

**Albemarle County
2008 – 2013
MS4 Program**

**Annual Report
– Year 2 –**

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

**Albemarle County
Water Resources
401 McIntire Road
Charlottesville, Virginia 22902
(434) 296-5816
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October 2010



COUNTY OF ALBEMARLE

Office of County Executive
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October 1, 2010

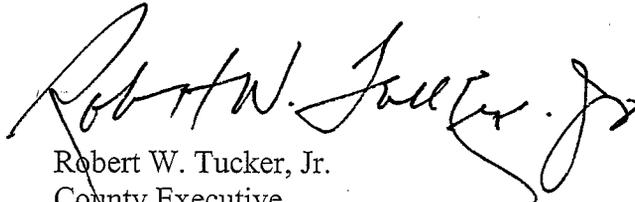
Mr. Doug Fritz, MS4 Program Manager
Stormwater Permitting
Virginia Department of Conservation and Recreation
203 Governor Street, Suite #206
Richmond, Virginia 23219

RE: Certification of Albemarle County VPDES Year 1 Report

Dear Mr. Fritz:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or other persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,



Robert W. Tucker, Jr.
County Executive

RWT,Jr/dbm
10.064
Enclosure

This report documents Albemarle County's activities related to each of the six minimum control measures for Year 2 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:

- Brownsville Elementary School: 3.0 acres impervious (JR02)
- Crozet Elementary School: 0.75 acres impervious (JR02)
- Greer Middle School: 1.0 acre impervious (JR07)
- Vehicle Maintenance Facility: 1.0 acre impervious (JR07)

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 through the Rivanna Regional Stormwater Education Partnership (RRSEP). The Thomas Jefferson Soil and Water Conservation District (TJSWCD) serves as the partnership coordinating body. The partnership website is <http://www.rivanna-stormwater.org/>; it's website visitation statistics are included as attachment 1a)

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 seven times; meeting minutes are provided (attachment 1c). Specific activities that the partnership undertook this past year include:

- City mails 23,500 IDDE flyers with utility bills – July 2009
- Three stormwater PSA slides on ten movie screens (4 in city and 6 in county) for two months with every movie shown – July/August 2009 (attachment 1b)
- Anti-cigarette litter plug on 106.1 FM Bruce and Betty Show – August 2009
- County mails 16,000 IDDE flyers with utility bills – September 2009
- Students at Western Albemarle County High School given stormwater presentation and participate in placing storm drain placards on stormdrains at the high school, middle school and elementary school – October 2009
- Fall BMP Ad placed in [The Hook](#) – November 2009
- New pages on privately-owned SMF maintenance added to RRSEP web site – February 2010
- Designed and ordered 1,000 anti-cigarette litter refrigerator magnets – March 2010
- Spring BMP ad placed in Cville Weekly once each month – March/April 2010
- Ten Spring BMP posters laminated and posted – April 2010
- RRSEP stormwater and anti-cigarette litter display at Charlottesville Earth Week Eco-Fair RRSEP booth – April 2010
- Spring BMP posters placed on CTS buses – May 2010

A partnership initiative that continued from the previous reporting period was a public outreach campaign related to IDDE. The partners decided to improve public knowledge about illicit discharges (including how to identify these) and to make it easier 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 TJSWCD. The partnership has continued to publicize the new hotline and website by developing flyers

(attachment 1d) and inserting them into the bills of all Charlottesville Public Works and [Albemarle County Service Authority](#) customers (approximately 39,500 total).

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

A new initiative that has not yet been brought to full fruition is an anti-cigarette litter campaign. Based on research by a City intern, it became apparent to the partnership that discarded cigarettes likely have a major impact on water quality – especially from dense, urban areas such as the downtown Charlottesville outdoor pedestrian mall – due to their vast quantities and the degree to which they leach carcinogens and toxins. So far, the partnership has placed ads in buses and created and distributed magnets (attachment 1e), included the message in an Eco Fair display, and discussed them on the radio. We've also completed a one-day cigarette butt sweep on the pedestrian mall with the intention of creating a plexi-glass tube educational display of the quantity collected for dramatic visual effect.

The partnership has begun to place ads in a local weekly newspaper every spring and the fall including season best management messages for homeowners (attachment 1f).

To promote public understanding of the purpose of stormwater management facilities and their maintenance needs, the County produced educational signs (attachment 2a) and now offers them free to owners of facilities. The County Local Government is preparing to install signs at five regional stormwater management facilities – those that have the highest public visibility. County Schools will be installing signs at seven stormwater management facilities on school campuses. So far, several home owners associations have expressed interest in receiving signs (note: private owners must install the signs, themselves).

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 (attachment 2b) 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 the northern-most parking area) is expected to be constructed spring 2011.

County Schools recently installed a green roof as part of a building addition to Albemarle High School. The green roof was fitted with a HOB0 monitoring system that measures temperature (air and soil substrate), relative humidity, dew point, soil water content. Data is accessible through a [live link](#) (<https://www.hobolink.com/p/96c5dccbf772ca55d29abc95a169a0b>).

The TJSWCD continues to conduct public education activities on behalf of the County under an ongoing contract (work during the reporting year was done under a, now, former contract; the new contract, beginning July 1, 2010, is included as attachment 3a). Reports of activities for year 2 (337 total hours) are included as attachment 3b. Highlights of these activities include:

- watershed education for County students at [Camp Albemarle](#)
- developed educational ads for use by RRSEP

proposed BMP	implementation schedule, including milestones	year-2 progress
– as partner of RRSEP		
meet as a group at least 6 times per year	ongoing	met 7 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	continued general stormwater education initiatives; began educational campaign targeting littering smokers
... 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 and those addressing IDDE are appropriate for both types of impairment
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	continued major effort 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; web usage data included as attachment 1a)
– independently		
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, at public parks, county office building, and events; brochures are occasionally updated
develop and install educational signs at major capital projects	complete within six-months of completion of project	three major capital projects will be completed spring 2011; signs will be installed at all three; separately, signs were developed for installation at stormwater facilities by HOAs (see text above)
give tours of demonstration BMPs (including green roof) located at County Office Building and other County properties	continued and ongoing	approximately 25 visitors to the County's green roof; school biofilter tour given to teachers and master gardeners
utilize local news media to the extent possible to promote and cover events, projects, milestones, and other initiatives	continued and ongoing	it's been a slow media year; we anticipate many opportunities in the coming reporting period due to the construction of several capital projects
maintain County website	continued and ongoing	the County recently made major changes to its overall website, including the water resources page; the County and RRSEP websites are continually updated with new information
– through contract with TJSWCD		
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 and annual reports](#) are available online at the Water Resources website (www.albemarle.org/water). To date, 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.

proposed BMP	implementation schedule, including milestones	year-2 progress
– as partner of RRSEP		
participate in and encourage public participation in local water quality improvement initiatives, including: <ul style="list-style-type: none"> stream clean-ups (such as that sponsored by RCS) and other activities conducive to public participation activities associated with capital projects implemented by partners the technical advisory committees of organizations 	a minimum of one major event per year; regular participation on TACs	documented in attached invoices; continued active participation on Technical Advisory Committee of the Rivanna River Basin Commission and StreamWatch
– independently		
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; new annual report will be announced on main page
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 has been created for MS4-related information
provide contact information for key staff associated with each MCM	in conjunction with above	staff contact 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 1 event (see text above)

Illicit Discharge Detection And Elimination

A couple of years prior to this reporting year, the County conducted an IDDE 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 two-year contract (attachment 3a). Reports of activities for year 2 are included as attachment 3b. Highlights of these activities include updating the IDDE report database, revisions to the IDDE web report form, and assimilating past IDDE mapping data into ArcGIS shapefile.

proposed BMP	implementation schedule, including milestones	year-2 progress
develop and maintain map of stormwater infrastructure <ul style="list-style-type: none"> • locate discharge points • locate stormwater management facilities • to the extent possible, map conveyance infrastructure (both points and lines) 	<i>year 1:</i> complete locating discharge points and SMF locations <i>years 1-5:</i> map conveyance infrastructure (as information is located)	discharge locations into streams were obtained through IDDE survey; SMF locations are essentially mapped and are 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 was not done during this reporting period (see text above)
develop, implement, and refine procedures for addressing known or suspected illicit discharges and connections	ongoing	SOPs are being developed but are not yet completed
maintain mapping and inspection information in GIS	ongoing	mapping is ongoing; facility locations are complete, infrastructure and watersheds should be completed during the next reporting period

Construction Site Stormwater Runoff Control

During the reporting period, the County amended its Water Protection Ordinance (attachment 4a) 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.

Also, the County amended its development regulation procedures to now require staff, prior to issuing a notice to proceed for land-disturbing activities, to inform owners/contractors that they are responsible for obtaining a VSMP permit from DCR (Erosion and Sediment Control Preconstruction Conference Checklist included as attachment 4b). And staff are now checking for posted permits at construction sites.

proposed BMP	implementation schedule, including milestones	year-2 progress
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 made more restrictive with much resistance from the regulated community; no additional changes to E&S regulations have been implemented
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	this requirement was added to the County's pre-construction conference checklist (included as attachment 4b)
enhance procedures for receipt and consideration of public input (hotline/website)	<i>year 1:</i> determine most appropriate means <i>year 2:</i> implement	hotline (296-5834) and online complaint form now available
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 Community Development Department now has both a hotline (434/296-5834) and [online complaint form](#) to allow citizens to comment on issues related to development or land disturbance. And, it is now possible for the public to access information through a [website](#) regarding a variety of applications, including site plans.

proposed BMP	implementation schedule, including milestones	year-2 progress
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:

- In April 2010, we held a training session with the staff of the General Services Department specifically on preventing stormwater pollution during day-to-day activities and operations.
- All waste materials from our facilities are disposed of properly.
- A contractor agreement is in place for the majority of our maintenance, grounds, and custodial contracts that states that any contractor doing work in/on our facilities will not dump anything down a storm drain. All contractors, including painters, general

construction contractors, and carpenters, must sign this document before any work is conducted.

- 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 for the safer treatment of indoor pests as part of the Safer Chemical Management Policy.
- In September 2009, we tied for 1st place in Virginia Municipal League’s “Go Green Virginia” challenge which is a statewide competition for localities to showcase their various pollution prevention-related programs.
- As part of our internal energy conservation program, which is likely our most robust pollution prevention initiative, we earned the ENERGY STAR label for two of our County office buildings and achieved a 20.3% overall energy reduction goal by the end of this reporting period.
- We’ve achieved E3 level certification in VDEQ’s Virginia Environmental Excellence Program (VEEP) in September 2009 for the General Services EMS fenceline and applied at the E3 level for the Parks and Recreation fenceline.

proposed BMP	implementation schedule, including milestones	year-2 progress
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, 2, and 3
- through the RRSEP, complete the targeted public education campaign on the harmful effects of cigarette butts and initiate a new targeted campaign

- now that our comprehensive database has been completed and stormwater facility inspections have restarted, 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 three large capital projects to retrofit stormwater management into built areas of the County’s MS4 (two projects are carried-over from previous reporting year)
- begin planning for new capital project
- 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 current contract for services is from July 1, 2010 through June 30, 2012.

Number Of Illicit Discharges Identified / How They Were Eliminated

Albemarle County has received four reports of suspected illicit discharges during the reporting year. Three of the accounts (cleaning restaurant equipment in parking lots, washing dealership cars in a parking lot, and dumping leaves in drainage channels every fall) were legitimate IDDE issues and were addressed by speaking with the violators; the other (contribution of trash into a stream by the incremental erosion of the banks of a very old Charlottesville landfill) is located on the property of a proposed development and was addressed through the County’s Community Development Department.

Regulated Land-Disturbing Activities

total number of regulated land-disturbing activities	35
total disturbed area (acres)	298.8

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.

A new inspection database – developed around CityView software used by many other County divisions, such as permitting and code enforcement – has just recently become operational; it is still being loaded with existing data – in part, due to the large number of facilities on record (about 600) – and has yet to be wholly used. Its new components 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.

Requested information pertaining to the new BMPs brought online during the reporting period is attached (attachment 5) 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) website statistics
 - b) meeting minutes
 - c) movie ad designs
 - d) IDDE hotline flyer
 - e) cigarette ads
 - f) fall/spring ads
- 2) County projects
 - a) BMP sign
 - b) County office building BMP map
- 3) TJSWCD Documents
 - a) new contract: July 1, 2010 – June 30, 2012
 - b) summary report of activities for period July 2009 – June 2010
- 4) development and land disturbance regulation
 - a) ordinance change: erosion and sediment control
 - b) E&S preconstruction conference checklist
- 5) New Permanent BMP Data