

**Albemarle County  
2008 – 2013  
MS4 Program**

**Annual Report  
– Year 1 –**

**Coverage Under VPDES General Permit for  
Small Municipal Separate Storm Sewer Systems  
VAR040074**

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**October 2009**

This report documents Albemarle County's activities related to each of the six minimum control measures for Year 1 under its 2008 – 2013 general permit for small MS4s (VAR040074). Program activities are carried out by staff from both Albemarle County Local Government (including the Departments of General Services and Community Development) and Albemarle County Public Schools.

The sections that follow are responses to information requested in Section II.E.3 of the general permit; tables of proposed BMPs include specific progress comments.

### **Roles And Responsibilities**

There have been no changes to staff roles and responsibilities.

### **New MS4 Outfalls**

The County does not own and maintain an MS4-wide storm sewer system. Rather, private developments typically construct onsite stormwater management systems which have discharge points into channels or streams. The County does not track privately-owned connections except that we will periodically survey streams within the development areas for outfalls as part of our IDDE program. We do not have the data to identify private outfalls that may have been constructed during the reporting period.

Nonetheless, the County has completed several school additions which have resulted in additional (albeit, managed) stormwater discharges, as follows:

- Albemarle High School: 0.25 acres (JR07)
- Greer Middle School: 0.25 acres (JR07)
- Brownsville Elementary School: 0.5 acres (JR02)

### **Status Of Compliance With Permit Conditions**

The County is in compliance with all permit conditions. There are no waste load allocations associated with a TMDL approved by the State Water Control Board that have been assigned within watersheds lying in the County's MS4.

### **Assessment Of Appropriateness Of Identified BMPs**

Albemarle County's various programs being implemented under this VSMP permit are comparable to or exceed those of other local governments or institutions in breadth of program elements and the level of execution. The BMPs in the County's MS4 Program Plan are based on guidance from DCR and other institutions such as the Center for Watershed Protection, are consistent with the Virginia Stormwater Management Handbook and the Virginia Erosion and Sediment Control Handbook, and are generally considered appropriate for the management of stormwater from MS4s.

### **Progress Towards Achieving Measurable Goals For Each MCM**

The sections that follow summarize activities the County has completed during the reporting year for each minimum control measure (MCM).

## Public Education And Outreach

The County (both local government and schools) has continued its fruitful collaboration with other local VPDES permit holders – City of Charlottesville, University of Virginia, the Rivanna Water and Sewer Authority, and the local Virginia Department of Transportation – in implementing education and involvement efforts. The Thomas Jefferson Soil and Water Conservation District serves as the partnership coordinating body. The partnership website is <http://www.rivanna-stormwater.org/>.

RRSEP meets at least six times per year to discuss and organize initiatives and share information pertaining to meeting stormwater permit requirements. This past reporting year, the partnership met eight times; meeting minutes are provided (attachment 1a). Specific activities that the partnership undertook this past year include:

- placing online banner ads in the local newspaper ([Daily Progress](#)) with the slogan “please, only rain down the drain” with a link to the partnership website; the anticipated exposure was 150,000 impressions per month over 3 months
- placing ads in Charlottesville-area movie theaters (attachment 1b) from August 8 through September 4, 2008; the anticipated exposure was 3,360 total spots over four weeks; examples of the three ad designs are attached as
- purchased a training DVD on the subject of local government good housekeeping practices related to water resource protection for use by all partners
- purchased 1,000 3.5-in x 4-in refrigerator magnets having design based on movie ads to give away at public events
- created 3-panel display board for use at public events
- participated in the following public events
  - World Water Monitoring Day: October 18, 2008 at Greenbrier Park on Meadow Creek
  - Earth Day Eco Fair: April 18, 2009 at the downtown Charlottesville pavilion
  - UVA Earth Day Event: April 22, 2009 at UVA

A major initiative undertaken by the partnership this past year was a public outreach campaign related to IDDE. The partners decided to both improve public knowledge about illicit discharges – including how to identify these – and then how to report observed discharges. To facilitate reporting, the partnership created a web-based form at the [RRSEP website](#) and a single “hotline” phone number at the office of the Thomas Jefferson Soil and Water Conservation District (District). To publicize the new hotline and website, the partnership issued a press release through the Albemarle County Office of Community Relations (April 14, 2008), discussed them on a local radio show called the Rivanna Rambler (April 16, 2008), and generally promoted them at subsequent public events. In addition, flyers (attachment 1c) were developed and inserted into the bills of all Charlottesville Public Works and Albemarle County Service Authority customers, reaching approximately 40,000

households (actually done in year 2 but included here because of it's relation to the initiative).

The partners have received numerous illicit discharge reports through the website. Key staff at the County, City, UVA, and the District are automatically emailed through the web form; the appropriate person is expected to then follow up.

The Albemarle County Office Building on McIntire Road features several projects that demonstrate to property owners what can be done to reduce impacts on water resources from stormwater runoff. The projects include a greenroof, raingarden, pervious pavers, rain barrels, and underground stormvault. A brochure is made available to the public that summarizes these projects and guides visitors to project locations. Currently, an additional demonstration project (a biofilter to serve the majority of staff parking) is under design.

The District continues to conduct public education activities on behalf of the County under a multi-year contract (contract extension is attachment 2a). Reports of activities for year 1 are included as attachment 2b. Highlights of these activities include:

- watershed education for County students at Camp Albemarle
- assisting school curriculum staff with the development of stormwater and watershed-related lesson plans

<b>proposed BMP</b>	<b>implementation schedule, including milestones</b>	<b>year-1 progress</b>
<b>– as partner of RRSEP</b>		
meet as a group at least 6 times per year	ongoing	met 8 times; minutes attached
provide general stormwater pollution prevention awareness to the public through various media with particular focus on minorities, disadvantaged audiences, and minors ...	continue existing education efforts with a focus on at least 1 unique audience per year	focus this year was on general stormwater education; beginning to develop targeted campaigns
... and with a priority on reducing impacts to impaired waters and addressing local pollutants of concern	<i>year 1</i> : determine appropriateness of special effort to focus on impaired waters <i>years 2 - 5</i> : if deemed appropriate, incorporate impairment-specific messages into overall education campaigns	County streams are impaired for bacteria and benthic due, primarily, to urban development; general stormwater education messages are appropriate for both types of impairment and for cause

whenever possible, incorporate messages related to the prohibition of illegal discharges and proper disposal of waste (including pertinent legal implications) into greater outreach campaigns	ongoing	major effort this year on illicit discharge education (see text above)
implement or participate in at least one major activity or event per year (such as a workshop, tour, or speakers bureau)	one major event per year	participated in several events (see text above)
continue to do targeted education campaigns for industrial, commercial, and institutional entities likely to have significant stormwater impacts	at least one group every two years	none this year
maintain the RRSEP website and track the number of hits	ongoing	website being maintained
<b>- independently</b>		
develop and refine various brochures and fact sheets; make these available at County Office Building and online; distribute at appropriate events	continued and ongoing	brochures are available online, public parks, county office building, and at events; updates to some brochures are currently in the works
develop and install educational signs at major capital projects	complete within six-months of completion of project	no capital projects completed this year
give tours of demonstration BMPs (including green roof) located at County Office Building and other County properties	continued and ongoing	approximately 250 visitors
utilize local news media to the extent possible to promote and cover events, projects, milestones, and other initiatives	continued and ongoing	TV coverage for stream buffer restoration grant and TV and newspaper coverage for Crozet capital project
maintain County website	continued and ongoing	the County and RRSEP websites are continually updated with new information
<b>- through contract with TJSWCD</b>		
work with schools to develop and implement teacher and student stormwater and watershed education	continued and ongoing	documented in attached invoices
implement storm drain placard installation program	continued and ongoing	documented in attached invoices
provide specific outreach and education to HOAs and other owners of private BMPs regarding maintenance responsibility	continued and ongoing	beginning this new effort

## Public Involvement And Participation

The County's [MS4 Program Plan](http://www.albemarle.org/water) continues to be available online at the Water Resources website ([www.albemarle.org/water](http://www.albemarle.org/water)). We have received no public comments – written or otherwise – regarding the plan.

We have organized and participated in – sometimes through the RRSEP – multiple events in which the public was invited to participate, including World Water Monitoring Day, volunteer stream cleanups, and storm drain placarding.

<b>proposed BMP</b>	<b>implementation schedule, including milestones</b>	<b>year-1 progress</b>
<b>– as partner of RRSEP</b>		
participate in and encourage public participation in local water quality improvement initiatives, including: <ul style="list-style-type: none"> <li>• stream clean-ups (such as that sponsored by RCS) and other activities conducive to public participation</li> <li>• activities associated with capital projects implemented by partners</li> <li>• the technical advisory committees of organizations</li> </ul>	a minimum of one major event per year; regular participation on TACs	documented in attached invoices; active participation on TAC of Rivanna River Basin Commission and StreamWatch
<b>– independently</b>		
announce, on the County's website (main page), the occurrence of all significant updates to the MS4 permit, such as this draft Program Plan	immediately upon completion of plans, reports, etc.	program plan has been made available on website
on the County's website (water resources), provide information about and links to the latest registration statement, Program Plan, and annual reports	year 1: establish location and format on website; update as needed	annual report will be added to website; a separate location on the website will be created for MS4-related information
provide contact information for key staff associated with each MCM	in conjunction with above	information available on website
make available printed versions of above documents	as requested	these are available upon request
participate in events as a sponsor, partner, or participant; possible events include: County Open House, Charlottesville Eco-Fair (Earth Day), Rivanna Conservation Society stream cleanups, green-themed events, youth watershed summit	have presence at 3 events per year	participated in 3 events (see text above)

### Illicit Discharge Detection And Elimination

In the year prior to this reporting year, the County conducted a survey of all perennial and intermittent streams within the MS4 boundaries (designated urban areas ). Several suspicious discharges of minor concern were investigated but no illicit discharges or connections were discovered. The benefits of conducting this extensive investigation relative to its effort was deemed to be slight. Therefore, this type of survey will be conducted only periodically.

The County, through the RRSEP, conducted a major education initiative related to illicit discharges and connections as discussed in the public education section above. The County has responded to several communications by the public of suspected illicit discharges through its new web-based reporting form. Additional reports or inquiries from the public come through the normal County phone system. On average, only a couple of reports per year result in the confirmation of minor illicit discharges and all are addressed by communicating directly with the responsible party.

The District continues to assist the County in implementing its IDDE program under a multi-year contract (attachment 2a). Reports of activities for year 1 are included as attachment 2b. Highlights of these activities include conducting a field survey of possible illicit connections and mapping storm sewer discharge locations within urban stream corridors.

<b>proposed BMP</b>	<b>implementation schedule, including milestones</b>	<b>method to determine effectiveness</b>
develop and maintain map of stormwater infrastructure <ul style="list-style-type: none"> <li>• locate discharge points</li> <li>• locate stormwater management facilities</li> <li>• to the extent possible, map conveyance infrastructure (both points and lines)</li> </ul>	<i>year 1</i> : complete locating discharge points and SMF locations <i>years 1-5</i> : map conveyance infrastructure (as information is located)	discharge points were obtained through stream surveys; SMP locations are relatively complete and updated regularly (for new facilities)
perform periodic inspection of outfalls and storm sewer system for signs of illicit discharges and connections	<i>bi-annually</i> : perform inspection throughout MS4	field survey is done periodically but none this year (see text above)
develop, implement, and refine procedures for addressing known or suspected illicit discharges and connections	ongoing	SOPs are currently informal; beginning to formalize in written documents
maintain mapping and inspection information in GIS	ongoing	mapping is ongoing; facility locations relatively complete, infrastructure and drainage areas being done

### Construction Site Stormwater Runoff Control

In response to a proposal prepared by a local environmental coalition consisting of the Southern Environmental Law Center, the Environmental Law Clinic at UVA, and the Rivanna Conservation Society, the County amended its Water Protection Ordinance (attachment 3a) to reduce erosion and sedimentation resulting from construction activities. The amendment established a time limit (9 months) within which permanent vegetation must be installed on disturbed areas of construction sites.

<b>proposed BMP</b>	<b>implementation schedule, including milestones</b>	<b>method to determine effectiveness</b>
encourage E&S control designs that have the goal of maintaining or replicating pre-development runoff characteristics and site hydrology	<i>year 1</i> : consider applicability and feasibility of stated goal <i>year 2</i> : if feasible, determine most appropriate means of implementing <i>year 3</i> : implement	E&S rules were recently made more restrictive with much public resistance; it is likely not possible at this time to place greater requirements on the development community
require construction site owners and operators to secure a VSMP permit for construction activities	<i>year 1</i> : require proof of VSMP permit prior to issuance of County permit	the County has not yet implemented this requirement
enhance procedures for receipt and consideration of public input (hotline/website)	<i>year 1</i> : determine most appropriate means <i>year 2</i> : implement	the County is just beginning this effort
periodically review site inspection and enforcement procedures and augment, as needed	ongoing and as part of overall MS4 program evaluation	program is implemented under the guidance of a PE
ensure that County staff obtain and maintain required certificates	annually review	all E&S staff have required certificates
enhance, as needed, the tracking and reporting of required information	<i>year 1</i> : determine most appropriate means <i>year 2</i> : implement <i>years 3+</i> : assess	the existing database (CityView by Municipal Software Corp.) will continue to be used by the County and is the most appropriate means

### Post-Construction Stormwater Management In New Development And Redevelopment

The County amended its Water Protection Ordinance (attachment 3b) to place under protection vegetated riparian buffers on all intermittent streams within the County. Prior to the amendment, intermittent stream buffers were protected only within water supply watersheds; perennial stream buffers have been protected throughout the County.

<b>proposed BMP</b>	<b>implementation schedule, including milestones</b>	<b>method to determine effectiveness</b>
encourage the use of structural and non-structural design techniques that have the goal of maintaining or replicating pre-development runoff characteristics and site hydrology	<i>year 1</i> : consider applicability and feasibility of stated goal <i>year 2</i> : if feasible, determine most appropriate means of implementing <i>year 3</i> : implement	the County is anticipating the more stringent stormwater management requirements being proposed by DCR that intend to result in developments better replicating pre-development hydrology
require owners of permanent stormwater management facilities to develop a recorded inspection schedule	<i>year 1</i> : determine feasibility and best approach to meet intent of stated goal <i>year 2</i> : if feasible, develop procedure <i>year 3</i> : implement	the County is just beginning this effort
ensure that site inspection and enforcement measures are consistent with the Virginia Stormwater Management Act and attendant regulations	ongoing and as part of overall MS4 program evaluation	program is implemented under the guidance of a PE

### **Pollution Prevention / Good Housekeeping**

Through our Environmental Management Policy, the County is committed to environmental compliance, pollution prevention, and continual environmental improvement. Many of the efforts related to the County’s implementation of an Environmental Management System (EMS) satisfy requirements under this stormwater permit. Highlights of this program include:

- We held a training session with the Public Works Department specifically on preventing stormwater pollution in day-to-day activities and operations.
- All waste materials from our facilities are disposed of properly.
- A contractor agreement has been drafted for contractors to sign that states that any contractor doing work in/on our facilities will NOT dump anything down a storm drain. They must sign this document before any work is conducted. This includes painters, general construction contractors, carpenters, etc.
- We are continuing to implement our Safer Chemical Management Policy, which mandates that Green certified cleaners be used and that all herbicides be bio-based.
- We are implementing an Integrated Pest Management (IPM) program as part of the Safer Chemical Management Policy.
- We participated in VML’s “Go Green Virginia” challenge which is a statewide competition for localities to showcase their various pollution prevention-related programs, and are planning to participate this year as well.

- As part of our internal energy conservation program, which is likely our most robust pollution prevention initiative, we earned the ENERGY STAR label for one of our County Office Buildings, and achieved a 14% overall energy reduction goal by the end of this reporting period.
- We applied for the E3 level in the VEEP program for the General Services EMS fenceline (note that the award was received in September 2009)

<b>proposed BMP</b>	<b>implementation schedule, including milestones</b>	<b>method to determine effectiveness</b>
environmental management system (EMS) implementation	ongoing	EMS is being aggressively implemented (see text above)
provide periodic pollution prevention training to applicable County staff	ongoing	entire PW division was instructed on good housekeeping practices

### **Results Of Information Collected And Analyzed**

Albemarle County has not collected or analyzed data related to its stormwater permit, except for the information provided pertaining to BMPs. The County relies on the surveys and analyses done by [StreamWatch](#) to gage the general health of County streams.

### **Activities Planned For Next Reporting Period**

- continuation of core programs and initiatives
- initiatives listed in MS4 Program Plan in the tables of program enhancement under the column title “implementation schedule, including milestones” for years 1 and 2
- targeted public education campaign – through the RRSEP – on either the harmful effects of cigarette butts or misuse of lawn fertilizers
- begin a more organized effort to educate HOAs and property owners about the proper maintenance of privately-owned BMPs
- make application to VDEQ’s Virginia Environmental Excellence Program (VEEP) for participation for the Departments of General Services and Parks & Recreation’s fencelines (milestones)
- continue holding spill and compliance-related training for employees
- construction of two large capital projects to retrofit stormwater management into built areas of the County’s MS4
- completion and full implementation of a BMP database to record inspection information and communications with property owners and track the status of BMPs

### **Change In BMPs Or Measureable Goals**

At this time, the County does not propose any changes to its MS4 Program Plan or its measureable goals.

### **Notice That County Is Relying On Outside Party**

As indicated in previous sections, Albemarle County continues to receive services related to implementation of its MS4 program plan from staff of the TJSWCD. The contract for services has been extended through June 30, 2010.

### **Number Of Illicit Discharges Identified / How They Were Eliminated**

Albemarle County has received four reports of suspected illicit discharges during the reporting year. Only one report was actually a confirmed case of illicit discharge: a restaurant cleaning its kitchen equipment in the parking lot. The restaurant was contacted and the practice was discontinued. Other suspected illicit discharges were related to land-disturbing activities and were addressed through that program.

### **Regulated Land-Disturbing Activities**

total number of regulated land-disturbing activities	42
total disturbed area (acres)	249.75

### **Permanent Stormwater Management Facilities**

The County has a policy of periodically inspecting all stormwater BMPs – every one to three years, depending on the type of facility. The location of the facilities are maintained in a GIS and other data are maintained in a database.

County staff have struggled over the last few years with an inherited database that had numerous weaknesses and irreconcilable bugs. With many other County divisions, such as permitting and code enforcement, already using CityView software – created by Municipal Software Corporation (MSC) – water resources staff decided to contract with MSC to expand the existing CityView database to include numerous components specific to water resources needs. New components will include better tracking and reporting of 1) stormwater management design review, 2) construction-related erosion and sediment control issues, and 3) post-construction inspection and maintenance activities. Although commenced in May 2007, the database has not yet be completed and delivered to the County. However, we expect to begin working with the new database well before the year 2 report is due.

Requested information pertaining to the known BMPs located within the County’s MS4 is attached (attachment 4) and will be made available in digital format.

### **Written Comments Received During Public Comment Period**

The County did not receive any written comments during the public comment.

## List Of Attachments

- 1) Rivanna Regional Stormwater Education Partnership
  - a) meeting minutes
  - b) movie ad designs
  - c) example IDDE flyer
- 2) TJSWCD Documents
  - a) contract extension through June 30, 2010
  - b) summary report of activities for period July 2008 – June 2009
- 3) Water Protection Ordinance Changes
  - a) erosion and sediment control
  - b) stream buffer
- 4) Permanent BMP Data