	25 %	30 %
Fertilize lawn	44	43
Change own oil	19	16
None	38	36

How Often They Pick Up After Their Pet		
Always	27 %	31 %
Not always	6	8
Never	3	1

Recycle Used Motor Oil		
Recycle	71 %	74 %
Don't Recycle	6	8

How Often They Fertilize Their Lawn		
Once	13 %	17 %
Twice	17	19
More that two	8	10
Never	30	25

Ad Effectiveness		
Very Somewhat	This question was only asked during the post-survey	72
Not at all		21

Ad Effect on Behavior		
Yes	This question was only asked during the post-survey	20
Already Doing		9
Don't Apply		16
No		49

VI. The Call Script and Taglines

The Call¹ - *Tough-talking storm drain persona. Think "Sopranos".*

[Phone rings]

Homeowner: Hello?

Storm Drain: Yeah Johnson. It's me.

Homeowner: Who?

Storm Drain: I'm right in front of the house.

Homeowner: Where?

Storm Drain: Right on the street.

Homeowner: Well, uh... All I see is a storm drain.

Storm Drain: Yeah yeah. That's me.

Homeowner: What?

Storm Drain: Listen Johnson, you gotta stop dumpin' yer used motor oil on the ground. Ya hear me?

Homeowner: I don't dump my used mo...

Storm Drain: Now no use denying it, Johnson. Just stop it. Alright?

Homeowner: Hey, uh, How are you doing that?

Storm Drain: And you're over-fertilizing your yard.

Homeowner: I'm not over-fertilizing...

Storm Drain: They're called labels, Johnson. Whatsa matter wit' you? They tell you how much fertilizer to use. Read 'em.

Homeowner: Hey, but all I did was...

Storm Drain: Look all that *stuff* washes into our storm drains whenever it rains.

Homeowner: Well I... I didn't know that.

Storm Drain: I know you don't know. That's why I'm calling ya.

Homeowner: Well, thanks. I... I didn't mean any harm.

Storm Drain: Yeah yeah. Same thing with all that dog waste you have out there, alright? Pick that up!

Homeowner: You mean that you ev...

Storm Drain: Pick it up! I don't want to talk about it, just pick it up.

Homeowner: I understand.

Action-specific taglines:

Disposing of Pet Waste

Remember, what goes down the storm drain goes straight to the Potomac River and Occoquan Reservoir, our sources of drinking water. So please pick up after you pet! Brought to you by the Northern Virginia Clean Water Partners. Representing local governments, water and sewer authorities, and the Northern Virginia Regional Commission - www.onlyrain.org

Fertilizing Lawns Properly

Remember, what goes down the storm drain flows to the Potomac River and Occoquan Reservoir, our sources of drinking water. Keep fertilizer off driveways and sidewalks to prevent it from washing into storm drains. Fertilize in the fall, if at all, and make sure to follow the directions on the label. Brought to you by the Northern Virginia Clean Water Partners - www.onlyrain.org

Recycling Used Motor Oil

Remember, what goes down the storm drain goes straight to the Potomac River and Occoquan Reservoir, our sources of drinking water. Recycle your used motor oil at participating gas stations or your County's Household hazardous materials program. Brought to you by the Northern Virginia Clean Water Partners Representing local governments, water and sewer authorities, and the Northern Virginia Regional Commission - www.onlyrain.org

¹ *The Call* was originally developed by the Texas Commission on Environmental Quality

VII. Pet Waste Postcard

Know what's yuckier than picking up dog poop?



PLEASE PICK UP MY POOP.

Stepping in it. Know what's even more disgusting than that? Swimming in, fishing from or treating our drinking water from sources that have dog poop in them! Please pick up after your pooch.

Cleaning up pet waste is good for your health and the environment! Seriously. Pet waste left on the ground, especially near streets and sidewalks, gets washed into storm drains and drainage ditches which flow to your local waterway...without being treated! Bacteria, parasites, and viruses found in pet waste can be harmful to water quality and human health. Not only is picking up after your pooch the neighborly thing to do, it's the healthy thing to do... for you and the environment!



Visit the Northern Virginia Clean Water Partners web site at www.onlyrain.org

IT'S UP TO YOU TO PREVENT WATER POLLUTION!

Follow these simple tips:

- ▶ Dispose of used motor oil and household hazardous waste through your local Household HazMat program.
- ▶ Avoid excess fertilizer or pesticide use.
- ▶ Always pick up pet waste from your yard or public area.
- ▶ Wash your car at a commercial carwash, or in a location where the soapy water will not run into the storm drain.
- ▶ Sweep up dirt, grass clippings, other yard waste instead of washing them down the driveway and into the gutter.



Remember, Only Rain Down the Storm Drain!
Northern Virginia Clean Water Partners
www.onlyrain.org

Design Courtesy of NCEM of Environmental Education and Washington State Department of Ecology, King County and the cities of Seattle and Tacoma

VIII. Media Toolbox

News Release

3060 Williams Drive, Suite 510
Fairfax, VA 22031
www.novaregion.org



Voice: 703 642-0700
Fax: 703 642-5077

NEWS RELEASE

FOR IMMEDIATE RELEASE

March 14, 2007
NVRC 07.10a

Contact: Barbara J. Gordon, Communications Director
703.642.4635

Local Governments Join Forces to Prevent Water Pollution *Develop Comprehensive Education Campaign*

A large group of local governments and utilities in Northern Virginia have joined forces as the Northern Virginia Clean Water Partners to educate the public about steps they can take to prevent water pollution. Convincing the public that anything put down a storm drain can pollute a local stream is not an easy task, but a coordinated message from many agencies and various venues rather than individual messages should have more impact. "The availability of clean water for drinking, washing and recreation is one of the most important services local governments provide. Yet, polluted rivers have no boundaries. Local leaders understand the need to create a coordinated regional campaign to make a positive difference for our regions waterways. This is a very exciting effort," said Barbara F. Favola, chairman of the Northern Virginia Regional Commission.

Dog waste, excess fertilizer, and used motor oil are just a few of the pollutants that flow from neighborhood lawns, sidewalks and streets to the Potomac River and on to the Chesapeake Bay. While educational brochures are a handy tool, Northern Virginia governments have begun using more horsepower - the media - to inform residents about pollution and to meet regional goals for cleaning up local waterways.

For the third consecutive year, Northern Virginia local governments, in conjunction with the Northern Virginia Regional Commission, are using a 60-second radio spot featuring a tough-talking storm drain to get their message out. This year's campaign uses print materials, in addition to radio spots, with the theme, "Only Rain Down the Storm Drain."

The consortium of local governments and utilities behind this campaign also decided to brand their initiative by calling themselves the Northern Virginia Clean Water Partners. The "partners" include the counties of Arlington, Fairfax, Loudoun, Prince William, the cities of Alexandria, Fairfax, Falls Church, the towns of Herndon, Vienna, and Fairfax Water and the Loudoun County Sanitation Authority. For the first time, the radio campaign will attempt to "drive" listeners to action by directing them to a new website (www.onlyrain.org) that has more in-depth information on the issues, good practices, how to get involved by volunteering, and links to other pertinent websites.

The NoVa Clean Water Partners also intend to conduct another pre- and post-campaign survey to help quantify the effectiveness of the program. Last year's survey found that half the residents who heard the advertisement would "think differently about disposing of motor oil, fertilizing their lawn and picking up their pet's waste." Three out of four listeners indicated a "high" degree of concern after listening to the advertisement. And almost 9 out of 10 residents surveyed approved using tax dollars on this type of outreach campaign.

For information see www.onlyrain.org or contact Doug Pickford, Environmental and Heritage Resources, Northern Virginia Regional Commission, 703.642.4623 or pickford@novaregion.org . ##

Newsletter Article



“Only Rain Down the Storm Drain!” Help Prevent Water Pollution

Did you know that the water that goes down the storm drain on your street flows right into your local stream (*insert a local stream name here*)? Polluted rain water is the nation's number one water quality problem, and (*insert your locality name here*) is hoping that you can help do something about it! (*insert your locality name here*) is joining other Northern Virginia localities in a water pollution prevention campaign to educate residents about how common household waste and chemicals can contaminate local streams. The campaign will feature a “Only Rain Down the Storm Drain” message and is running on several radio stations in March and April of 2007.

Nonpoint source pollution, often called stormwater runoff pollution, comes from many sources, including parking lots, lawns, driveways, golf course, and roads. Rainwater that runs off these surfaces picks up contaminants like motor oil, fertilizer, pesticides, and bacteria from pet waste. This stormwater runoff flows into storm drains and then into local streams and the Potomac River, the sources of drinking water for many residents in the Washington, D. C. area. This runoff also contributes to the pollution affecting the Chesapeake Bay.

So what can you do to prevent water pollution? Follow these simple tips:

- Dispose of used motor oil and household hazardous waste (paint, batteries, household cleaners, etc.) properly through the Household HazMat program, rather than pouring it on the driveway or into the storm drain;
- Avoid excess fertilizer or pesticide use, especially before rain is predicted;
- Wash your car at a commercial carwash, or in a location where the soapy water will not run into the storm drain;
- Sweep up dirt, grass clippings, other yard waste instead of washing them down the driveway and into the gutter;
- Always pick up pet waste from your yard, sidewalk, or park area.

The campaign partners include Arlington County, Alexandria, Fairfax County, Prince William County, Loudoun County, Fairfax City, the City of Falls Church, the town of Herndon, the town of Vienna, Fairfax Water, the Loudoun County Sanitation Authority (LCSA), and the Northern Virginia Regional Commission.

For more information about preventing stormwater pollution, please check the campaign web site at www.onlyrain.org or call Local Contact at 703-XXX-XXXX or [local contact email](#).

Appendix A – Pre-Survey Topline Report

AMERICAN VIEWPOINT

American Viewpoint, Inc.
300 North Lee Street A Suite 400
Alexandria, Virginia
(703) 684-3325
(703) 684-9295 – FAX
1-800-684-4410
www.amview.com

**NORTHERN VIRGINIA SURVEY
March 2007**

Hello, my name is _____, and I'm with AMERICAN VIEWPOINT, an independent market research firm located in Alexandria, Virginia. This is not a sales call. We are doing a survey on issues in Northern Virginia, and I would like to ask you a few questions.

A. What is your age? ***IF UNDER 18 YEARS OF AGE, ASK IF THERE IS ANYONE IN THE HOUSEHOLD WHO IS 18 OR OLDER.***

5%	18-24
5%	25-29
11%	30-34
14%	35-39
11%	40-44
13%	45-49
11%	50-54
11%	55-59
8%	60-64
3%	65-69
2%	70-74
5%	75 and over
0%	Refused

THANK AND TERMINATE

B. Do you live in (NAME OF CITY, TOWN OR COUNTY FROM SAMPLE) at this address?

1	Yes
2	No

***CONTINUE
THANK AND TERMINATE***

1. What do you think is the number one cause of pollution in local streams, the Potomac River and the Chesapeake Bay?

- 19% Litter/Trash dumped into the river
- 15% Industrial pollution
- 13% Runoff (In General)
- 9% Pesticides/Fertilizers from lawns
- 8% Sewage/Sewer system
- 8% Farms/Agriculture
- 6% Boats/Cars/Traffic
- 3% People (In General)
- 2% Gas/Petroleum
- 7% Other
- 21% Don't Know/Refused

2. How important do you feel the role of individuals is in maintaining the quality of water in our local streams and rivers, the Potomac River and Chesapeake Bay?

- 75% Very important
- 19% Somewhat important
- 3% Not too important
- 1% Not at all important
- 3% Don't know
- 0% Refused

3. Storm water is rain or other water discharged over land, such as a lawn sprinkler, that flows into the street, along the gutter and into the storm drain. Where do you think storm water eventually ends up? **ASK AS A PRE-CODED OPEN END QUESTION**

- 76% Into the Potomac River or Chesapeake Bay
- 3% Underground
- 2% To a waste water treatment facility
- * Into a pipe
- 12% Other
- 7% Don't know
- * Refused

SPECIFY

4. In the past couple of months, have you heard any ads on the radio about keeping storm water a little cleaner by picking up after your pet, not dumping motor oil in the storm drain and using less fertilizer on your lawn?

- 22% Yes
- 76% No
- 2% Don't know
- 0% Refused

5. I would now like to read to you a list of activities that people engage in and have you tell me which if any you engage in? **ACCEPT MULTIPLE RESPONSES**

- 28% Walk your dog
- 39% Fertilize your lawn

- 15% Change your own motor oil
- 39% None of the above
- * Don't know
- 0% Refused

Now, I would like to read to you some specific actions that individuals could take to help improve water quality in the Potomac River and the Chesapeake Bay and have you tell me if you do any of these actions. The first is...**ROTATE**

6. Would you say that you always, most of the time, sometimes, occasionally, or never pick up after your pet?

- 31% Always
- 3% Most the time
- 2% Sometimes
- 1% Occasionally
- 2% Never
- 55% Don't have a pet
- 4% I have a pet, but don't walk it
- 1% Don't know
- 1% Refused

IF PUNCH 4 OR 5 ABOVE, ASK:

6A. Which of the following would you say is the reason you don't pick up after your pet?

READ AND ROTATE LIST

- 8% I don't like to pick up pet waste
- 0% I forget to bring a bag to put the waste in
- 21% I don't think picking up after my pet is important
- 5% There are not enough trash cans to dispose of the waste in
- 42% Other **SPECIFY**
- 13% Don't know
- 11% Refused

7. If you were to change your car's oil...what would you do with the used motor oil?

READ AND ROTATE LIST

- 62% Take it to a gas station or hazmat facility for recycling
- 3% Store it in my garage
- 2% Put it in the trash
- * Dump it on the ground or in the gutter
- * Dump it down the sink
- 2% Other **SPECIFY**
- 26% I don't change my car's oil / I take it to a garage
- 4% Don't know
- 1% Refused

IF OTHER THAN PUNCH 3, 7, 9 or 0 ABOVE, ASK:

7A. Which of the following would you say is the reason you don't recycle your used motor oil?

- 32% I am not sure where to take my used motor oil
- 15% I don't want to have to pay to recycle it since my local station charges a fee
- 0% It is inconvenient to recycle used motor oil
- 0% I don't think that recycling is important
- 14% Other **SPECIFY**
- 35% Don't know
- 4% Refused

8. Which of the following best describes how often you fertilize your lawn?
READ AND ROTATE LIST

- 10% Once a year in the spring
- 3% Once a year in the fall
- 15% Twice a year
- 4% Three times a year
- 3% Four or more times a year
- 31% Never
- 15% I have a lawn care service take care of my yard
- 14% I don't have a lawn
- 3% Don't know
- 2% Refused

9. Some people are surprised to learn that polluted storm water is the NUMBER ONE cause of pollution in the Potomac River and Chesapeake Bay. When it rains and when snow melts, the water picks up pollutants on the land and washes them into local waterways and storm drains where it flows eventually to the Potomac River and Chesapeake Bay. Used motor oil dumped into a storm drain, pet waste and lawn fertilizers and other yard chemicals also contribute significantly to this problem. Knowing this, would you be more likely or less likely to take actions to reduce the amount of pollutants that you personally put into storm drains or would knowing this not make a difference in your actions?

- 57% Much more likely
- 15% Somewhat more likely
- 2% Somewhat less likely
- 1% Much less likely
- 20% No difference
- 5% Don't know
- 72% TOTAL MORE LIKELY**
- 3% TOTAL LESS LIKELY**

10. How frequently do you listen to a local radio station?

- 67% Daily
- 15% Frequently, but not daily
- 11% Seldom
- 6% Never **SKIP TO D1**
- * Don't know **SKIP TO D1**
- * Refused **SKIP TO D1**

11. When you listen to the radio, what local radio station do you listen to most often?
ASK AS PRECODED OPEN END QUESTION

5%	DC 101	
0%	WABS (780)	
*	WAGE	
10%	WAMU (NPR)	
2%	WARW-FM	
2%	WASH-FM (97.1)	
2%	WAVA (105.1)	
1%	WBIG-FM	
*	WDCT	
5%	WETA-FM (90.9)	
0%	WFAX (1220)	
4%	WGAY (99.5)	
1%	WGMS (Classical)	
2%	WHUR-FM (Howard University)	
3%	WJFK	
1%	WJZW-FM	
3%	WKYS (93.9)	
0%	WLZL-FM	
5%	WMAL (630)	
4%	WMZQ (98.7)	
1%	WRC (980)	
1%	WTEM-AM	
21%	WTOP (1500 or 103.5)	
16%	Other	SPECIFY
9%	Don't know	
*	Refused	

And now I have just a few questions for statistical purposes only . . .

D1. What is the primary language spoken in your home?

94%	English	
2%	Spanish	
0%	Chinese	
*	Vietnamese	
*	Korean	
0%	Ethiopian	
1%	Middle Eastern	
2%	Other	SPECIFY
1%	Refused	

D2 Which of the following income groups includes your total household income in 2006 before taxes?

1%	Under \$10,000
1%	\$10,000 - \$14,999
2%	\$15,000 - \$19,999
1%	\$20,000 - \$24,999
1%	\$25,000 - \$29,999
1%	\$30,000 - \$39,999

3% \$40,000 - \$49,999
13% \$50,000 - \$74,999
13% \$75,000 - \$99,999
44% \$100,000 And Over
3% Don't Know
17% Refused

D3. Do you consider yourself to be White, Black, Hispanic, Asian or what?

65% White
15% Black
4% Hispanic
8% Asian
5% Other
0% Don't Know
3% Refused

D4. Which of the following best describes where you live? Is it a...**ROTATE 1 THRU 4**

65% Single Family Home
7% Duplex / Semi-Detached Home
11% An Apartment
14% A Condominium
2% Don't Know
1% Refused

D5. SEX OF RESPONDENT:

48% Male
52% Female

D6. City or County

7% City of Alexandria
11% Arlington County
54% Fairfax County
12% Loudoun County
16% Prince William County

Appendix B – Post-Survey Topline Report

AMERICAN VIEWPOINT

American Viewpoint, Inc.
300 North Lee Street A Suite 400
Alexandria, Virginia
(703) 684-3325
(703) 684-9295 – FAX
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www.amview.com

**NORTHERN VIRGINIA SURVEY
May 2007**

Hello, my name is _____, and I'm with AMERICAN VIEWPOINT, an independent market research firm located in Alexandria, Virginia. This is not a sales call. We are doing a survey on issues in Northern Virginia, and I would like to ask you a few questions.

A. What is your age? ***IF UNDER 18 YEARS OF AGE, ASK IF THERE IS ANYONE IN THE HOUSEHOLD WHO IS 18 OR OLDER.***

6% 18-24
7% 25-29
10% 30-34
10% 35-39
13% 40-44
12% 45-49
11% 50-54
9% 55-59
11% 60-64
3% 65-69
2% 70-74
5% 75 and over
0% Refused

THANK AND TERMINATE

B. Do you live in (NAME OF CITY, TOWN OR COUNTY FROM SAMPLE) at this address?

1 Yes
2 No

***CONTINUE
THANK AND TERMINATE***

12. What do you think is the number one cause of pollution in local streams, the Potomac River and the Chesapeake Bay?
- 31% Litter/Trash dumped into the river
 - 18% Pesticides/Fertilizers from lawns
 - 16% Industrial Pollution
 - 12% Boats/Cars/Traffic
 - 9% Farms/Agriculture
 - 7% Sewage/Sewer system
 - 6% Runoff (In General)
 - 4% Gas/Petroleum
 - 3% People (In General)
 - 3% Overdevelopment
 - 2% Other
 - 20% Don't Know/Refused
13. How important do you feel the role of individuals is in maintaining the quality of water in our local streams and rivers, the Potomac River and Chesapeake Bay?
- 76% Very important
 - 19% Somewhat important
 - 3% Not too important
 - 1% Not at all important
 - 2% Don't know
 - 0% Refused
14. Storm water is rain or other water discharged over land, such as a lawn sprinkler, that flows into the street, along the gutter and into the storm drain. Where do you think storm water eventually ends up? **ASK AS A PRE-CODED OPEN END QUESTION**
- 68% Into the Potomac River or Chesapeake Bay
 - 7% Underground
 - 6% To a waste water treatment facility
 - 1% Into a pipe
 - 12% Other **SPECIFY**
 - 6% Don't know
 - 0% Refused
15. In the past couple of months, have you heard any ads on the radio about keeping storm water a little cleaner by picking up after your pet, not dumping motor oil in the storm drain and using less fertilizer on your lawn?
- 38% Yes
 - 60% No
 - 2% Don't know
 - 0% Refused
16. I would now like to read to you a list of activities that people engage in and have you tell me which if any you engage in? **ACCEPT MULTIPLE RESPONSES**
- 27% Walk your dog

- 37% Fertilize your lawn
- 11% Change your own motor oil
- 44% None of the above
- 0% Don't know
- 0% Refused

Now, I would like to read to you some specific actions that individuals could take to help improve water quality in the Potomac River and the Chesapeake Bay and have you tell me if you do any of these actions. The first is...**ROTATE**

17. Would you say that you always, most of the time, sometimes, occasionally, or never pick up after your pet?

- 31% Always
- 4% Most the time
- 1% Sometimes
- 2% Occasionally
- 1% Never
- 57% Don't have a pet
- 3% I have a pet, but don't walk it
- 1% Don't know
- * Refused

IF PUNCH 4 OR 5 ABOVE, ASK:

6A. Which of the following would you say is the reason you don't pick up after your pet?

READ AND ROTATE LIST

- 5% I don't like to pick up pet waste
- 11% I forget to bring a bag to put the waste in
- 9% I don't think picking up after my pet is important
- 13% There are no enough trash cans to dispose of the waste in
- 33% Other **SPECIFY**
- 16% Don't know
- 12% Refused

18. If you were to change your car's oil...what would you do with the used motor oil?

READ AND ROTATE LIST

- 73% Take it to a gas station or hazmat facility for recycling
- 3% Store it in my garage
- 3% Put it in the trash
- * Dump it down the sink
- * Dump it on the ground or in the gutter
- 1% Other **SPECIFY**
- 18% I don't change my car's oil / I take it to a garage
- 2% Don't know
- * Refused

IF OTHER THAN PUNCH 3, 7, 9 or 0 ABOVE, ASK:

7A. Which of the following would you say is the reason you don't recycle your used motor oil?

- 35% I am not sure where to take my used motor oil
- 12% It is inconvenient to recycle used motor oil
- 10% I don't want to have to pay to recycle it since my local station charges a fee
- 3% I don't think that recycling is important
- 10% Other **SPECIFY**
- 30% Don't know
- 0% Refused

19. Which of the following best describes how often you fertilize your lawn?
READ AND ROTATE LIST

- 11% Once a year in the spring
- 5% Once a year in the fall
- 15% Twice a year
- 5% Three times a year
- 3% Four or more times a year
- 26% Never
- 12% I have a lawn care service take care of my yard
- 20% I don't have a lawn
- 2% Don't know
- * Refused

20. Some people are surprised to learn that polluted storm water is the NUMBER ONE cause of pollution in the Potomac River and Chesapeake Bay. When it rains and when snow melts, the water picks up pollutants on the land and washes them into local waterways and storm drains where it flows eventually to the Potomac River and Chesapeake Bay. Used motor oil dumped into a storm drain, pet waste and lawn fertilizers and other yard chemicals also contribute significantly to this problem. Knowing this, would you be more likely or less likely to take actions to reduce the amount of pollutants that you personally put into storm drains or would knowing this not make a difference in your actions?

- 48% Much more likely
- 19% Somewhat more likely
- 1% Somewhat less likely
- 2% Much less likely
- 25% No difference
- 5% Don't know
- 66% TOTAL MORE LIKELY**
- 3% TOTAL LESS LIKELY**

IF YES TO Q4 ABOVE, ASK:

21. Earlier you indicated that you had heard on the radio about the campaign to reduce the amount of motor oil, fertilizer or dog waste that is put into our storm drain system. How effective do you think this ad is in causing people to change their behavior with regard to picking up pet waste, not dumping used motor oil or using less fertilizer? Would you say it is...**READ RESPONSES**

- 20% Very effective
- 57% Somewhat effective
- 12% Not too effective
- 4% Not at all effective
- 7% Don't know

1% Refused

10B. Did hearing the ad make you personally change any of your behaviors relating to picking up pet waste, not dumping motor oil or fertilizing? **IF YES, READ RESPONSES/ ACCEPT MULTIPLE RESPONSES**

9% Yes, I pick up pet waste more often

5% Yes, I no longer dump motor oil

4% Yes, I now recycle motor oil

12% Yes, I am more careful with fertilizer

15% I was already doing the correct behaviors

20% None of the above applies to me because I don't have a pet, a lawn and/or change my own oil

41% No

5% Don't know

* Refused

22. How frequently do you listen to a local radio station?

59% Daily

17% Frequently, but not daily

16% Seldom

7% Never

1% Don't know

0% Refused

SKIP TO D1

SKIP TO D1

SKIP TO D1

23. When you listen to the radio, what local radio station do you listen to most often?
ASK AS PRECODED OPEN END QUESTION

4% DC 101

0% WABS (780)

* WAGE

11% WAMU (NPR)

* WARW-FM

4% WASH-FM (97.1)

1% WAVA (105.1)

1% WBIG-FM

0% WDCT

5% WETA-FM (90.9)

0% WFAX (1220)

6% WGAY (99.5)

* WGMS (Classical)

1% WHUR-FM (Howard University)

1% WJFK

* WJZW-FM

1% WKYS (93.9)

0% WLZL-FM

6% WMAL (630)

4% WMZQ (98.7)

1% WRC (980)

0% WTEM-AM

19% WTOP (1500 or 103.5)
27% Other
9% Don't know
0% Refused

SPECIFY

And now I have just a few questions for statistical purposes only . . .

D1. What is the primary language spoken in your home?

92% English
2% Spanish
* Chinese
* Vietnamese
0% Korean
0% Ethiopian
1% Middle Eastern
4% Other
* Refused

SPECIFY

D2 Which of the following income groups includes your total household income in 2006 before taxes?

1% Under \$10,000
1% \$10,000 - \$14,999
1% \$15,000 - \$19,999
1% \$20,000 - \$24,999
2% \$25,000 - \$29,999
3% \$30,000 - \$39,999
6% \$40,000 - \$49,999
12% \$50,000 - \$74,999
13% \$75,000 - \$99,999
40% \$100,000 And Over
4% Don't Know
16% Refused

D3. Do you consider yourself to be White, Black, Hispanic Asian or what?

65% White
15% Black
4% Hispanic
7% Asian
4% Other
0% Don't Know
5% Refused

D4. Which of the following best describes where you live? Is it a... **ROTATE 1 THRU 4**

59% Single Family Home
8% Duplex / Semi-Detached Home
14% An Apartment
10% A Condominium

6% Don't Know
3% Refused

D5. SEX OF RESPONDENT:

48% Male
52% Female

D6. City or County

7% City of Alexandria
11% Arlington County
54% Fairfax County
12% Loudon County
16% Prince William County

Appendix B

Northern Virginia Clean Water Partners Planning Meeting Summaries

**Northern Virginia Regional Stormwater Media Campaign
Meeting Summary
November 6, 2006**

In attendance:

Randy Williford	Loudoun County
Aileen Winquist	Arlington County DES
Krystal Kearns	Fairfax County DPWES
Zoran Dragalevac	Town of Herndon, DPW
Deb Oliver	Prince William County
Samantha Villegas	Loudoun County Sanitation Authority
Diana Handy	City of Alexandria
Laura Grape	NVRC
Marshall Popkin	NVRC

Discussion of Regional PSA

Deb suggested that the group create a regional PSA to be used on all local government stations. News Channel 8 and other cable channels are required to run free PSAs.

- Such efforts are expensive up front, but there are few associated costs afterwards.
 - Still footage could be incorporated into printed materials
 - Importance of one line that is consistently repeated
- Such a PSA could be used to compliment the radio announcements.
- The group watched a 30-sec conservation-based PSA run in Prince William County, entitled "Do It for Me."
 - The rights to the PSA belong to PWC.
 - Prince William County has not gotten any feedback yet on the PSA.
 - There may be an opportunity for reusing the PSA in other jurisdictions.
 - Production of the PSA required 20-30 hours.
 - Local government cable companies do not usually charge for such productions.
- Past PWC efforts
 - Youth Ambassador's Program – PWC program in which kids from public, private, and home schools put on Earth Day Festivals. Two kids are selected from each interested institution. High school students lead the groups.
 - Deb discussed one student's effort to encourage recycling and landfill preservation in her DVD "Recycling Rocks." This goes out to the schools
- Samantha suggested that a metric for determining the success of a PSA is necessary.
- The group may want to make PSAs seasonal.

Scott's Campaign Update

Due to time constraints this fall, the campaign to promote fertilizing in the fall did not occur. However, Scott's Company and MWCOG would still like to pursue something concurrent with Northern Virginia's efforts in spring 2007.

- Aileen is maintaining contact with representatives from Scotts and MWCOG for this effort.

Supplements to Current Efforts

To bolster the current campaign, several ideas were raised to supplement the radio ad and reach out to a greater audience.

- Public Service Announcements
 - PSAs could run on:
 - local government TV stations
 - internal public school networks
 - The question was raised as to any information that may be available regarding the ratings for local government cable access channels.
 - No formal viewership information is available.
 - Aileen noted that in a County-wide survey, half of Arlington cable subscribers (60,000 total) stated that they watched the government access channel at least once a month.
 - A formal mechanism is in place for monitoring radio ratings.
 - Samantha noted that data supports the use of radio campaigns, especially in the DC area because of the long commute times. Given the budget for this regional stormwater campaign, radio is a good choice because it is affordable and allows the jurisdictions to effectively target certain audiences.
- Point of "Purchase"
 - Fertilizer
 - It was noted that using Lowes / Home Depot for water conservation efforts may be difficult because approval from their regional offices would be required.
 - Such efforts have been more successful in the West, in areas such as Arizona.
 - Motor Oil
 - A past successful campaign conducted in the mid-1990s regarding Household Hazardous Waste used labels, brochures, shelf tags, and other point of purchase methods at smaller business operations.
 - Auto parts stores may be an effective launching point.
 - Pet Waste
 - Utilize animal shelters and veterinarians' offices to access pet owners.
 - A postcard for cleaning up pet waste from North Carolina will be amended with local information.
 - Aileen will gather information regarding the general ages of pet walkers.

Discussions Regarding Current Radio PSA Tagline

Aileen presented several suggestions for new taglines that incorporated "pollution solutions" and featured suggested names for the group.

- Concern about the language contained within the current PSA was raised in regards to where the water flows "directly" to.
 - Currently stated as "Drains directly to Potomac River."
- It was also suggested that the tagline not focus so much on the drinking water aspect. However, it was noted that public officials will be more apt to participate in the PSAs if impacts directly affect people (such as in the case of drinking water).
- Aileen suggested that language in the current PSA could be changed to view the Potomac River as 'a' source of drinking water.
- The group thinks that listing the jurisdictions' names is less important than leaving time for the message itself.
 - The PSA could direct listeners to a website so that individual jurisdictions may receive recognition. For example: "Visit cleanwaterpartners.com..."
- The group is interested in creating a name for itself.

- Positive feedback regarding the term 'partners.'
- The group considered aligning itself with another organization.
 - Approval may be required from higher up within each jurisdiction's government body.

Discussions Regarding Spring Campaign

The group agreed that a webpage, the radio ad and the TV PSA should be running by spring 2007. The timeframe for the radio campaign is March and April 2007 – 2 weeks on and 2 weeks off. The pre-survey will be conducted a few days before the radio ad airs.

- Future Funding
 - Concern about how the campaign will be funded in the future was discussed, especially in times of fiscal constraint.
 - Perhaps NVRC could send out a standard budget line item to be included in its dues. NVRC could emphasize that such efforts help to meet MS-4 requirements. Laura will see if this is possible.
- Zoran suggested that putting each jurisdiction's name on the TV PSA might induce greater participation.
- Laura suggested that the webpage, radio PSA, and TV PSA be running by spring 2007.
- Printing
 - Krystal asked whether each jurisdiction should fund its own printing?
 - Laura responded that additional funding may be available from a pot of federal funds. She has a phone call planned with state representatives.
- Survey
 - It was agreed that a survey would be an effective way for gauging success on a year-to-year basis. The survey may be expanded to include more people in each jurisdiction. Although it was noted that surveying 500 people provides a 95% confidence interval for this region. The survey should also include questions to determine whether people acted differently before the survey campaign.
 - Laura will see what the additional costs will be for an expanded survey.
 - Several benefits of conducting a survey were discussed and include:
 - An annual pre- and post survey would be an effective means for determining the success of a given PSA.
 - An annual survey is helpful because of the transitory nature of this region.

Website Discussion

Currently, a webpage exists for the campaign off NVRC's domain at:

www.novaregion.org/pollution_prevention.html However, it is suggested that the group develop a webpage with a shorter, more memorable URL that may be used in the radio ad, the PSA and on any printed material.

- The website may include:
 - Partner information
 - Photos of clean ups and drain marking activities be used for public relations purposes.
 - Tips of the Month or Season
 - Links to additional information on the 3 pollution concerns, for example – "Green Lawncare Companies".
 - Other suggestions?
- Costs will be determined for leasing a domain name, designing and developing content, and maintaining the site.
- Laura will pull together draft content and allow the group to make comments.

Action Items

- Deb, Aileen, Laura, and Diana will help with the PSA.
- The group will gather data on local cable channels.
- Randy, Krystal, Laura and Aileen will work on the survey.
- The draft taglines will be sent out to the group for review.
- Laura will send out letters requesting support for funding.
- Laura will research costs associated with website development and maintenance.

Northern Virginia Clean Water Partners Meeting Summary	June 12, 2007 10 a.m. – noon NVRC's Chesapeake Conference Room 3060 Williams Drive, Fairfax, VA 22031
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In Attendance

- ✦ Kathy Allan, City of Falls Church
- ✦ Zoran Dragacevac, Town of Herndon
- ✦ Laura Grape, NVRC
- ✦ Diana Handy, City of Alexandria
- ✦ Fred Rose, Fairfax County
- ✦ Samantha Villegas, LCSA
- ✦ Aileen Winquist, Arlington County

Agenda

- ✦ Overview of the Radio Ad
- ✦ Overview of the Survey Results
- ✦ Debut of the Public Service Announcement
- ✦ Update on the Trash-Free Potomac Initiative Campaign
- ✦ Other Items and Next Steps

Action Items

Aileen will examine the survey results for any interesting jurisdictional comparisons. She will also provide a summary that may be used in upcoming MS4 reports. Aileen will also follow-up with Karl Berger for MWCOG on the recent airing of the Scotts Lawn Care company campaign.

Fred will look into the costs for making additional copies of the "Only Rain down the Storm Drain" PSA and will provide direction to Laura for purchase.

Laura is working on developing a summary report for the 2007 campaign and will begin developing a strategic outline for the 2008 effort. She will also send out a summary of the Trash-Free Potomac Summit. Options for airing the PSA on cable, dish, and fiber optic networks will also be explored.

Samantha will touch base with her contact from Spanish-speaking cable networks to see if they will air our PSA.

Suggestions for 'tips of the month' are requested. Please provide sources for any information that may be pulled from existing websites or if it's information from your particular organization. Please provide these to Laura Grape.

Discussion

Overview of the Radio Ad

Laura presented a brief summary of the airing of "The Call" radio advertisement throughout March and April. NVRC is still waiting to hear the specifics regarding our reach to the campaign's target audience. Several partners have received complements regarding their participation in the campaign. Laura has received a few phone calls from different radio stations interested in airing the ad. One in particular was "Redskins Radio" which has a tremendous listener-base in the fall. While the 2007 budget has for the most part been exhausted, extending the ad into the fall for subsequent campaigns will be considered. The ad or taglines may need to be revised to promote fertilizing in the fall.

Total number of times the ad aired: 926

Number of times the ad aired per radio station:

Station	March	April
WARW – FM	30	88
WBIG – FM	24	24
WJFK – FM	51	158
WJZW – FM	59	59
WLZL – FM	12	36
WMAL – AM	108	36
WMZQ – FM	20	70
WTEM – AM	---	93
WTOP – FM	---	58
TOTAL	232	694

Total cost: \$148,960

Overview of the Survey Results

Aileen presented the results from the surveys that were conducted before and after the radio advertisement aired. The presentation is attached.

Demographic Information

500 Northern Virginia residents were surveyed, providing a 95% confidence interval.

Number of respondents per jurisdiction

Jurisdiction	Number of Respondents
Alexandria	35 (7%)
Arlington	55 (11%)
Fairfax	270 (54%)
Loudoun	60 (12%)
Prince William	80 (16%)
TOTAL	500 (100%)

The survey was fairly evenly distributed between men and women (240 vs. 260, respectively), with 31% of the respondents landing in our target audience category (men 35 – 59).

Key Findings of the Survey

- ✦ Awareness of where stormwater goes remains high with 70 – 75% of respondents correctly stating that it goes into the Potomac River or Chesapeake Bay).

- ✦ The survey revealed that there was a 15% increase in the number of people who heard the ad this spring versus last year (38% vs 23%).

The 2007 survey question was tweaked slightly from the 2006 survey to be a little more specific to the "Only Rain down the Storm Drain" Campaign. It was mentioned that asking this question in a more generic sense would allow for a truer recollection from the respondent instead of a false response because they think it is the correct answer. One suggestion for rewording the question included: "Have you heard anything on the radio about behaviors for protecting water?" This generic question may be followed-up with more specific questions about the campaign.

- ✦ Some additional questions were added to the post survey to measure any behavior changes for those respondents who heard the ad.

In May, fewer people stated that they thought picking up after your pet was **not** important, as compared with the pre-campaign survey in March (21% felt it was not important in March and 9% felt it was not important in May!)

- ✦ The majority of those responding that they didn't recycle their used motor oil stated that they were not sure where to take their used motor oil (32% in March vs 35% in May).

Approximately 1/2 of the respondents stated that they fertilize once or more per year, with 1/5 of the total respondents employing a lawn care service.

- ✦ 77% of those that heard the ad believe that it will be effective in getting people to change their behavior in regards to the campaigns 3 targeted pollutants.

- ✦ When asked if the ad made the respondents change their behavior,:
 - 12% stating they will be more careful with fertilizer
 - 9% stating they will pick up pet waste more often
 - 9% stating they will either recycle and/or no longer dump motor oil
 - 41% stated that they had not changed any behaviors.

** Note: This question was asked only during the May post-ad survey*

Overall, the results from the surveys present promising results, especially the fact that respondents indicated that hearing the ad had motivated them to change their behaviors with relation to fertilizer, pet waste, and motor oil. However, it is difficult to determine trends based on just two years worth of data. The current data may be used to better define what messages the partners or individual jurisdictions ought to promote (locations of participating motor oil recyclers, for example) as well as particular demographics to target and produce complementing products for.

Debut of the Public Service Announcement

Fairfax County developed a :30 second Public Service Announcement for the Northern Virginia Clean Water Partners. The PSA has been airing frequently on Fairfax County's local cable, Channel 16. It features a colorful mixture of informative pictures associated with narrative messages on reducing our three targeted pollutants. It ends with the Clean Water Partners slogan, the website URL, and our name.

Fred Rose, of Fairfax County, managed the project on behalf of the Partners.

There is money in the budget for additional copies of the PSA to be made. Fred is currently investigating the costs associated with burning one DVD for each partner. The goal is to air these on all local government cable channels.

Adding subtitles in Spanish was also mentioned. Fred will look into possibly adding this to an existing contract. Laura will also explore grant opportunities to provide funding to do so. Samantha will explore options for airing the PSA on Spanish-speaking channels, such as Tele Mundo and Univision.

Laura is also looking into opportunities to have the PSA air on Comcast, Cox, and FiOS networks and will also work with Barbara Gordon, NVRC's Communications Director, to explore opportunities to get it on Satellite networks.

Update on the Trash-Free Potomac Initiative Campaign

The Alice Ferguson Foundation is hosting the Trash-Free Potomac Summit on Thursday, June 14, 2007 at the World Bank, in Washington, D.C. Several partners indicated that they will be attending.

As part of the foundation's initiative to have a "Trash-Free Potomac by 2013", they are interested in developing a multi-media campaign similar to the Northern Virginia Clean Water Partners, where local governments throughout the Metropolitan region will contribute financially to this effort. MWCOG will hold the similar role as NVRC as the campaign's funding instrument.

Laura and Aileen will be participating in a roundtable discussion at the summit on how to best develop the foundation's regional campaign. She will present a unified message for the Partners.

The partners provided several ideas to promote at the roundtable, including:

- ✦ Recommend AFF partner with Keep America Beautiful and other local groups to assist in promoting common messages.
- ✦ Recommend AFF partner with local businesses for additional funds.
- ✦ The success of the Northern Virginia efforts has been its ability to stay focused on local issues and target messages specifically for its residents, while simultaneously meeting Phase I and Phase II MS4 stormwater permit requirements for education. Our focus is on dissolved pollutants, which may not be as obvious as trash and litter.
- ✦ Through our surveys, we collect data to determine trends, target product development, and provide critical data for MS4 reporting purposes. Based on this data, we may re-evaluate our campaign and make changes in the coming years.
- ✦ Trash messages may be incorporated into the taglines for the ads, but the partners, who are mostly stormwater managers, can not justify solely focusing promoting just trash.
- ✦ The partners will continue to support AFF's goal in reducing trash by promoting their events through our website – www.onlyrain.org. Participating jurisdictions may provide additional support through their individual programs.

Other Items and Next Steps

Pharmaceuticals in Water

The issue of pharmaceuticals & endocrine-disruptors in local waters is of concern to the Loudoun County Sanitation Authority (LCSA). It was suggested that the partners consider adding information to our website or develop a brochure explaining the proper methods for disposing of pills and other pharmaceutical waste and where collection sites are located.

Reaching out to the Spanish-speaking Communities

Throughout the next year, the Spanish-speaking communities will be targeted, particularly to promote the recycling of used motor oil. Local organizations that reach out to the Latino community will help to serve as a conduit for promoting materials and messages. For example, La Vos reaches out to Latino communities in Loudoun County. Arlington County has an oil recycling brochure that has been translated into Spanish, however, it needs to be updated. It was suggested that the pet waste postcard serve as a template for future products to provide some consistency and branding to the campaign's products.

The products will have positive messages with suggestions for what to do and answer the 'why' questions (i.e. why can't I fertilize in the spring?). As one partner put it, our campaign is "battling a cultural shift from behaviors that have been practiced

for decades to something new." The products will incorporate social marketing techniques that recognize trade-off and tie into emotional values. The website will provide a repository for additional information.

Next Meeting

The next meeting of the partners will in August. In the meantime, the partners will stay in contact through email and are asked to contribute topics for the 'tip of the month' portion of the webpage. Please send suggestions to Laura.

Northern Virginia Clean Water Partners Meeting Summary	September 12, 2007 10 a.m. – noon NVRC's Potomac Conference Room 3060 Williams Drive, Fairfax, VA 22031
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In Attendance

- ✦ Kathy Allan, City of Falls Church
- ✦ Zoran Dragacevac, Town of Herndon
- ✦ Laura Grape, NVRC
- ✦ Fred Rose, Fairfax County
- ✦ Aileen Winqvist, Arlington County
- ✦ Holly Chu, Town of Vienna
- ✦ Heather Diez, Town of Vienna

Agenda

- ✦ 2008 Campaign Plan
- ✦ Coinciding Campaigns Update
- ✦ Updates from Around the Region
- ✦ Onlyrain.org
- ✦ Other Items and Next Steps

Action Items

Fred Rose (Fairfax County)

Work with Channel 16 to convert the Campaign's television PSA into Spanish.

NVRC:

Develop a media packet with talking points for the 2008 campaign.

Pull together a map of where disposal centers are located – based on DEQ list, make updates as provided from local governments.

Holly Chu (Town of Vienna):

Will promote the Clean Water Partners initiative at an upcoming Public Works Director's meeting.

Aileen Winqvist (Arlington County):

Will share the promotional information developed for fall lawn care practices.

Discussion

2008 Campaign Plan

Laura presented an overview of the 2008 Campaign Plan with elements agreed upon at the June 2007 meeting. The Campaign Plan details the objectives, target audience and goals for the upcoming year. A couple of suggestions to be added to the campaign include:

- Use shelf talkers or tear aways at motor oil point-of-purchase locations – make them simple with information linking to the onlyrain.org website.
- Map of disposal locations should be added to the website – if it could be interactive, that would be better! Explore if there are ways to query by location / jurisdiction / city address.

Coinciding Campaign Updates

Know Toxics (NVRC) – Laura met with the Know Toxics planning group, consisting of solid waste and recycling personnel from the various Northern Virginia jurisdictions. Since motor oil disposal is an overlapping issue and many of the solid waste organizations have information readily available, it is important to keep this group engaged and informed. The Know Toxics group is very interested in participating and supporting the Clean Water Partners efforts in 2008.

Regional Trash / Stormwater Campaign (Alice Ferguson Foundation) – The AFF will be hosting planning meeting for this budding campaign on September 25th. Laura, Aileen, and Kathy stated they will all be attending this meeting. There may be opportunities to include a trash specific tagline in the 2008 campaign.

Scotts Lawn Care (MWCOC) – COG is actively recruiting the Northern Virginia Clean Water Partners to participate in this effort. However, after reviewing the products developed and implemented as part of this initiative, the partners felt there was still an overwhelming amount of publicity toward fertilizing lawns throughout the year. Laura and Aileen continue to stay in communication with Karl Berger, the project manager from COG, regarding this effort.

Chesapeake Club (Chesapeake Bay Foundation / DCR) – The Chesapeake Club campaign has set up roots in Hampton Road and Richmond regions. They continue to collect data using survey techniques similar to the Clean Water Partners. Results from their Spring 2007 Campaign include:

Chesapeake Club Post Survey Results

Richmond

Hampton Roads

Self-Care of Lawn

1. In what season or seasons of the year do you typically apply fertilizer your lawn, if at all? (Code all that apply.)

	Pre	Post
Spring.....	59%	57%
Summer	16%	16%
Fall	51%	46%
Winter.....	9%	10%
Never/Not at all	24%	25%
Not sure	1%	3%

2. In what season or seasons of the year do you typically apply fertilizer your lawn, if at all? (Code all that apply.)

	Pre	Post
Spring.....	56%	44%
Summer	10%	9%
Fall	53%	59%
Winter.....	11%	7%
Never/Not at all	22%	21%
Not sure	2%	2%

3. How many times will you apply fertilizer to your lawn in all of 2007? (Record number. If given range, record higher number.)

	Pre	Post
0.....	20%	22%
1.....	19%	22%
2.....	28%	27%
3.....	12%	8%
4.....	9%	8%
5.....	5%	3%
6.....	2%	2%
7.....	-%	1%
8 or more.....	1%	2%
Not sure	4%	5%
Mean	2.92	2.31
Median	2.0	2.0

4. How many times will you apply fertilizer to your lawn in all of 2007? (Record number. If given range, record higher number.)

	Pre	Post
0.....	19%	18%
1.....	21%	29%
2.....	31%	25%
3.....	13%	11%
4.....	9%	6%
5.....	1%	4%
6.....	2%	1%
7.....	-%	-%
8 or more.....	1%	1%
Not sure	4%	5%
Mean.....	3.00	2.19
Median	2.0	2.0

Campaign Recall

5. Have you seen, read or heard anything this year about using fertilizer and the Chesapeake Bay?

	Pre	Post
Yes.....	39%	61%
No (Skip to Q.27.)	60%	39%
Not sure (Skip to Q.27.)	1%	-%

6. Have you seen, read or heard anything this year about using fertilizer and the Chesapeake Bay?

	Pre	Post
Yes.....	42% ...	56%
No (Skip to Q.27.)	56% ...	43%
Not sure (Skip to Q.27.).....	2%	1%

7. Please describe what you saw or read. What was it saying? (Open-ended. Code all that apply.)

We know fertilizer is the problem	21% ...	16%
How to care for your yard.....	6%	4%
Put off fertilizing until the fall	3% ...	12%
Save the crabs then eat them	1% ...	11%
Would you like more fertilizer with your flounder?	1%	1%
“Chesapeake Club”	-%	2%
No appetizers were used in the making of this lawn	-%	1%
Other (Specify. See verbatim responses.)	56% ...	54%
Not sure/ Can’t recall anything specific.....	16%	7%

8. Please describe what you saw or read. What was it saying? (Open-ended. Code all that apply.)

We know fertilizer is the problem	15% ...	18%
How to care for your yard.....	5%	4%
Put off fertilizing until the fall	2% ...	21%
Save the crabs then eat them	2% ...	16%
Would you like more fertilizer with your flounder?	1%	1%
“Chesapeake Club”	1%	1%
No appetizers were used in the making of this lawn	1%	-%
Other (Specify. See verbatim responses.)	55% ...	44%
Not sure/ Can’t recall anything specific.....	20%	5%

9. Where did you see or hear this? (Open-ended. Code all that apply.)

Newspaper.....	49% ...	41%
Television.....	43% ...	62%
Internet.....	5%	3%
Radio.....	4%	9%
Flyer or coaster	3%	2%
From a friend.....	-%	2%
Billboard	-%	-%
Other (Specify. See verbatim responses.)	18% ...	13%
Not sure/ Can’t recall anything specific.....	1%	3%

10. Where did you see or hear this? (Open-ended. Code all that apply.)

Newspaper.....	51% ...	39%
Television.....	30% ...	61%
Internet.....	9%	4%
Radio.....	5% ...	10%
Flyer or coaster	5%	2%

From a friend.....	2%	3%
Billboard	1%	1%
Other (Specify. See verbatim responses.)	20% ...	12%
Not sure/ Can't recall anything specific.....	5%	5%

26A. As a result of what you have seen, will you...? (Read and randomize options.)

- A. Change the season of the year when you fertilize?
- B. Fertilize fewer times during the year?
- C. Use less fertilizer each time?

Post-Campaign Results

	Yes	No	Depends	Do not fertilize	Not Sure
Use less fertilizer each time	44%	35%	5%	10%	5%
Fertilize fewer times during the year	35%	46%	5%	11%	4%
Change the season when you fertilize	18%	57%	5%	13%	6%

	Yes	No	Depends	Do not fertilize	Not Sure
Use less fertilizer each time	44%	39%	3%	10%	4%
Fertilize fewer times during the year	36%	44%	4%	11%	6%
Change the season when you fertilize	22%	52%	7%	11%	7%

Anacostia Trash Reduction Strategy (MWCOG) – MWCOG invited Laura to attend an upcoming meeting for the Anacostia Trash Reduction Strategy, which were planning to conduct a campaign and were interested in learning from the Clean Water Partner's experience. MWCOG contacted Laura in early-August, however, Laura has not received any follow-up.

Updates from Around the Region

Town of Vienna – Holly recently accepted the position of the Town of Vienna's Director of Public Works. Heather Deiz was recently hired and will attend the Partner's planning meetings in the future.

Arlington – Aileen is planning on attending an upcoming Environmental Landscaping conference on November 9th and will distribute the information for the event via email. The Chesapeake Forum also is coming up in November.

Fairfax – Fred stated that endocrine disrupters are on the front burner for the Board of Supervisors in Fairfax County and there may be pressure in the future to include information regarding this subject in future campaign materials or on the web. The Board is looking to push legislative changes, including a "no flush" requirement for pharmaceuticals.

Herndon – Nothing to report.

Falls Church – Nothing to report.

Onlyrain.org

Laura provided everyone with a copy of the Google Analytics report for the onlyrain.org website for the month of August. Google Analytics is a free service from Google that counts and tracks the web hits on a site. One of the most interesting and useful parts of this program is the keyword history that allows the user to see what keywords were used to access the site. This information will be useful to better meet the needs and desires of those searching for water quality information.

Other Items

No other items were raised at this time.

Next Steps

The partners will begin to move forward on product development in accordance with the 2008 Campaign Plan. The next meeting of the Partners will take place in November.

Appendix C

Technical Workshop Materials

Beautifying Your Yard for Healthy Streams

Designing, Building, and Maintaining Small-Scale Rain Gardens

Saturday, April 14, 2007

8:30 a.m. – 1 p.m.

Hidden Oaks Nature Center

AGENDA

8:30 a.m.

Registration and Refreshments

9 – 9:15 a.m.

Welcome

- Incorporate what is a rain garden into the welcome.

9:15 – 10 a.m.

Designing and Building a Rain Garden

Asad Rouhi, Urban Conservation Engineer, Northern Virginia Soil & Water Conservation District

10 – 10:10 a.m.

Break

10:10 – 11 a.m.

In the Field

- Determining the Best Location for Your Rain Garden
- Tools of the Trade – Equipment needed, soil amendments (gravel vs. leaf mulch vs. hardwood mulch)
- Surveying and Leveling Your Rain Garden

11 – 11:10 a.m.

Break

11:10 a.m. - noon

Selecting Plants and Landscaping a Rain Garden

Christin Jolicoeur, Watershed Specialist, Northern Virginia Soil & Water Conservation District

- Incorporate plant exercise into presentation?!

noon – 12:10 p.m.

Break

12:10 – 12:40 p.m.

Maintaining a Rain Garden, Lessons-Learned

Aileen Winquist, Environmental Planner, Arlington County

12:40 – 1 p.m.

Questions

This workshop was funded, in part, by Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant #NAO6NOS4190241 of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.



Rain Garden Seminar – April 15, 2007 at Green Spring Gardens

Last Name	First Name	Phone Number	Note
Acosta	Dorothy	703-522-4272	
Alpheim	Ruth	703-966-9250	
Alpheim	Steven	See above	
Ardemis	Diana	703-671-4916	
Bartelt + one	Becky	703-379-1880	
Battle	Diane	703-573-2134	
Battle	John	See above	
Bennett	Carol	703-243-1515	
Buchman	Carol		
Burke	Elizabeth	703-281-6626	
Carle	Gloria	703-360-8431	
Chauvette	Denise	703-658-7777	
Dukes	Dusty	703-938-7912	
Falcona	Karen	703-573-0444	
Fornaar	Tom	See above	
Fuhs	Karen	703-455-1881	
Fuhs	Greg	See above	
Funderburk	Judy	703-671-5310	
Gatehell	Diane	703-532-1430	
Hampel	Diane	703-690-7429	
Hardison	Joanne	703-319-9458	
Haughton-Denniston	Pam	301-203-7058	
Helms	Marcia	703-690-0159	Cancelled – would like fall class
Hopkins	Jennifer	703-764-9630	
Johnson	Ann	703-585-6272	
Kajara	Joe	571-333-9882	
Karinshak	Judy	703-533-9006	
Kertess	Margaret	703-538-1051	
King	Kimberly	703-536-2816	
Koch	Lynn	703-526-0041	
Leonard + one	Barbara	703-768-4113	
Malone	Jean	703-560-1814	
McDonald	Sheril	703-764-9630	
Meade + one	Therese		
Nicks	Christie	703-919-5531	
Owen	Wally	703-658-7777	
Peterson	Ellen	703-495-9027	
Sinaiko	Ivy	703-256-6031	
Sood	Basant	703-324-1978	
Stenning	Christina	703-641-8495	
Stratton	Pam	703-536-7497	
Taylor	Matthew	703-758-9015	
Wang	Siu	703-282-3529	
Waters	Robin	571-224-4559	
Wertime	MaryBeth	703-536-0812	
Wertime	Steven	703-237-0003	
Wolpe	Michelle	571-277-1653	
Woollett	Ruth	703-465-4990	
Wynne	Danielle	703-400-4785	Cancelled 4/13/07

Total # of interested participants: 52

Total # that attended: 48

Rain Garden Seminar for Homeowners
Evaluation Form Summary
April 15, 2007

1. How would you rate today's seminar

Rating
Excellent (20)
Good (9)
Fair
Poor
No Response

Comments:

- Received a lot of valuable information.
- Great to have a variety of different perspectives. Would be useful to have permit requirements in written form.
- Knowing nothing, I learned quite a lot.
- Very interesting and important to avoid so much erosion.
- Another very worthwhile program put on by Green Spring Gardens Park.
- Answered all my questions about rain gardens. Will help me promote them thru the water stewardship team program.
- Very informative
- Please leave more time for Q&A.
- Well worth a Sunday afternoon – shorter would be better

2. How would you rate the sessions on information and usefulness?

a. How Rain Gardens are Designed and Built

Rating
A (most informative & useful) (20)
B (7)
C (2)
D
F (least informative & useful)
No Response

Comments:

- Detailed calculations were annoying but perhaps necessary – useful step-by-step was great.
- It would have been useful to see actual gardens, but photos were helpful.
- Too much detail
- Handouts are helpful.
- New to me, so I found it very useful.
- Concrete (no pun intended) examples and numbers very helpful.
- Too much information for average homeowners – sometimes confusing.

b. How to Select Plants and Landscape a Rain Garden

Rating
A (most informative & useful) (16)
B (13)
C
D
F (least informative & useful)
No Response

Comments:

- Could have mentioned more about impacts on birds / wildlife.
- Handouts are great and will be used as we plan our gardens at school.
- Needs more information on plants. These are specialized plants and are harder to discover.
- Again, handouts are helpful.
- Good native plants suggested.
- Appreciated info about different options and questions to consider.
- Wish she talked more about plants (we saw slides very quickly.)

c. Maintaining a Rain Garden and Lessons-Learned

Rating
A (most informative & useful) (16)

B (11)
C (2)

D
F (least informative & useful)
No Response

Comments:

- Liked the hands-on perspective.
- There seemed to be some information that contradicted

Asad's program. So near a tree and using a rototiller! Yikes!

- I would love to persuade management where I live to act.
- Very good information.
- Enjoyed seeing a real project evolve.
- Good, informative presentation.

3. Please describe how today's seminar could be improved.

- Basic definitions of terms used (i.e. amended soils)
- Each presenter should be sure the audience can find handouts. Explain what each handout would be used for.
- Need more examples of successful gardens by people who build them.
- Asking questions not in the middle of the group may work better.
- Add permitting information in written form.
- I thought the information was very useful and informative.
- Try to get participants to hold their questions until the Q&A period.
- More info about the plants.
- They could give more ideas of the types of plants you can use.
- Handouts didn't always follow the presentation and were hard to read.
- More emphasis on information for neighborhood homeowners on a less grand scale.
- Add more information on what to do to amend soil and on how to reduce runoff on properties too small for a rain garden.
- Offer tea.
- More info about funding
- Address standing water issue – seems to have been forgotten.
- Try to shorten it a bit; don't spend as much time on formulas.

4. How did you learn about today's seminar?

Medium
Organization newsletter (5)
Email listserv (7)
Greenspring Gardens (7)
Northern Virginia Regional Commission
Newspaper (1)
Website
Other (9)
No Response

If other, please explain:

- A Master Gardener in our community e-mailed us.
- Arlington newsletter
- A friend
- E-mail from Adria
- Fairfax County's extension agent
- Aileen Winquist
- Arlington County Green Events Poster

5. Other Comments?!

- Thank you... Time well spent!
- It was very useful. Thanks.
- I didn't know what a rain garden was; now I do. Very interesting. Thanks for the food and drinks – it was so nice.

- Thank you!
- Great use of public money
- How can landscape / nursery business be brought on board?
- More time for Q&A. Thanks for a wonderful program.
- Thank you for pulling all these speakers together – they each presented their own topics and their own view so we came away with a good overall view of pros and cons of building a water garden. The food at lunch time was welcome and very appreciated.

Northern Virginia Regional
Commission
3060 Williams Drive, Suite 510
Fairfax, VA 22031



8:30 – 9 AM	Registration <i>Light refreshments will be served</i>
9 – 9:05 AM	Welcome
9:05 – 9:30 AM	Overview of Compensatory Mitigation <i>Laura Grape, NVRC</i>
9:30 – 10:30 AM	Virginia's Mitigation Banking Process <i>Bettina Rayfield, Virginia Department of Environmental Quality</i>
10:30 – 10:40 AM	Break
10:40 – 11:40 AM	Local Case Studies and Lessons-Learned <ul style="list-style-type: none">• <i>Tom Dombrowski and Patty Dietz, Prince William County</i>• <i>John Muse, Virginia Department of Transportation</i>
11:40 AM – NOON	Open Discussion / Questions & Answers



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Mitigating for Stream and Wetland Impacts in Northern Virginia
Final Registrants – August 7, 2007

	Name	Organization	Please make any corrections to your email address	Interested in future workshops? Y / N
1	Heather Ambrose	John Marshall SWCD	Heather.ambrose@va.nacdnet.net	Y
2	Kay Ansari	Prince William County	kansari@pwcgov.org	Y
3	Brett Barriteau	John Marshall SWCD	bbarriteau@hotmail.com	Y
4	Kelly Baty	Loudoun County	wbaty@loudoun.gov	Y
5	Mark Browning	Prince William County	mbrowning@pwcgov.org	Y
6	Deidre Clark	Fauquier County	Deidre.clark@fauquiercounty.gov	Y
7	Michael C. Collins	Town of Orange	depttownclerk@townoforangeva.org	Y
8	Chad Crawford	Fairfax County	Chad.crawford@fairfaxcounty.gov	Y
9	Patty Dietz	Prince William County	pdietz@pwcgov.org	Y
10	Tom Dombrowski	Prince William County	tdombrowski@pwcgov.org	Y
11	Laura Edmonds	Loudoun County	Laura.edmonds@loudoun.gov	Y
12	Mary Espiritu	Prince William County	mespiritu@pwcgov.org	Y
13	Kevin Haile	Loudoun County	Kevin.haile@loudoun.gov	Y
14	Diana Handy	City of Alexandria	Diana.handy@alexandriava.gov	Y
15	Diane Hoffman	Northern Virginia SWCD	Diane.hoffman@fairfaxcounty.gov	Y
16	Melissa Hooper	John Marshall SWCD	Melissa.hooper@va.nacdnet.net	Y
17	Noel Kaplan	Fairfax County	Noel.kaplan@fairfaxcounty.gov	Y
18	David Massie	Culpepper SWCD	David.massie@va-nacdnet.net	Y
19	Bruce McGranahan	Loudoun County	Bruce.mcgranahan@loudoun.gov	Y
20	Matt Meyers	Fairfax County	Matthew.meyers@fairfaxcounty.gov	Y
21	John Muse	VDOT	John.muse@vdot.virginia.gov	Y
22	Bettina Rayfield	VDEQ	bcrayfield@deq.virginia.gov	Y
23	Shane Richman	Loudoun County	Shane.richman@loudoun.gov	Y
24	Mike Rolband	WSSI	mrolband@wetlandstudies.com	Y
25	Mary C. Sherrill	Fauquier County	Mary.sherrill@fauquiercounty.gov	Y
26	Bob Slusser	DCR – Potomac Watershed Field Coordinator	Bob.slusser@dcr.virginia.gov	Y
27	Debbie Switzer	John Marshall SWCD	Debbie.switzer@va.nacdnet.net	Y
28	Shahid Syed	Fairfax County	Shahid.syed@fairfaxcounty.gov	Y
29	Todd Taylor	Loudoun County	Todd.taylor@loudoun.gov	Y
30	Poojan Tripathi	DEQ – Water Protection Permit Program	pbtripathi@deq.virginia.gov	Y

Kathy Allan (Falls Church) – kallan@fallschurchva.gov

Unable to attend but would like copies of the presentations and other subsequent information.

Mitigating for Stream and Wetland Impacts in Northern Virginia Feedback

1 Overall, how would you rate today's workshop?

1 (Very good)	1
2	11
3	1
4	
5 (Poor)	

Comments

- * More case studies would have helped to demonstration application of mitigation banks.
- * The presenters had pretty good knowledge of the subject.
- * In my opinion, needs regional perspective. How to tie all the smaller entities into a regional collaboration
- * Great overview & combination of regulatory & local experience. Nice job!
- * Build panel time into agenda.
- * Very good, but broad overview.

2 How helpful were the presentations in expanding your understanding of mitigating for impacts in NoVA?

Overview of Compensatory Mitigation

1 (Very helpful)	
2	10
3	3
4	
5 (Not at all)	

Comments

- * Good to have refresher prior to more detailed discussions
- * Good overview!
- * I have some knowledge of the restoration projects and mitigation crediting, but still missing how does the credits are for the MBRT
- * Confusing info well presented!

Virginia's Wetland Permitting Process

1 (Very helpful)	3
2	9
3	1
4	
5 (Not at all)	

Comments

- * Ms. Rayfield is extremely knowledgeable / informative (if somewhat prone to jargon) - very interested in how the subdivision guidelines will play out.
- * too much information for the allotted time - went too fast, but good info.
- * A lot of information to digest at one time, but good information
- * Great background & newsworthy items.

Local Government Example		
	1 (Very helpful)	1
	2	8
	3	4
	4	
	5 (Not at all)	
Comments		
* Helped appreciate the numerous pitfalls & complexities		
* Very helpful!		
* Nice lessons-learned		

State Government Example

1 (Very helpful)	
2	9
3	4
4	
5 (Not at all)	

Comments

- * Provide more details on the methods of structures / techniques for instream structures (i.e. j hooks, weirs, root ball -)
- * Helped appreciate the numerous pitfalls & complexities
- * very good advice!

3 Will the information present be useful in your work?

Yes	13
No	1

Explanations:

- * Provides me with info to share with local jurisdictions / organizations
- * No, in that I do not work on designing or constructing mitigation sites, but yes in that it's helpful to have this perspective in considering policy implications of
- * VDEQ overview of wetland permitting process helpful in considering local landuse policy connections, particularly with respect to subdivision guidelines.
- * It provides background information for public outreach / education
- * This will, but I have to study more about creating banking instrument and crediting

- * Loudoun County Government - Banking in Process
- * Particularly DEQ updates
- * Dealing with soil & water issues makes wetlands and streams extremely relevant to our work as a conservation organization.

4 Will your organization be setting up wetland or stream restoration banks?	
Yes	3
No	4
no response	6

5 How could this workshop be improved?

- * Great job. Need more testimonies from Fairfax County. Coordinate with SWPD / LDS / etc
- * More case studies
- * Need to add a portion to discuss how the credits are created and sold? What are different rates?
- * Corps - I know you tried!
- * Have contractor / developer talk about their experience in creatign these mitigation sites for \$. Discuss their permitting process with the various agencies (s
- * This provided some good basic info - rather dry, but that's the nature of the beast! Maybe more on-the-ground examples? Difficult to improve the basics!

6 Would you be interested in having additional workshops on this subject?

Yes	7
No	1
no repsonse	5

Explanations:

- * More info on structures that work in wetlands
- * I think more information on the process from beginning to end with local examples
- * Watershed planning & restoration / mitigation
- * Regulatory review process related to USACE subdivision guidelines & coordination with USACE / DEQ on plan review
- * Mitigation bank review process
- * Permitting process with the various agencies (state / fed / local)

7 Suggestions for future workshop topics:

- * Avoiding impacts instead of finding ways around the law
- * Stream restoration design
- * Quarterly meetings with county environmental staff with agenda items submitted prior to each meeting.

Northern Virginia Regional
Commission
3060 Williams Drive, Suite 510
Fairfax, VA 22031



Northern Virginia Coastal Resources Technical Assistance Program

Annual Report

Voice: 703-642-0700

Fax: 703-642-5077

www.novaregion.org

RESTORING OUR WATERWAYS – Case Studies in Northern Virginia

Wednesday, September 19, 2007
10 AM – 2 PM

Northern Virginia Regional Commission
Chesapeake Conference Room

10 – 10:15 AM

WELCOME

10:15 – 11:15 AM

MONITORING THE ACCOTINK CREEK STREAM RESTORATION

Tom O'Connor, U.S. Environmental Protection Agency

OConnor.thomas@epamail.epa.gov

11:15 – 11:25 AM

BREAK

11:25 AM - noon

STREAM RESTORATION IN ARLINGTON COUNTY

Jason Papacosma, Arlington County – Department of Environmental Services

jpapacosma@arlingtonva.us

NOON – 12:30 PM

LUNCH

12:30 – 1 PM

FOUR MILE RUN RESTORATION MASTER PLAN

Bill Hicks (NVRC) – Four Mile Run Restoration Master Plan

bhicks@novaregion.org

1 – 2 PM

OPEN DIALOGUE & QUESTIONS

Restoring Our Waterways – Case Studies in Northern Virginia

Registrants – September 19, 2007

PLEASE SIGN IN!

	Name	Organization	Please make any corrections to your email address	Interested in future workshops? Y / N
1	Deidre Clark	Fauquier County	Deidre.clark@fauquiercounty.gov	
2	Heather Diez	Town of Vienna	hdiez@viennava.gov	
3	Michael Edelen	Fauquier County	Michael.edelen@fauquiercounty.gov	
4	Laura Edmonds	Loudoun County	ledmonds@loudoun.gov	
5	Gayle England	Arlington County	gangland@arlingtonva.us	
6	Adrian Fremont	City of Fairfax	afremont@fairfaxva.gov	
7	Diana Handy	Arlington County	dhandy@arlingtonva.us	
8	Jeff Harn	Arlington County	jharn@arlingtonva.us	
9	Bruce McGranahan	Loudoun County	Bruce.mcgranahan@loudoun.gov	
10	Matt Meyers	Fairfax County	Matthew.meyers@fairfaxcounty.gov	
11	Asad Rouhi	Northern Virginia Soil and Water Conservation District	Asad.rouhi@fairfaxcounty.gov	
12	Mary Sherrill	Fauquier County	Mary.sherrill@fauquiercounty.gov	
13	Bob Slusser	Virginia DCR	Bob.slusser@dcr.virginia.gov	
14	Shirley Street	City of Falls Church	street@fallschurchva.gov	
15	Charles Williamson	Prince William County	cwilliamson@pwcgov.org	

Presenters

- Tom O'Connor
- Jason Papacosma
- Bill Hicks

Restoring Our Waterways – Case Studies in Northern Virginia Feedback

1 Overall, how would you rate today's workshop?

1 (Very good)	3
2	4
3	
4	
5 (Poor)	

Comments

- Liked the variety of speakers
- Nice to see projects at various stages and w/ various factors and concerns. Excellent presentations.
- I was a little disappointed in the lack of turnout from Fairfax & Alexandria
- Thank you! Keep up the good work!

2 How helpful were the presentations in expanding your understanding of stream restoration activities in NoVA?

Accotink Creek Restoration & Monitoring (EPA)

1 (Very helpful)	1
2	3
3	2
4	
5 (Not at all)	

Comments

- Look forward to hearing the results after 5 years.
- Good info, but I would have liked a more detailed discussion about the challenges of urban stream restoration monitoring. The short term & the limited extent of reforestation make the results very limited.
- Too technical at times (charts & graphs). Difficult to state conclusions with only 2 years of data.
- Very detailed analysis of water quality effects of stream restoration.

Stream Restoration in Arlington, VA (Arlington County)

1 (Very helpful)	5
2	2

	3	
	4	
	5 (Not at all)	

Comments

- Good info
- Very practical local project.

Four Mile Run Restoration Master Plan (NVRC)		
	1 (Very helpful)	4
	2	3
	3	
	4	
	5 (Not at all)	

Comments

- Bigger effort than local stream restoration.

3 Will the information present be useful in your work?

Yes	6
No	1

Explanations:

- I have a better understanding of the mechanics of a jurisdiction-sponsored restoration project.
- Rural jurisdiction; future issue that we will face however (hopefully not in my lifetime.)
- Our jurisdiction is currently determining how to put stream restoration funds to best use.

4 Will your organization be planning, designing, and implementing stream restoration projects?

Yes	5
No	1
no response	1

What information/data do you need to better assist you in the process?

- Long-term performance measure for stream restoration & BMPs. What are the ecological restoration targets or endpoints that we're aiming for? Is it anadromous fish spawning, warm water fishery, or macroinvertebrate community health and diversity? Or should we be aiming for stable channels to protect infrastructure with higher aesthetic values?

5 How could this workshop be improved?

- All three projects discussed were recently constructed or a future project. It would be great to see data and photos of a stream restoration project that has functioned for a number of years.
- During construction photos would be useful (presentations), more technical details (armor, etc), but workshop was great.
- More participants (i.e. private consultants, more jurisdictions)

6 Would you be interested in having additional workshops on this subject?

Yes	4
No	2
no response	1

Explanations:

- Natural Channel Design
- Work in a rural county that are more concerned at this time with preventing the need to do stream restoration by prohibiting developing in floodplains, protecting buffers, and improving water quality & quantity controls.
- Our work is on a much smaller scale, so it's not as useful even though it's very interesting.
- Really interesting topic

7 Are the handouts helpful?

Yes	6
No	
No response	1

8 Suggestions for other workshop topics?

- Low Impact Development is being pushed more and more on local jurisdictions to implement. However, without sufficient design guidelines or regulations as well as studies to indicate phosphorous removal rates of using micro-measures BMPs, it has been difficult to promote LID concepts. It would be great to hear successes and failures that other local regulatory agencies have experienced to assist our jurisdiction to improve upon LID implementation.
- Stormwater management – balancing water quality efficiency with maintenance.

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Northern Virginia Regional Commission

An Introduction to Maintaining Stormwater Best Management Practices

A Free Workshop for Private Owners and Operators

September 2007

AGENDA

8 AM	Registration / Refreshments
9 AM	Welcome Laura Grape Northern Virginia Regional Commission
	Maintenance Agreements & Inspections Paul Shirey Fairfax County Department of Public Works and Environmental Services
	Sediment Removal and Disposal Laura Grape Northern Virginia Regional Commission
	Vegetation Management Shannon Junior Angler Environmental, Inc.
10:45 AM	BREAK
11 AM	Maintaining Stormwater Systems – The Reston Experience Larry Butler & Claudia Thompson-Deahl Reston Association
12:30 PM	Ask the Experts



This project was funded by the Virginia Coastal Zone Management Program at the Department of Environmental Quality through grant number NA04NOS4190060 of the National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management under the Coastal Zone Management Act of 1972, as amended. This project was conducted as part of the Coastal Nonpoint Source Pollution Control Program in partnership with the Department of Conservation and Recreation.

List of Registrants – An Introduction to Maintaining Stormwater Systems

✓	Name		Company
	Last	First	
	Adams	Chris	Prince William County
	Azzarno	Jessica	Sequoi Management
	Brown	Roderick	Prince William County
	Convery	Mike	McHale Landscape Design, Inc
	Cook	Bob	Prince William County
	Cusat	Anthony R.	McHale Landscape Design, Inc
	Darden	Phil	Prince William County
	Davison	Jeff	Fairfax County Park Authority
	Delsignore	John	Oak Marr Golf Course
	Fornasar	Tom	Fairfax County Park Authority
	Hughes	Timothy	Prince William County
	Jewell	Tim	The West Group
	Johnson	Paula	Prince William County
	Moran	William	Prince William County
	Obeng	Michael	Prince William County
	Rienz	Charles	Prince William County
	Robey	Daniel	McHale Landscape Design, Inc
	Sheppard	Todd	Prince William County
	Sweeny	Paul	Prince William County
	Tasaka	Keith	Fairfax County Park Authority
	Toth	Tom	Fairfax County Park Authority
	Van Allen	Jon	McHale Landscape Design, Inc
	Winterstire	Samantha	Sequoia Management

Total Number of Responses - 27

1. Overall, how would you rate today's workshop?

Very Good	Good	Fair	Poor	Very Poor
7	13	5	2	0

Comments:

- Excellent info presented by presenters and PowerPoint slide shows. Please, please have more workshops and invite more HOA reps, mgmt companies and commercial and private owners.
- Good overview
- One of the best short workshops I have ever attended. Very well done! I rate it exceptional!
- All presenters were excellent
- As an introduction, I feel this class was very helpful. I do feel this class could have been more in depth.
- Nice overview of maintenance needs and issues. Good resources – case study is helpful
- Simply haven't attended any other to compare by.
- Made good points
- Average content
- Touched on a lot of good items

2. How helpful were the presentations at expanding your understanding of maintaining stormwater best management practices?

Maintenance Agreements & Inspections

Very Good	Good	Fair	Poor	Very Poor
6	11	8	1	1

Comments:

- Would like sample of inspection forms to be presented and examples of county forms and owner inspection forms.
- Presenter was dry
- Informative and to the point
- Include a detailed component on what pieces of a facility private owners should pay attention to
- Difficult to see some of the slides. Discuss enforcement protocols.
- Find a better presenter for this one!
- Already knew a lot about this.
- Not much new.
- Brought up some new practices

Sediment Removal & Disposal

Very Good	Good	Fair	Poor	Very Poor
11	8	6	2	

Comments:

- Excellent info on cost and maintenance of sediment removal. Include protection of RPA and stream protection to reduce erosion.
- Very knowledgeable about subject.
- Not pertinent to my clientele, but great speaker.
- Good
- Excellent guest – very knowledgeable!
- Already knew about this.
- Unsure of overall plan
- Same old same.

Vegetation Management & Algae

Very Good	Good	Fair	Poor	Very Poor
10	15	2		

Comments:

- Excellent biological & ecological info in presentation
- Very informative – clear
- Very interesting, just not applicable to my work
- Did not know much about these items
- Good info!
- Helpful hints

The Reston Experience

Very Good	Good	Fair	Poor	Very Poor
9	9	6		

Comments:

- Very useful info that planned communities can do to implement preventative maintenance program
- Provided real world experience
- Good
- Great local case study – wide variety of issues covered.
- OK, but Reston is a very small jurisdiction and does not face the same problems as Fairfax, Loudoun, & Prince William.**
- Good examples why this is important
- Same thing in our sites
- Did not know about Reston

3. Will the information presented be useful in your work?

Yes	No
26	0

Comments:

- Working for Prince William County, we know the need to educate the public about inspection and maintenance of BMP SWM facilities. Please have more workshops and invite lots of commercial and private owners, HOA reps, and management companies. Thank you!
- Vegetation management
- Present at CAI Expo – property management education is needed.
 - Community Association Institute (CAI)
 - State Corporation Commission – Associations must file annual reports which list Boards and Management
 - All Property Management – Lead service for property management companies
- We deal primarily with private homeowners. Many of the BMPs are used but a better education of why homeowners need to implement and maintained would be appreciated in future presentations. Case study examples would be helpful. How to design or calculate sizing for sites. County guidelines for plan approval. Materials that can be given to homeowners to help explain benefits and why elements are needed.
- Work with HOA's dry and wet ponds
- I'm a portfolio manager and have multiple lakes and ponds to maintain.
- Directly related to my work duties.
- A lot to incorporate into my department's inspection program
- To be able to help the developers / HOAs, etc!

** Reston is a planned community, not a government-based jurisdiction.

- I conduct site inspections in Prince William County for Subdivisions and commercial sites, which have many of the concerns that were covered in this class ☺.
- Gave me a lot to think about.
- As a site inspector it will help me plead my case to homeowners and developers to maintain these facilities due to the high cost of sediment removal and lack of areas for proper disposal.
- I will have a better understanding when I approach a site.

4. How could this workshop be improved?

- Include info on RPAs along perennial streams when educating about buffers. Include more upstream preventative maintenance solutions in minimizing sedimentation downstream in ponds to reduce cost of dredging.
- Have more specific information on erosion controls, vegetation and water management
- Have more in different locations
- Better description of what will be covered in speakers presentation via mailer sent to public. More Geared to HOA's and community / city, not homeowners
- Expand with more presenters from different areas – i.e. property managers, different municipalities
- Being more specific on each area; having a Community Association's Institute class enacted.
- Longer perhaps – can't get enough of a good thing.
- How to interact with all – developers, client, & designer. Obtain more notes from presenters as a form.
- Visiting fields
- It's good for introductory
- More vendors, or contacts for vendors; More information on rain gardens
- Additional case studies; Urban examples
- An overview of how SWM ponds are designed by engineers; longer time to discuss more detail
- Many questions were not able to be answered – start noting them to be better prepared next time or find presenters that can provide them!
- Additional food.
- More local / state input.
- Extend it to a full day.

5. Would you be interested in having additional workshops on this subject?

Yes	No
18	1

Comments:

- Please more workshops for HOAs, property managers, commercial and private pond owners. Educate, educate, educate HOAs, management cos, etc.
- Address better erosion controls.
- We manage a homeowners association and believe that education of management companies and homeowners are important. Homeowners and management do not understand how and why to maintain ponds.
- RPA descriptions and how to use or what can be done in these areas. Most homeowners do not even know their property may be located within one.
- More in depth explanations – rather than overview.
- More specific areas.
- Yes, interaction with corporate designers of BMPs to learn of the problems associated with designs as seen through maintenance.
- Yes
- More on application of specific maintenance
- If more in depth
- More in depth classes would be nice.
- Please have this annually. I want to get more owners here!

- I would really be interested in having a workshop on pollution prevention practices / good housekeeping techniques
- Go more into the actual construction of the ponds.
- More state regulations
- Very helpful!

6. Are the handouts helpful?

Yes	No
21	0

Comments:

- Provide business cards from each presenter. Provide PowerPoint slides show on webpage.
- Booklet has very good information.
- RPA guidelines.
- The actual PowerPoint presentations
- ANYTHING!
- Booklets are very well designed and informative.
- Like the online resource list.
- List of local contacts; sample agreements / facility brochures developed by local governments / organizations.
- More on underground detention.
- Need for more training tools – pictures / pamphlets

7. How did you hear about today's seminar?

Email	Newsletter	Brochure	Website	Word of Mouth
8	5	5	2	1

Appendix D

Fall 2007 NVironment Newsletter

NV Environment

Volume 20

NVRC

Fall 2007

New Committee to Focus on Region's Energy and Environmental Policies

To develop recommendations for the Northern Virginia Regional Commission's (NVRC) action on policies associated with energy efficiency, climate change and other applicable environmental issues and topics, the Energy and Environmental Policy Committee was formed in April 2007 and will be chaired by Bob Lazaro, Mayor of the Town of Purcellville.



*Northern Virginia Regional Commissioners
Chairman Gerald E. Connolly and Commissioner Bob Lazaro.
Photos: Fairfax County and Town of Purcellville*

The Commission's new Chairman, Fairfax County Board of Supervisors Chairman Gerald E. Connolly, who has formally committed to initiatives through the *Cool Counties* program sponsored by the Sierra Club, expressed a keen interest in promoting NVRC's involvement in energy and environmental policy. The Energy and Environmental Policy Committee will be the primary vehicle from which most of NVRC's energy related activities will be coordinated.

See COMMITTEE, page 5

The Greening of Northern Virginia Local Commitments to Climate Change Have Global Impacts

A green wave is crashing on Northern Virginia. Thanks to a myriad of local programs, acting in environmentally-conscious ways is easier than ever. Reusable grocery bags are widely available, Metro bus rides are free on code orange and red air quality days, and household recycling in the region continues to increase, according to the 2007 Solid Waste Survey conducted by the Northern Virginia Solid Waste Management Board.

Local governments also are making it easier for residents to find information while simultaneously committing to changing the way they do business. For example, Fairfax County and Arlington County stand alongside King County, WA and Nassau County, NY as the first counties in the United States to sign onto the Sierra Club's *Cool Counties* initiative.

See CLIMATE CHANGE, page 7

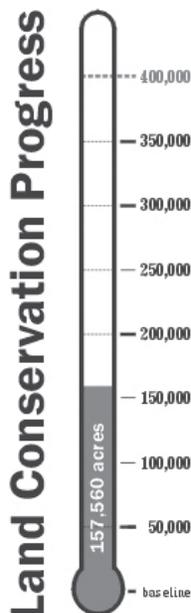
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- 2 NVRC to Co-Host International Conference
- 3 Forecasting the Region's Water Supply
- 3 Four Mile Run Takes Center Stage
- 4 Maintaining Stormwater Systems
- 4 Virginia's Clean Marina Program
- 6 Tools to Determine Change
- 6 Northern Virginia Clean Water Partners

CONSERVING THE UNCOMMON WEALTH

Virginia on Track to Conserve 400,000 Acres By 2010

When John Smith first set foot on Virginia soil 400 years ago, Virginia had twice the number of productive wetlands as it does today. The loss of these natural pollutant filters contributed greatly to the decline of the Chesapeake Bay's health.



Progress toward goal as of June 30, 2007
Credit: Virginia DCR

According to the Virginia Department of Conservation and Recreation (DCR), 60,000 acres of land in Virginia is converted to development each year. To offset this rapid conversion, Virginia Governor Timothy Kaine recently announced Virginia's commitment to conserving 400,000 acres of land by 2010. At the 17th Annual Environment Virginia Symposium on April 20, 2006, he said this goal will conserve more land in four years than has been in the previous 40 years.

The commitment also aims to exceed Virginia's pledge under the Chesapeake Bay 2000 Agreement to protect 20 percent of the commonwealth's land residing within the Chesapeake Bay watershed.

Virginia is on track to meet this goal. In calendar year 2006, 65,764 acres were conserved by public and private land conservation organizations according to DCR's Conservation Lands Database. In Northern Virginia, a team of conservation organizations is working diligently to preserve the region's treasured natural resources.

One example is the Northern Virginia Conservation Trust, which recently acquired a 5 acre easement along the Potomac Gorge, in McLean. This effort was made possible by a \$207,800 grant from the National Oceanic and Atmospheric Administration and the Virginia Department of Environmental Quality - Coastal Zone Management Program through the Coastal and Estuarine Land Conservation Program.

Virginia ranks 14th in the nation for globally significant conservation areas, less than a quarter of which are protected and properly managed. Although there are significant pressures on these significant natural areas, efforts to protect them and to meet Governor Kaine's conservation commitment will allow future generations to enjoy Virginia's uncommon wealth.❖

For more information, visit DCR's website, at: www.dcr.virginia.gov/land_conservation.

NVRC TO CO-HOST INTERNATIONAL CONFERENCE

Forum Will Highlight Regional Approaches to Climate Change

In the fall of 2008, the Northern Virginia Regional Commission, in partnership with the Metropolitan Washington Council of Governments, Verband Region Stuttgart, Germany, and the European Network of Metropolitan Regions and Areas (METREX), will bring together experts from United States and European metropolitan regions to share innovative policies and practices used to address climate protection and energy conservation on a regional scale, in an economically sustainable manner.

This three-day forum will examine how metropolitan regions and their governing authorities can work together to improve transportation, solid waste, and land use planning policies to effectively address these issues. The forum also will examine the critical factors

affecting the growth and economic viability of these regions in relation to demographics, governance, and technologies.

This conference will aid participants from both continents in identifying innovative programs, lessons, and best practices for transfer and application by policy makers and practitioners. The ultimate goal is to assist metropolitan regional authorities in meeting the global challenges of climate change and concurrently sustain economic development.❖

For more information, contact:
Doug Pickford at 703.642.4623 or
pickford@novaregion.org

FORECASTING THE REGION'S WATER SUPPLY

Localities Agree to Regional Study on Water Supply

Dipping water levels during the hot and dry late-summer months are gentle reminders that even the mighty Potomac River and Occoquan Reservoir - the drinking water sources for over a million Northern Virginians - are limited resources. While surface waters serve as the major source of drinking water in the region, thousands of residents live on wells, drawing their tap water from the ground and from aquifers.

Increasing development pressures throughout Virginia and significant droughts experienced in 1999 and 2002 elevated awareness that the state's drinking water supplies may not be adequate to meet future consumption needs.

To address this concern, the commonwealth enacted the Local and Regional Water Supply Planning Regulation (9 VAC 25-780-10), in 2005. The purpose of the regulation is to ensure that adequate and safe drinking water is available; to encourage, promote, and protect all other beneficial uses of water resources; and to encourage, promote, and develop



incentives for alternative water sources, including but not limited to desalinization.

NVRC was tasked by the Northern Virginia Chief Administrative Officers Committee to coordinate a regional water supply plan with those jurisdictions that would like to participate. Out of the 23 Northern Virginia independent jurisdictions, 21 have agreed formally to a regional study and have signed a Memorandum of Agreement.

A workgroup of representatives from the participating local governments and water utilities is in the process of collecting data necessary to fulfill the state requirements before November 2011. In the end, the report, which will be adopted by all participating organizations before going to the Virginia Department of Environmental Quality, will forecast water supply demands over the next 30 years and recommend actions to meet these future needs.❖

For more information, contact:
Norm Goulet at 703.642.4634 or
ngoulet@novaregion.org

FOUR MILE RUN TAKES CENTER STAGE

Restoration Plan Featured at National Building Museum

In celebration of National Landscape Architecture Month in April 2007, the National Building Museum engaged the members of the project team for the Four Mile Run Restoration Project to participate in a panel discussion and a dialogue with attendees entitled, "Greening the River." Panel members included consultant team members, Deana and Elliot Rhodeside of the Alexandria firm Rhodeside & Harwell, Inc.; Judy Guse-Noritake, Co-Chair of the Joint Citizen Task Force; and Bill Hicks, project manager with the Northern Virginia Regional Commission. Paul Kelsch, professor of landscape architecture at Virginia Tech's Alexandria campus, moderated the discussion.

Elliot Rhodeside began the hour and a half discussion with a short PowerPoint presentation of the project. Paul Kelsch followed the presentation with a series of questions allowing panel members to respond on project issues including multi-jurisdictional coordination, flood protection, and designing with nature. Paul Kilmer of the National Building Museum said "The event was one of the best that I had participated in organizing."

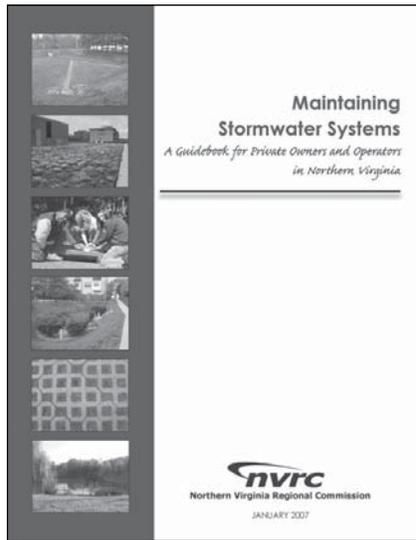
The Washington Smart Growth Alliance also selected the master plan for inclusion on their 2007 Regional Conservation Priorities list.❖

For more information, contact:
Bill Hicks at 703.642.4628 or
bhicks@novaregion.org



MAINTAINING STORMWATER SYSTEMS

New Guidance Available for Private Owners and Operators



Uncontrolled and untreated stormwater runoff is a primary cause of physical stream degradation and decreased water quality in urban areas. The effectiveness of stormwater management solutions relies on their long-term maintenance, which is often overlooked or under-appreciated. While many Northern Virginia local governments have programs in place to perform routine inspections of stormwater systems, the maintenance responsibility often falls on the shoulders of private owners and operators.

Maintaining Stormwater Systems: A Guidebook for Private Owners and Operators introduces the maintenance needs for 11 of the most common traditional and innovative stormwater facilities in Northern Virginia, provides guidance for planning maintenance costs, contains a troubleshooting guide, and lists local government contacts and additional resources. ❖

The guidebook is accessible in Adobe PDF format on the web, at: www.novaregion.org/bmp.htm.

VIRGINIA'S CLEAN MARINA PROGRAM

Reducing Pollution, One Marina at a Time

On any warm and sunny day, hundreds of boats of every type, shape, and size speckle the tidal Potomac River. The Potomac's silvery waters provide a welcome oasis to weary Northern Virginians looking for a nearby escape. However, many boats require gas to propel them, areas to pump out holding tanks, and service centers for repairs.

Marinas are critical targets for pollution prevention efforts due to their proximity to waterways and the potential for direct inputs of gas, oil, human waste, and other pollutants into the Potomac. Fortunately, many local marinas are committing to reducing and preventing pollution from their facilities with guidance from the Virginia Clean Marina Program.

The program is a voluntary partnership with state and federal government agencies, including the Virginia Department of Environmental Quality - Coastal Zone Management Program, and the Virginia Institute of Marine Science, to reduce non-point source pollution. To receive Clean Marina status, marinas must meet state and federal regulations and be assessed in 10 areas including boater education, marina design, and maintenance. A recent survey conducted by Virginia Clean Marina Program managers found that almost 80 percent of respondents thought the Clean Marina Program reaped economic benefits upon their businesses. Marinas that implement best

management practices noted dollar savings of \$500 to \$5,000 a year.

Currently, three Northern Virginia marinas are designated Clean Virginia Marinas, with three others pledging to work toward designation status. A unique program sponsored by the Belle Haven Marina in Fairfax County features an "environmental boater of the year" award as well as a reference list of best management practices for the marina's staff. Through efforts such as this, marinas are doing their part to preserve a unique way of life and the quality of the Potomac River. ❖

Learn more about the Virginia Clean Marina Program and read other local success stories at: www.virginiacleanmarina.com

Clean Marinas in Northern Virginia	
<u>Designated</u>	<u>Pledging</u>
Washington Sailing Marina <i>City of Alexandria</i>	Hampton's Landing Marina <i>Prince William County</i>
Belle Haven Marina <i>Fairfax County</i>	Leesylvania State Park <i>Prince William County</i>
Belmont Bay Harbor <i>Prince William County</i>	Prince William Marine <i>Prince William County</i>

COMMITTEE, continued from page 1

Community education and outreach is an important aspect of this committee. To provide residents and businesses with information on energy efficiency, NVRC plans to develop a website that will serve as a single source of information whereby residents and businesses may obtain timely information on how to save money and resources by implementing some simple measures that save energy.

To demonstrate cost savings, a series of calculators will be developed and links to important local websites that provide additional resources and incentives will be included. Companion print materials that may be mailed and handed out also will be developed in conjunction with the website.

NVRC specifically will target local governments in regional collaboration and promotion of the *Cool Counties* initiative, championed by Chairman Connolly.

The feasibility of establishing a *Cool Schools* program that examines opportunities to integrate formal recycling programs and ways to reduce energy consumption in school buildings also will be assessed. The committee plans to host a forum where representatives from the local school districts will have an opportunity to discuss ongoing programs and how to better collaborate in the future.

NVRC will work with the Metropolitan Washington Council of Governments and its member localities to promote the adoption and implementation of more energy efficient building codes. NVRC will help promote the incorporation of Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ programs for commercial and high-rise residential buildings in the region and will explore other, similar types of efforts aimed at residential development (such as the National Association

of Home Builder's Model Green Home Building Guidelines). These efforts will occur in concert with other ongoing state initiatives.

The State Corporation Commission's (SCC) Workgroup is exploring new energy conservation initiatives in the commonwealth. Through this process, NVRC will promote innovative energy conservation efforts such as the use of smart metering, smart grids, compact fluorescent lamps, tax incentive programs, promoting the use of ENERGY STAR rated appliances, and the establishment of one or more statewide demand service management organizations. NVRC also will support efforts to ensure that environmental concerns are incorporated into the SCC's evaluation of the cost and benefit analysis of new and innovative energy efficiency policies. The consideration of external environmental benefits, or more importantly, detriments, may also be a factor in consideration of new energy generation permits. NVRC staff will work with the region's General Assembly members to promote these

and other applicable legislative initiatives, such as changes in building codes.

With coordinated efforts, the promotion of energy conservation to a wide-range of audiences will have an impact that reaches much further than the Washington, D.C., metropolitan area. ❖



**Roles of the
Northern Virginia Regional Commission
Energy and Environmental Policy Committee**

- Reach Out and Educate Communities
- Promote and Coordinate Regional Cool Counties Initiative
- Promote More Energy Efficient Building Codes
- Participate in State Energy Conservation Initiatives

For more information, contact:
Doug Pickford at 703.642.4623 or
pickford@novaregion.org

**To learn more about this
and other regional initiatives, visit:**

www.novaregion.org

TOOLS TO DETERMINE CHANGE

Geographic Information Systems Valuable in Determining Sustainability

The management of natural resources is spatial by nature. Understanding where things occur and how they relate to other things around them, always an essential element of environmental planning and restoration, will be critical in addressing the challenges of climate change.

Today's sophisticated Geographic Information Systems (GIS) have the capacity to organize, analyze, and present all of the relevant data on their own. By tying visual representations of each factor to databases of descriptive characteristics, GIS allows planners, managers, and researchers to ask and answer sophisticated questions about how one environmental factor (e.g., rates of glacial melting) might influence another (e.g., sea level variations), and to make predictions about the impacts of such interactions (e.g., coastal flooding) into the future.

The use of GIS capabilities, however, is not limited simply to identifying problems that might occur. The



technology has a long history of use in oil and gas exploration efforts, and is increasingly employed in the quest for sources of renewable energy. For example, by matching data on wind and solar radiation patterns with information about the land - its use, availability, and sensitivity - priority sites may be identified for the development of large, commercially-viable wind turbine or solar panel arrays, which in turn may decrease dependency on fossil fuels.

While the rate at which climate change is occurring is often debated, Geographic Information Systems provide tools for planners to make prudent judgements on the management of existing and future natural and man-made resources. ❖

For more information, contact:
Matt Handy, GIS Specialist, at 703.642.4645 or
mhandy@novaregion.org

NORTHERN VIRGINIA CLEAN WATER PARTNERS

Local Governments Continue to Work Together to Reduce Water Pollution

Armed with a new name, a website, television public service announcements, and printed materials, nine local Northern

Virginia governments, two independent sanitary and drinking water authorities, the Northern Virginia Regional Commission, and the Virginia Department of Environmental Quality - Coastal Zone Management Program, joined forces for the third year in a row to promote behaviors that reduce common household pollution from entering the region's waterways.

The Northern Virginia Clean Water Partners aired the radio ad "The Call", featuring a talking stormdrain, on nine stations during March and April. The ad also featured new action-specific taglines encouraging residents to carefully read directions on fertilizer bags, to place their pet waste in a trash cans, and to recycle their used motor oil at participating locations.



To collect data on the effectiveness of the campaign, the partners conducted a survey before and after the radio ad ran. When compared to the results of the 2006 survey, more respondents heard the ad and stated that it is effective in getting people to change their pollution-causing behaviors.

The participating organizations receive credit for this effort under the education and outreach requirements of their Municipal Separate Storm Sewer System (MS4) Permit. ❖

For more information, contact:
Laura Grape, at 703.642.4625 or
lgrape@novaregion.org
or visit www.onlyrain.org

CLIMATE CHANGE, continued from page 1

Through this program, the county pledges to reduce global warming emissions 80 percent by 2050, an average reduction of two percent annually.

Responding to global climate change may appear to be a daunting task, but... elected leaders can and must make strategic investments to reduce our [local governments] emissions and lead by example within our communities.

Gerald Connolly, Chairman
Fairfax County Board of Supervisors and the
Northern Virginia Regional Commission

To accomplish this task, Fairfax County, working with the Sierra Club, produced a roadmap showing the kinds of actions that counties realistically may take to reduce their emissions. The roadmap is a template that other counties across the United States may use to reduce emissions through actions in seven key areas: energy efficiency, renewable energy, greening county vehicle fleets, land use, transportation, water conservation, and educational outreach.

Cool Counties initiative. In 2007, Arlington County Board Chairman Paul Ferguson championed the Arlington Fresh AIRE program, where AIRE stands for Arlington Initiative to Reduce Emissions. The program complements the *Cool Counties* initiative and Arlington's ongoing commitments to reduce Arlington's greenhouse gas emissions 10 percent from 2000 to 2012, by encouraging businesses and residents to reduce emissions and energy needs, partnering with other localities across the region and nation on joint efforts, and providing a website (www.arlingtonva.us/climate) that includes self-assessment tools, tips, case studies, information, and a blog.

Even in the world of stormwater management, the shift is away from traditional stormwater ponds to implementing systems on a site-by-site basis that conform to the natural environment through the use of native plants, natural pollutant filtration of soils and mulch, and provide aesthetically-pleasing habitat. In partnership with public and private planners and engineers, NVRC is preparing a supplement to the *Northern Virginia BMP (Best Management Practices) Handbook* that integrates these Low Impact Development (LID) techniques. Once the supplement is complete, LID will be an accepted system in any



*Metro buses offer free rides on code orange and code red air quality days.
Photo: Washington Metropolitan Area Transit Authority*

"Responding to global climate change may appear to be a daunting task, but...elected leaders can and must make strategic investments to reduce our [local governments] emissions and lead by example within our communities," said Fairfax County Board of Supervisors and NVRC Chairman Gerald Connolly at the 2007 National Association of Counties Conference in Richmond, VA.

Along with Fairfax, Arlington County is also one of the founding jurisdictions participating in the

new developments or retrofits, across the region.

Through these local and regional initiatives, "going green" is not an abstract concept anymore. Behaviors are changing and these "green" goals are realistic and achievable. Jump on board and enjoy the lower-emissions ride. ♣

Learn more about the *Cool Counties* initiative at:
www.fairfaxcounty.gov
Click on the Cool Counties logo.

NVironment

The Northern Virginia Regional Commission
3060 Williams Drive, Suite 510, Fairfax, Virginia 22031

The NVironment is published annually by the Northern Virginia Regional Commission and is dedicated to the reporting and analysis of coastal and environmental issues affecting Northern Virginia.
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Marshall Popkin



Virginia Coastal Zone
MANAGEMENT PROGRAM



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