



Town of Ashland

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September 30, 2011

Department of Conservation and Recreation
Division of Soil and Water Conservation
Stormwater Permitting
203 Governors Street, Suite 206
Richmond, Virginia 23119
Attn: Mr. Jeff Selengut

FAYE O.
PRICHARD
MAYOR

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MARTIN
VICE MAYOR

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HARTGROVE
TOWN MANAGER

ANDREA E.
ERARD
TOWN ATTORNEY

LOIS A. SMITH
CLERK OF COUNCIL

RE: 2011 MS4 Annual Report, Town of Ashland
Permit Registration Number VAR040011

Dear Mr. Selengut:

The Town of Ashland is pleased to submit its report documenting compliance with the requirements of its MS4 Phase II permit. The Town of Ashland performed all of the activities required during the reporting period of July 1, 2010, through June 30, 2011.

The attached report details the activities performed in accordance with the items outlined in the General Permit. Where appropriate, we have included copies of documents that demonstrate achievement of these goals.

If you have questions regarding this report or require further information, please contact me or Ingrid Stenbjørn, PE, Town Engineer.

Sincerely,
Town of Ashland

Michael A. Davis, PE
Director of Public Works

Attachment: MS4 General Permit Report Permit Year July 1, 2010, through
June 30, 2011

CC: Town Council
Charles Hartgrove, Town Manager

**Town of Ashland
MS4 General Permit Report
Reporting Year July 1, 2010 through June 30, 2011**

a. Background Information

1. Town of Ashland, General Permit Registration Number VAR04011
2. Permit Year July 1, 2010, through June 30, 2011
3. No modifications to operator's department's roles and responsibilities
4. Number of new MS4 outfalls and associated acreage by HUC added during the permit year: No new outfalls
5. Certification:

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 those 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.



Michael A. Davis, PE
Director of Public Work

9/30/11
Date

- b. Compliance with permit Conditions and assessment of best management practices:
1. Public Education and Outreach on Storm Water Impacts. Goals for third permit year, and how goals have been met:
 - 200 flyers distributed.
 - Distributed 200 pollution prevention educational flyers to the Ashland Branch of the Pamunkey Regional Library, businesses, and the two elementary schools. Flyers are also available at the Town Hall. See Attachment 1.
 - Articles on stormwater pollution prevention in On Track and employee newsletter each quarter.
 - Attachment 2 includes articles that have appeared in the Town newsletter over the reporting period. The newsletter is distributed to Town residents and employees.
 - Include environmental protection section in tour for elementary school classes.
 - No elementary school classes toured the Town Hall during the reporting period. However, a Randolph-Macon College intern assisted in preparing material for such tours. See Attachment 3.
 - Continue to collaborate with RMC on Mechumps Creek Restoration project. Continue to publicize the project.
 - The town continued to collaborate on the Mechumps Creek Restoration project with R-MC until it was completed during this reporting period. The project was publicized in the Town newsletter (see Attachment 2), local newspapers and by Channel 12 news.
 - Town Council remained informed of the progress on the project until it was completed. The project was discussed at Town Council meetings when appropriate.
 - Air 4 seasonal slides on the Town's public television station.
 - See Attachment 4 for slides. In addition, the Town airs slides about picking up after your pet.
 2. Public Involvement/Participation. Goals for second permit year, and how goals have been met:
 - Conduct at least one stream pick-up program.
 - Randolph-Macon College conducted stream pickups in Mechumps Creek, Stony Run Creek and the unnamed creek in Carter Park as part of Macon a Difference Day.
 - Continue communication and collaboration with Randolph Macon College (R-MC).
 - Collaborated on the following Macon a Difference Day (in conjunction with Earth Day) projects:
 - ✓ Trash pickup in the Ashland Parks, and the Trolley Line Tail
 - ✓ Trash pickup on N. Carter Road, Hill Carter Parkway and Kitty Hamilton Road
 - ✓ Stream pickups in Mechumps Creek, Stony Run Creek and Carter Park Creek,

- ✓ 100 Storm Pollution flyers to businesses (see Attachment 1)
 - ✓ Installed markers (“Drains to the Bay”) on remaining inlets in Town.
 - The Town took on a volunteer intern from R-MC. She assisted in developing a brochure on permeable pavers and LID for educating Town Council and interested residents. See Attachment 5. She also assisted in assembling data for the WIP requirements for the Chesapeake Bay TMDL.
 - Worked with an R-MC Environmental Policy Class taught by Bud Watson. The Town Engineer assisted the class in understanding the upcoming VSMP regulations and how the Town will be affected. The class reviewed VSMP requirements to possibly assist the Town in developing a stormwater ordinance pursuant to the new regulations.
 - Collaborated with an R-MC class to begin moving the Town toward a Virginian Environmental Excellence Program certification, and a Go Green certification.
 - R-MC Environmental Studies class continues to collect and analyze e. coli samples from Mechumps Creek on behalf of the Town.
- Discuss possible stormwater education programs with Elementary school contacts
 - This is the second year that Town staff made presentation to students on how trash in stormwater inlets makes its way into streams and may contaminate the Chesapeake Bay. At this time, the Town and the School have agreed to include such a presentation on an annual basis. (See photos in Attachment 6).

3. Illicit Discharge and Elimination. Goals for second permit year, and how goals have been met:

- Continue with implementation of program to detect illicit discharges using information in the storm sewer map, taking enforcement action as required.
 - The Town consults the map to assist with dry weather monitoring. The R-MC intern performed dry weather monitoring in the northern and southern branches of Mechumps Creek. No illicit discharge was detected. The planned scope of dry weather monitoring was not completed because there was not sufficient stretches of dry weather. If there is persistent dry weather in fall 2011, the remaining dry weather monitoring work will be completed,
- Continue with implementation of program to investigate older storm sewer systems for cross connections and condition, making repairs as required.
 - Town installed a new manhole in the storm sewer system because the run between manholes was too long to facilitate TV monitoring. Additional TV monitoring is scheduled for FY12.
- Circulate 100 flyers dedicated to eliminating illicit discharges to the general public and/or targeted businesses.
 - The Town delivered information on car washing to businesses that allow carwash fundraisers. Such carwashes are discouraged in areas that discharge to stormwater inlets. See Attachment 7 for the guidance and application form.
 - See Attachment 7 for illicit discharge flyers that were circulated. 100 were distributed.

4. Construction Site Storm Water Runoff Control

- Maintain a consistent E&S Program in accordance with DCR.
 - The Town’s E&SC program is consistent with DCR standards. From July 1, 2010, through June 30, 2011, the town permitted the following land disturbing activities:

Year	Number of Land Disturbing Permits	Number of Agreements in Lieu of E&S Plan	Acres Disturbed
July 1, 2010 – June 30, 2011	9	24	22.07

5. Post-Construction Storm Water Management in New Development and Redevelopment

- Continue tracking existing BMPs and enforcing inspection requirements.
 - The Town continued to track and enforce BMP inspection and maintenance. From July 1, 2010 to June 30, 2011, the Town caused 20 BMP inspections to occur. See Attachment 8 for is a list of BMPs in the Town’s database. The list indicates which BMPs were inspected during the reporting period.

6. Pollution Prevention/Good Housekeeping for Municipal Operations

- Articles on stormwater pollution prevention in employee newsletter each quarter.
 - See articles referenced under Item 1 (Attachment 2).
- Complete construction of vehicle washing facility.
 - Construction of the vehicle washing facility was completed in March 2009.
- Implement program to keep records of the maintenance program activities at the Town Maintenance Facility.
 - See Attachment 9 for a summary of street sweeping
 - Other records kept for the Town Maintenance Facility are:
 - Waste oil disposal
 - Fuel leak detection system for both the gasoline tank and the diesel tank
 - Oil-Water Separator inspections, maintenance and pump out for truck washing facility
 - Sand Interceptor inspections, maintenance and pump out for truck washing facility.

7. Mechumps Creek TMDL for E. coli

- Evaluate ordinances, BMPs, programs, policies, plans, and procedures to determine their effectiveness in addressing the TMDL.
 - The following are provisions in the Town Ordinance that assist in addressing the TMDL:
 - ✓ Livestock may not run at large
 - ✓ Certain live stock is not allowed
 - ✓ Other livestock is allowed only with permit
 - ✓ There are requirements on cleaning stalls and pens

- ✓ Dogs are not allowed to run at large
 - ✓ Restrictions apply in Chesapeake Bay Protection Areas
 - ✓ Part of our MS4 ordinance address illicit discharges and cross connections.
 - ✓ Requirements for trash disposal and against littering
 - ✓ Nuisance ordinance addresses odors from putrescible materials, which may be a source of bacteria.
- BMPs:
 - ✓ The Town owns and operates one stormwater management facility south of the intersection on England Street and Hill Carter Parkway. This is a shallow marsh facility. According to research, removal efficiency for bacteria in such BMPs can be up to 90%.
 - ✓ The Town is preparing to install pervious pavers in the municipal parking lot on Railroad Avenue. We expect work to start by FY12-13.
 - ✓ The Town is preparing to install a rain garden on Hanover Avenue. Rain gardens have been shown to be up to 90% efficient in removing bacteria.
- Programs, policies, plans and procedures:
 - ✓ The Town has an education and promotion program for picking up after your pets. This includes TV slides, newsletter, educational signs, flyers, pet waste disposal stations, etc.
 - ✓ The Town meets quarterly with Hanover County Department of Public Utilities. During these meetings, the Town and County discuss sanitary sewer repairs and upgrades.
- Develop a schedule to implement procedures and strategies that address weaknesses, if any, in addressing TMDL.
 - The Town plans to update permits in FY11-12 for livestock to include procedures for disposal of animal waste.
- Continue public education program about picking up after pets.
 - See Attachment 1 for new flyers about picking up after your pet.
 - See Attachment 4 for TV slides about picking up after your pet.
 - The Town continues to maintain pet waste stations at the Town Hall, at the Hanover Arts and Activities Center, and at all the Town parks (one was added during reporting period).
 - Randolph-Macon College (R-MC) maintains two pet waste stations on campus.
- Perform reconnaissance for 15% of outfalls.
 - Performed reconnaissance of 15% of outfalls for dry weather monitoring. There was not discharge detected at the outfalls.
- Continue investigating sources of E. coli bacteria.
 - R-MC continues to collect and analyze samples on behalf of the Town. Samples were collected at four locations during the reporting period. Sampling results are tabulated in Attachment 10.
 - The Town installed one new manhole to facilitate TV monitoring of storm sewers during the reporting period. We intend to install 2 additional manholes in the next reporting period.

- Concentrations of e. Coli were consistently higher in the northern branch than the other sampling locations. Therefore, the Town intends to focus its investigation efforts for the next reporting period in the northern branch.
 - The sampling event which resulted in the highest e. Coli concentrations, was April 5, 2011. The sampling took place 2 days after a 1.18” rainfall. This implies pet waste runoff and exfiltration from sanitary sewers. The Town will continue to investigate these sources.
 - Estimate volume of stormwater and the quantity of E. coli discharged to Mechumps Creek.
 - A total of 40.11” of precipitation was recorded at the Town Hall during the reporting cycle. The drainage area to Mechumps Creek, which includes Slayden Creek and Mechumps Creek, is approximately 1,880 Acres. The estimated total precipitation over this area is 2.74×10^8 C.F. Runoff is estimated to be 45% of the precipitation. Therefore, approximately 1.23×10^8 C.F. of runoff entered Mechumps Creek. See Attachment 10.
 - Randolph-Macon College collected samples from the north, middle and south branches, and the main channel of Mechumps Creek during the reporting period. Note that this data was collected by students and the Town has no assurance that appropriate QA/QC protocol was followed. The concentrations from the sampling events were averaged. The approximated concentration of E. coli bacteria and the approximated runoff volume were used to calculate an approximated amount of E. coli bacteria entering Mechumps Creek: 6.28×10^{12} cfu for the reporting period, which is lower than the Total Maximum Daily Load (TMDL) of 3.08×10^{13} cfu/yr and a non-point source Load Allocation (LA) of 2.98×10^{13} cfu/yr. See Attachment 10.
 - Evaluate Town owned properties for potential sources of E. coli.
 - Town owned properties were evaluated. No apparent source of e. Coli was located.
 - Meet with Hanover County DPU to discuss potential sources of E. coli.
 - The Town and Hanover County DPU meet quarterly. During these meetings DPU and the Town discuss DPU’s continual work on sanitary sewer repairs and upgrades in the Town.
 - Update MS4 Program with new information on TMDL, if necessary.
 - No update to the MS4 permit was required for the reporting period.
- c. Results of information collected and analyzed, including monitoring data, if any, during the reporting period.

The information collected during this permit year includes:

- BMP Inspection (see Item 5 under section b)
 - Street Sweeping (see Item 6 under section b)
 - Maintenance Records (see Item 6 under section b)
- d. Summary of activities to undertake during the next reporting cycle:
- 200 flyers distributed.

- Articles on stormwater pollution prevention in On Track newsletter, which is distributed to residents and employees, each quarter.
 - Stormwater pollution prevention presentation for elementary school classes.
 - Continue to publicize the Mechumps Creek Restoration project. The Town will construct a recreational walking trail along the restored creek, which will enable us to continue public education on stream health and the effects of stormwater runoff on natural channels. The Town will continue to collaborate with R-MC in monitoring the restoration.
 - Air 4 seasonal slides on the Town's public television station.
 - Conduct at least one stream pick-up program.
 - Continue communication and collaboration with Randolph Macon College (R-MC) on various environmental projects.
 - Continue to collaborate with elementary schools on stormwater education programs.
 - Continue with implementation of program to detect illicit discharges using information in the storm sewer map, taking enforcement action as required.
 - Continue with implementation of program to investigate older storm sewer systems for cross connections and condition, making repairs as required.
 - Circulate 100 flyers dedicated to eliminating illicit discharges to the general public and/or targeted businesses.
 - Maintain a consistent E&S Program in accordance with DCR.
 - Continue tracking existing BMPs and enforcing inspection requirements.
 - Continue inspections and maintenance of vehicle washing facility.
 - Continue to keep records of the maintenance program activities at the Town Maintenance Facility.
- e. Changes from the BMPs proposed in the MS4 Program Plan dated December 7, 2008, and revised December 2010 are:
- The Mechumps Creek stream restoration project was completed this year.
 - Instead of discussing stormwater education programs with public schools, this is the second year Town staff has taught a section on stormwater pollution prevention to an elementary school class.
 - The vehicle washing facility had been completed in 2009.
 - The Town eliminated a separate employee newsletter. Employees now receive the same newsletters as the public.
- f. The Town of Ashland does not rely on another government entity to satisfy some of the permit obligations. However, Hanover County Department of Public Utilities manages the sanitary sewer in the Town, and collaborates with the Town on issues regarding sanitary sewer.
- g. Not applicable.
- h. Information required pursuant to Section I B 9 of the General Permit.
- The MS4 Program Plan was not updated during the reporting cycle, and there is no new information on the TMDL or WLA, which are shown in the following table. However,

the Town and Randolph-Macon College (R-MC) are continuing their effort to track the source of E. coli in Mechumps Creek. R-MC students collected wet and dry weather samples and tested for E. coli. The sample results implied that sanitary sewer inflow and infiltration (I & I) (also causing sanitary sewers to leak and allowing bacteria to enter the storm sewer) and pet waste may be a contributors to bacteria in storm sewers and surface water. Cross connections are not suspected.

The Town continues its storm sewer flushing and TV monitoring in suspected areas. Also, Hanover County Department of Public Utilities, which owns the sanitary sewer system in the Town of Ashland, has been actively working to eliminate I & I. An I & I elimination project in the Mechumps Creek watershed was performed during this reporting period.

The Town, in collaboration with R-MC, completed a stream restoration for the reach of Mechumps Creek between Cottage Green Drive and Hill Carter Parkway.

The Town and RM-C continue to provide bags at the Town parks, the R-MC campus and other locations for pet owners to pick up after their pets. Educational signs are in place at the bag dispensers to inform the public on the importance of picking up after pets.

Mechumps Creek TMDL for E. coli

Segment	Parameter	TMDL (cfu/yr)	WLA (cfu/yr)	LA (cfu/yr)	MOS
Mechumps Creek	E. Coli	3.16E+13	9.86E+11	3.06E+13	Implicit

- o A total of 40.11” of precipitation was recorded at the Town Hall during the reporting cycle. The drainage area to Mechumps Creek, which includes Slayden Creek and Mechumps Creek, is approximately 1,880 Acres. The estimated total precipitation over this area is 2.74×10^8 C.F. Runoff is estimated to be 45% of the precipitation. Therefore, 1.23×10^8 C.F. of runoff entered Mechumps Creek. Because the concentration of E. coli is so variable, it is difficult to quantify the amount of E. coli that entered Mechumps Creek.
- i. The following illicit discharges were identified during the reporting period:
 - o No illicit discharges were identified during the reporting period. The Town engaged in the following activities to minimize the possibility of illicit discharges:
 - The Town continues to team with R-MC to determine the source of E. coli bacteria in Mechumps Creek.
 - The Town developed a guidance document on car washing. The document states that it is illegal for anyone other than residents to discharge water from car washing to storm sewers, but it strongly discourages residents from doing so. It suggests appropriate locations and products to use to wash cars. This guidance document continues to be distributed to businesses that have been known to allow volunteer groups to conduct fund raiser carwashes. It is also available on the Town website.

- j. Regulated land-disturbing activity is addressed under Item 4 in section b of this report.
- k. All known permanent stormwater management facility data tracked under Section II B 5 b (6) may be viewed in Attachment 8. Two new BMPs were added to the list. However, one is not yet under construction.
- l. Two (2) new BMP maintenance agreements were executed during the reporting period. No BMP maintenance agreements were terminated during the reporting period.
- m. The Town of Ashland did not receive any written comments regarding the MS4 Program Plan.

Attachments: Copies of documents and samples of literature are attached as follows:

- o Attachment 1: Stormwater Pollution Education Flyers
- o Attachment 2: Stormwater articles from the On Track newsletter
- o Attachment 3: Stormwater Pollution Education material for children
- o Attachment 4: Stormwater TV Slides
- o Attachment 5: LID Educational material for Town Council
- o Attachment 6: Photos of Town Staff making presentation at Gandy Elementary School
- o Attachment 7: Material on Illicit Discharge
- o Attachment 8: Table of Stormwater Management Facilities
- o Attachment 9: Street Sweeping Data
- o Attachment 10: E. Coli Calculations for Mechumps Creek