



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

WILLIAM C.
MARTIN
VICE MAYOR

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COUNCIL MEMBER

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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

Attachments

**Attachment 1:
Stormwater Pollution
Education Flyers**



What You Can Do:

Always clean up after your pet and dispose of the waste in the trash in a sealed or tied plastic bag.

Flush your pet's waste down the toilet. The waste from your toilet goes to a septic system or wastewater treatment plant that removes pollutants before the water reaches streams, rivers or the Bay.



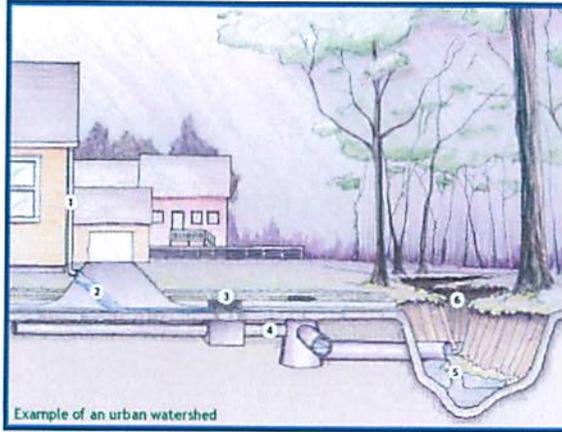
Encourage your neighbors and other pet owners to clean up - it's part of the responsibility of owning a pet.

What You Should Not Do:

Don't dispose of waste in a stormwater drain! These systems go directly to streams that drain to rivers and eventually the Chesapeake Bay.

Don't use pet waste as a fertilizer. The bacteria in pet waste does more harm than good.

Stormwater Run-off Problems



1 - Downspout 3 - Storm drain 5 - Untreated stormwater discharge
2 - Untreated runoff 4 - Sewer system 6 - Local stream

Run off - Run off is stormwater that flows over impervious surfaces such as rooftops, driveways, sidewalks, streets and to some extent over residential lawns. As it flows, it picks up oils, lawn chemicals, **pet waste** and other pollutants along the way.

Polluted stormwater runoff has been identified as a major cause of water quality problems in the Chesapeake Bay.

CLEAN WATER

THE CLEAR CHOICE

For more information contact:

Jenny Schöntag
804-798-9219

To report illegal dumping or a spill call

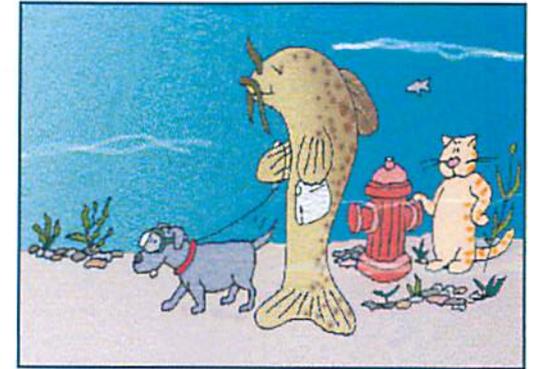
798-9219 or email:

CleanWater@town.ashland.va.us

Printed on recycled paper

CLEAN WATER

THE CLEAR CHOICE



Pet Waste and Water Quality



Town of Ashland

Department of Public Works

P.O. Box 1600
101 Thompson Street
Ashland, VA 23005

Phone: 804-798-9219
Fax: 804-798-4892



**Pet Waste
Pollutes Our
Watersheds!**

Pet waste left on the street or lawn does not just go away or fertilize the grass; the rain washes all that pet waste and bacteria into our storm drains and pollutes our streams!

Facts about Pet Waste & Water Quality

- There are approximately 5,000 dogs in Ashland.
- A dog population of 5,000 is estimated to contribute about 2,000 pounds of solid waste every day and has been identified as a major contributor of bacteria to the stream.
- Pet waste contains harmful bacteria such as *E. Coli* and fecal coliform. Waters that contain a high amount of bacteria such as *E. Coli* are unhealthy for human contact and wildlife. Did you know that a **single gram (0.035 ounces) of dog waste can contain 23 million fecal coliform bacteria?**
- In addition to bacteria, pet waste contains nitrogen and phosphorus, nutrients that can speed growth of algae and aquatic weeds which are harmful to streams, rivers and the **Chesapeake Bay**. Excess vegetation growth is unsightly, and it uses up the oxygen that fish and other aquatic life need to live.

Here are some easy steps for dealing with your pet's waste:

- **Always carry a plastic bag** when you walk your dog; re-using an old newspaper delivery bag or plastic grocery bag works well. To avoid unpleasant surprises, check the bag for holes before your pet's walk!
- Use the bag as a glove to pick up the pet waste. Turn the bag inside out around the waste, scoop it up, seal the bag, and **dispose of it in a trash can**. You can also flush un-bagged pet waste down the toilet.
- **Don't place bagged or un-bagged pet waste in storm drains (or ditches)!** Also, do not hose pet waste towards storm drains, as they drain directly to streams that drain to rivers and eventually to the Chesapeake Bay.
- If you have a large yard, **bury un-bagged pet waste** about 5 inches deep in the ground away from vegetable gardens and waterways. Do not add to compost piles, as compost piles may not get hot enough to kill disease-causing organisms.
- Remove waste from areas where children play or you garden.
- **Wash your hands** with warm, soapy water after dealing with pet waste!



Please help

**KEEP OUR
PARKS AND
OUR
STREAMS
CLEAN!**

**Pet Waste
Stations**
are located in
all Town
parks. Please
use them to

**PICK UP PET
WASTE!**



**Pets 'on-leash' are permitted at
all Town of Ashland parks:**

- **Carter Park**
- **DeJarnette Park**
- **Pufferbelly Park**
- **Railside Park**
- **S Taylor Street Park**
- **Stony Run Trail**

**Attachment 2: Stormwater
articles from the On Track
newsletter**

MORE EFFORTS TO CLEAN UP THE CHESAPEAKE BAY

After two decades of efforts, major portions of Chesapeake Bay and its tidal tributaries still do not meet the water quality goals set forth under the Clean Water Act, and are listed as impaired. The main pollutants causing these impairments are nitrogen, phosphorus, and sediment.

The six Chesapeake Bay Watershed States (Virginia, Maryland, Delaware, West Virginia, Pennsylvania, and New York) and the District of Columbia, and U.S. Environmental Protection Agency (EPA) agreed that a Total Maximum Daily Load (TMDL) needed to be developed. EPA assumed primary responsibility for establishing the Bay TMDL with assistance from the Bay watershed states. The establishment of TMDL was completed December 31, 2010.

The Chesapeake Bay TMDL addresses all segments of the Bay and its tidal tributaries that are impaired. It identifies a maximum total amount of pollutants that may be discharged to the Bay so that the Chesapeake Bay's water quality goals may be reached. This total watershed loading will be divided among the Bay states and major tributary basins, as well as by major source categories (wastewater, urban storm water, agriculture, air deposition).

Virginia has developed a preliminary or Phase I Watershed Implementation Plan (WIP), which is the state plan to meet the TMDL. It contains Virginia's overall pollution reduction strategy and broadly identifies how water quality standards will be met by 2025, and interim goals by 2017. The Phase II WIP, which will be developed in 2011, will describe pollution reduction strategies for localities, like Ashland. It will require that everyone in the community participate in reducing pollution to the Bay. For more information see <http://www.deq.state.va.us/tmdl/baywip.html> and <http://www.epa.gov/chesapeakebaytmdl> .

REDUCE POLLUTION FROM DOG/PET WASTE

Mechumps Creek has been deemed “impaired” by the Virginia Department of Environmental Quality due to excessive E. Coli bacteria. The Town of Ashland is working to reduce the E. Coli bacteria in the creek. A primary suspected source of the E. Coli is dog/pet waste. Pet waste left on the street or lawn does not just go away nor does it fertilize the grass. Rain washes all that pet waste and bacteria into storm drains, then it pollutes our streams, including Mechumps Creek.

Facts about Pet Waste & Water Quality

- Pet waste contains harmful bacteria such as E. Coli and Fecal Coliform. Waters that contain a high amount of bacteria such as E. Coli are unhealthy for human contact and wildlife. Did you know that a single gram (0.035 ounces) of dog waste can contain 23 million fecal coliform bacteria?
- In addition to bacteria, pet waste contains nitrogen and phosphorus nutrients that can speed growth of algae and aquatic weeds which are harmful to streams, rivers and the Chesapeake Bay. Excess vegetation growth is both unsightly and it uses up the oxygen that fish and other aquatic life need to live.

Here are some easy steps for dealing with your pet’s waste:

- Always carry a plastic bag when you walk your dog. Re-using an old newspaper delivery bag or plastic grocery bag works well. To avoid unpleasant surprises, check the bag for holes before your pet’s walk!
- Use the bag as a glove to pick up the pet waste. Turn the bag inside out around the waste, scoop it up, seal the bag, and dispose of it in a trash can. You can also flush un-bagged pet waste down the toilet.
- *Don't place bagged or un-bagged pet waste in storm drains (or ditches)!* Also, do not hose pet waste towards storm drains because they drain directly to streams.
- Remove waste from areas where children play or you garden.
- Wash your hands with warm, soapy water after dealing with pet waste!

Pet Waste Stations are located in all Town parks. Please use them to *PICK UP PET WASTE!*



MECHUMPS CREEK STREAM RESTORATION UPDATE

As you may recall, the Town of Ashland and the Environmental Studies Program at Randolph-Macon College (R-MC), with considerable help from Williamsburg Environmental Group (WEG), have been collaborating to perform a stream restoration for Mechumps Creek between Route 1 and Interstate 95. This section of the creek has been degraded by increased stormwater runoff due to the urbanization of Ashland over the past century. Remember, any developed surface sheds more water than a natural surface. In recent decades, environmental regulations have required that developed sites include means for managing stormwater runoff. However, much of the area that drains to Mechumps Creek was developed before such regulations were in place, and, as a result, it has undergone considerable erosion and degradation.

The stream restoration work between Cottage Greene Drive and Hill Carter Parkway began in September 2010, and was completed in November 2010. On December 4, 2010, volunteers, mostly from R-MC, but also from WEG and the Ashland community, planted more than 2,000 trees (live stakes and containerized plants) along the restored portion of creek.



Lorelei Holloway, age 6, plants trees.

There are two more sections of Mechumps Creek that are also eroded and degraded: (1) between Route 1 and Cottage Greene Drive, and (2) between Hill Carter Parkway and Interstate 95. WEG prepared designs for these sections as well. However, funding is not currently available for the implementation in these two sections. R-MC, WEG and the Town plan to apply for grants through the State of Virginia, the National Fish and Wildlife Federation (NFWF), and other sources to complete the remainder of the restoration work.

The stream restoration design was prepared by Williamsburg Environmental Group (WEG), which has offices in Richmond, Williamsburg, and other locations in Virginia. Visit <http://www.wegnet.com/index.htm> for more information about WEG. WEG donated a portion of their time to the design of this project, and volunteers from WEG helped with the tree planting. Thank you to everyone at WEG!

Environmental Quality Resources (EQR) implemented the design. EQR is a Baltimore, MD, company that specializes in stream restorations, wetland creation, and stormwater management. Visit <http://www.eqri.com/> for more information about EQR.

Preventing Stormwater Pollution (a series)

Routine Maintenance Needs for Stormwater Management BMPs

Routine maintenance will keep your BMP functioning properly and will pay off in the long run by preventing unnecessary repairs. In the last newsletter, we presented some items necessary for routine maintenance needs of most BMPs. The following are additional items you should incorporate as routine maintenance of BMPs.

EMBANKMENT AND OUTLET STABILIZATION

A stable embankment is important to ensure that erosion does not contribute to water quality problems and that embankments are not breached – resulting in downstream flooding. Maintaining a healthy vegetative cover and preventing the growth of deep-rooted (woody) vegetation on embankment areas is an important component of stabilization.

Animal burrows will also deteriorate the structural integrity of an embankment. Muskrats in particular will burrow tunnels up to 6 inches in diameter. Efforts should be made to control excessive animal burrowing, and existing burrows should be filled as soon as possible.

Outlet structures are particularly prone to undercutting and erosion. Unchecked, a small problem can easily result in the need to replace the entire structure. A professional engineer should be consulted if sink holes, cracking, wet areas around the outlet pipe, pipe displacement, or rusting of the pipe are observed.

DEBRIS AND LITTER CONTROL

Regular removal of debris and litter can be expected to help in the following areas:

- reduce the chance of clogging in outlet structures and trash racks;
- prevent damage to vegetated areas;
- reduce mosquito breeding habitats;
- maintain facility appearance; and,
- reduce conditions for excessive algae growth.

Special attention should be given to the removal of floating debris which can clog inlet and outlet devices. If trash or dumping is particularly problematic, outreach to the local community can help

MECHANICAL COMPONENTS

Some BMPs have mechanical components that need periodic attention: valves, sluice gates, pumps, anti-vortex devices, fence gates, locks, and access hatches. These should be functional at all times. This type of routine maintenance is best left to a BMP professional.

INSECT CONTROL

Mosquito and other insect breeding grounds can be created by ponded water. Though perceived as a significant nuisance, mosquitoes are not as big a problem as is often thought, and there are ways to address the issue. The best control technique is to ensure that stagnant pools of water do not develop. For BMPs that have a permanent pool of water, this means the prompt removal of floatable debris. It may also be possible in larger wet ponds to maintain a stock of fish that feed on mosquito larvae. The Virginia Department of Game and Inland Fisheries (<http://www.dgif.virginia.gov/>) can provide additional information on this management option.

The development of a mosquito problem, particularly in dry ponds, infiltration trenches, and rain gardens, is usually an early indication that there is a maintenance problem. In such cases, the infiltration capacity of the BMP needs to be increased or sediment needs to be removed.

ACCESS MAINTENANCE

Most BMPs are designed so that heavy equipment can safely and easily reach the facility for non-routine maintenance. Routine maintenance of these areas is particularly important since one never knows when

emergency access will be needed. Maintenance includes removal of woody vegetation and upkeep of gravel areas.

OVERALL POND MAINTENANCE

An often overlooked aspect of maintenance, especially for wet ponds, is the need to ensure a healthy aquatic ecosystem. A healthy ecosystem should require little maintenance. An indicator of an unhealthy system is excessive algae growth or the proliferation of a single species of plant in the permanent pool of a wet pond. This may be caused by excess nutrients from fertilization practices (of a landscape company or surrounding neighbors) or by excess sediment. Steps should be taken to reduce the nutrients at their source and to encourage the growth of more desirable aquatic and semi-aquatic vegetation in and around the permanent pool. The Department of Game and Inland Fisheries can provide additional information on overall pond maintenance practices of wet ponds.

Preventing Stormwater Pollution (a series)

Non-Routine Maintenance Needs for Your BMP

The non-routine maintenance needs of a BMP, while infrequent, can be major undertakings and should always be performed by a professional. While tasks will vary by facility, they typically include sediment/pollutant removal and replacement of BMP components.

SEDIMENT/POLLUTANT REMOVAL

Because the primary purpose of a BMP is to remove sediment and other pollutants (which are usually attached to sediment) from stormwater, sediment will naturally accumulate in a BMP and eventually need to be removed. Facilities vary so dramatically in terms of removal requirements that there are no fast “rules of thumb” to guide responsible parties. For instance, dry ponds should be cleared of sediment once a significant portion of the BMP volume (25-50%) has been filled. For wet ponds, a minimum water depth of approximately 3 feet is desirable. For sediment/pollutant removal needs of individual BMP types, contact your engineering consultant or see the Department of Conservation and Recreation website.

Sediment and pollutants will need to be discarded. The best solution is to have an onsite area or a site adjacent to the facility (outside a floodplain) set aside for sediment. When sediment is stored near the facility, it is important to protect the stockpile against erosion. If onsite disposal is not an option, transportation and landfill tipping fees can greatly increase sediment removal costs. Once the sediment is removed, the facility should be quickly restabilized, either through revegetation or, in the case of a sand filter, replacement of sand and other filter media if necessary.

Finally, wet sediment is more difficult and expensive to remove than dry sediment. In some cases, the entire facility can be drained and allowed to dry so that heavy equipment can remove sediment from the bottom. In other cases, it may be necessary to remove sediment from the shoreline or by hydraulic dredging from the surface. A permit may be required for removal and proper disposal of sediment.

BMP COMPONENTS REPLACEMENT

Eventually, like most infrastructure, actual BMP components will need to be replaced.

Components may include:

- inflow and outflow devices;
- trash racks and anti-vortex devices;
- valves, orifices, and aerators;
- concrete structures (such as the casing for a sand filter);
- pumps and switches;
- earthworks such as embankments and side slopes; and,
- mulches and vegetation.
-

While most BMPs will last for a long time with proper maintenance, a community or business should plan long in advance for replacing these facilities.

Mechumps Creek Stream Restoration Update

As you may recall, the Town of Ashland and Randolph-Macon College (R-MC) have been collaborating to perform a stream restoration for Mechumps Creek between Route 1 and Interstate 95. This section of the creek has been degraded by increased stormwater runoff due to the urbanization of Ashland over the past century. Remember, any developed surface sheds more water than a natural surface. In recent decades, environmental regulations have required that developed sites include means for managing stormwater runoff. However, much of the area that drains to Mechumps Creek was developed before such regulations were in place, and, as a result, it has undergone considerable erosion and degradation.

R-MC, taking the lead on this project, has contracted with Environmental Quality Resources (EQR) to implement measures that will restore eroded and degraded portion of the stream, as well as measures to protect the stream from further erosion and degradation. In addition to making Mechumps Creek more aesthetic, the restoration will create beneficial habitat for aquatic life, and reduce the transport of sediments downstream that is likely to make its way to the Chesapeake Bay. EQR is a Baltimore, MD, company that specializes in stream restorations, wetland creation, and stormwater management. Visit <http://www.eqri.com/> for more information about EQR.

The implementation work that is currently underway began the week of September 20, 2010, and will be completed in November 2010. It addresses the portion of Mechumps Creek between Cottager Greene Drive and Hill Carter Parkway. The stream restoration design was prepared by Williamsburg Environmental Group (WEG), which has offices in Richmond, Williamsburg, and other locations in Virginia. Visit <http://www.wegnet.com/index.htm> for more information about WEG.

There are two more sections of Mechumps Creek that are also eroded and degraded: between Route 1 and Cottage Greene Drive, and between Hill Carter Parkway and Interstate 95. WEG prepared designs for these sections as well. However, funding is not currently available for the implementation in these two sections. R-MC and the Town plan to apply for grants through the State of Virginia, the National Fish and Wildlife Federation (NFWF), and other sources to complete the remainder of the restoration work.

Preventing Stormwater Pollution (a series)

Routine Maintenance Needs for Stormwater Management BMPs

Routine maintenance will keep your BMP functioning properly and will pay off in the long run by preventing unnecessary repairs. The following is an overview of the common routine maintenance needs of most BMPs.

REGULAR INSPECTIONS

The Town of Ashland requires a particular schedule of inspections for your different types of BMP. In many instances, an annual or semi-annual inspection, depending on the facility, is required. It will also be necessary to conduct an inspection any time that the BMP's capacity has been surpassed. Some BMPs, such as sand filters, may require more frequent inspections. Additional information on carrying out inspections is provided in your BMP maintenance agreement.

VEGETATION MANAGEMENT

Most BMPs rely on vegetation to filter sediment from stormwater before it reaches the BMP and to prevent erosion of the banks and the bottom of the facility. Turf grass is the most common groundcover although many BMPs use woody vegetation (rain gardens) and wetland plants (wet ponds) to increase pollutant removal.

The following is a quick reference of ways to help your vegetation stay healthy.

Mowing. Most grass is hardiest if it is maintained as an upland meadow, cut no shorter than 6 to 8 inches. If a more manicured look is desired, special attention to the health of the turf is needed. Grass should never be cut below 4 inches. Grass on embankments should be cut at least twice during both growing seasons and once during the summer.

Pest and Weed Control. To reduce the amount of pollutants reaching the BMP, avoid over fertilization and excess pesticide use.

Removing Sediment Build-Up. Because vegetation surrounding a BMP is designed to trap sediment, it is likely to become laden with sediment and bare spots may emerge. Bare areas should be vigorously raked, backfilled if needed, and covered with top soil. Disturbed areas should be seeded (a tall fescue grass seed is recommended) and mulched. Excess material should be taken off-site and can be used as a mulch or soil supplement. If the soil becomes compacted, it will require aeration by a landscape company.

Unwanted Vegetation. Some vegetation is destructive to a BMP. Keeping dam and bottom areas free of deep-rooted vegetation (trees and bushes) is critical because roots can destabilize the structure. Consistent mowing and monitoring will control any unwanted vegetation.

No Mow Zones. For wet ponds, a 10 foot un-maintained vegetated buffer around the perimeter of the facility (exclusive of the dam embankment) may be established to filter

pollutants from adjacent properties and to help prevent shoreline erosion. Activities that have the potential to damage vegetation or compact the soil should be avoided. What may seem like a harmless activity (sports activities, inappropriate landscaping, etc.) could take years off the life of your facility. Before altering vegetation in a BMP, the Town of Ashland Department of Public Works.

**Attachment 3: Stormwater
Pollution Education
material for children**



FOR MORE INFORMATION
CONTACT

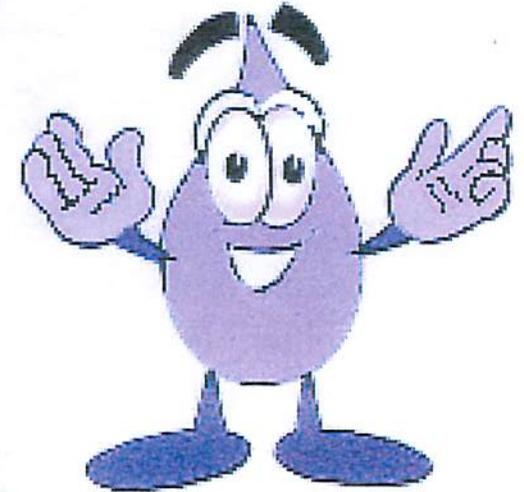
THE TOWN OF ASHLAND

(804) 798-9219

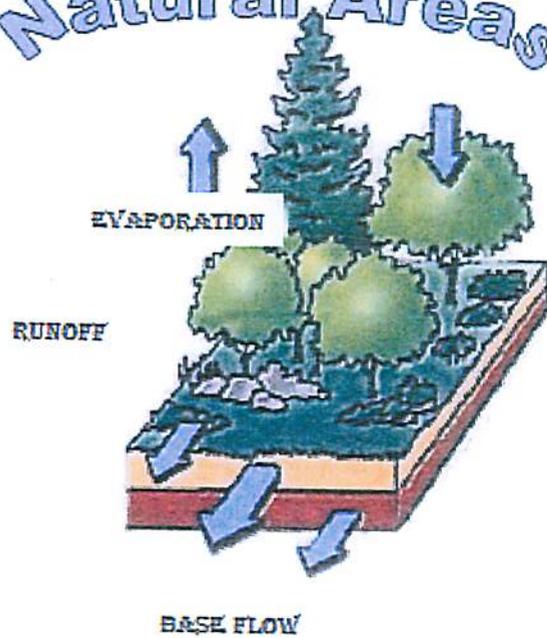
CLEANWATER@TOWN.ASHLAND.VA.US

OR VISIT US ONLINE:

WWW.TOWN.ASHLAND.VA.US

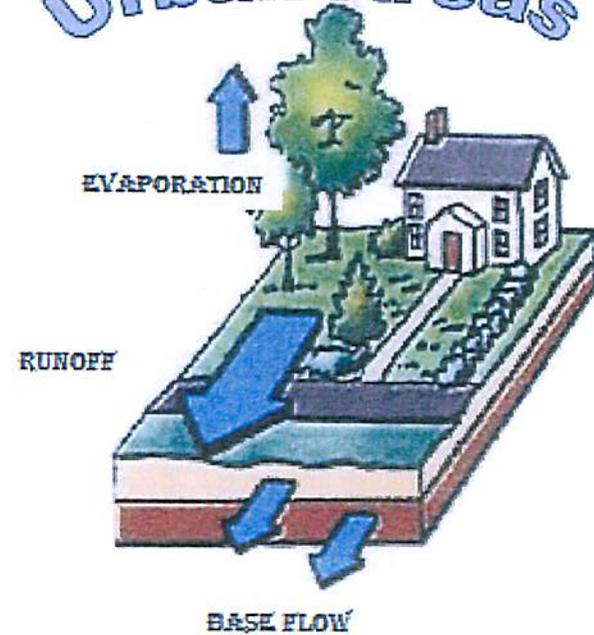


Natural Areas



When it rains in natural areas such as woods or meadows, rain drops are caught by leaves on trees and other plants. This water is either used by the plants, or it evaporates into the air after the rain stops. The rain drops that fall to the ground soak into the ground. When the ground is too wet to let any more water soak in, the water runs off into streams. On its way to the stream, the water flows around grass, tree trunks, other plants that grow on the ground, leaves on the ground, and rocks. So it takes water a long time to get to the stream.

Urban Areas



In urban areas such as towns or cities, there are buildings, streets, parking lots, sidewalks and other paved surfaces. Rain water cannot soak into these surfaces, so water runs off much more quickly and flows into the streams. There are fewer plants to catch raindrops, so even more water runs off and flows into streams.

When too much water flows into a stream, such as in an urban area, it can harm the stream. The banks become eroded.



The particles of soil that are eroded away are deposited downstream. The erosion and depositing of soil prevents a healthy mix of fish, insects and other stream animals



from living and growing in the stream.

Another problem in urban areas is that rainwater picks up pollutants from streets and lawns. These pollutants may be oil, grease or gasoline from cars, chemicals to melt ice on streets and sidewalks, and fertilizer and other chemicals used on lawns. These pollutants flow to streams and harm the health of stream life.



The pollutants and eroded soil particles in streams and rivers can also flow all the way to the Chesapeake Bay. We want to protect the Chesapeake Bay because it is an incredibly complex ecosystem, the largest of its type in the United States. The Bay and its rivers, wetlands and forests provide homes, food and protection for many different groups of animals and plants. Fish of all types and sizes either live in the Bay and its tributaries (streams and rivers that flow into it) year-round or visit its waters as they migrate along the East Coast.

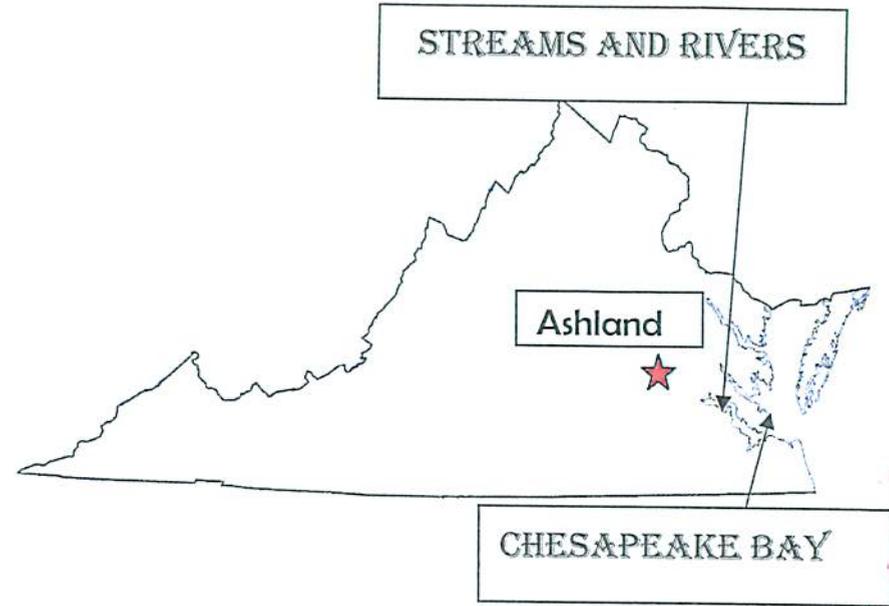
RAIN WATER ON
STREETS
FLOWS TO
STORM-
WATER
INLETS.



THE WATER FLOWS
THROUGH UNDERGROUND
PIPES AND
ENDS UP IN
STREAMS
AND RIVERS.



STREAMS AND RIVERS

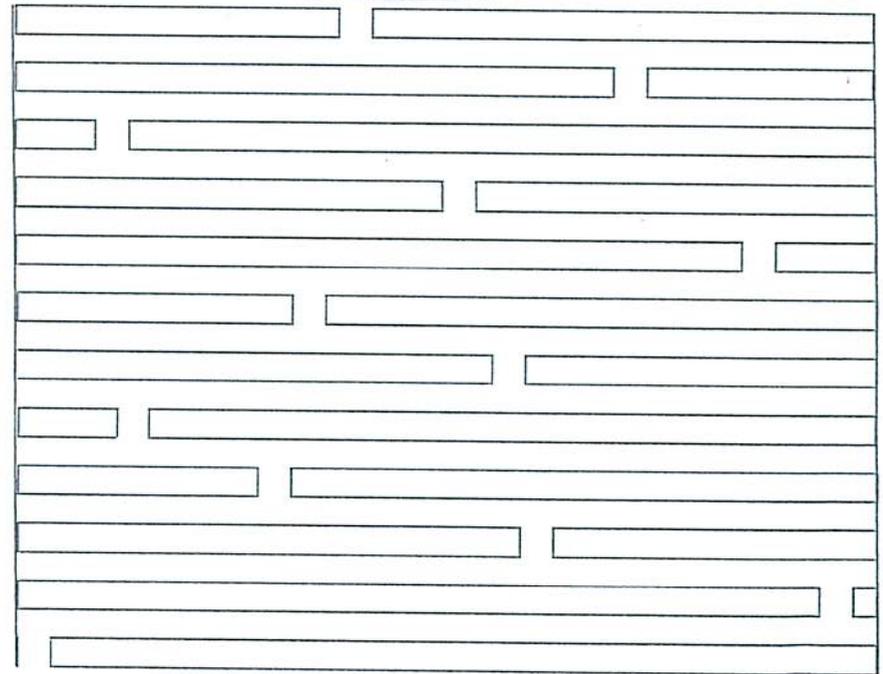


CHESAPEAKE BAY

THE WATER FLOWS IN STREAM AND RIVERS
TO THE CHESAPEAKE BAY

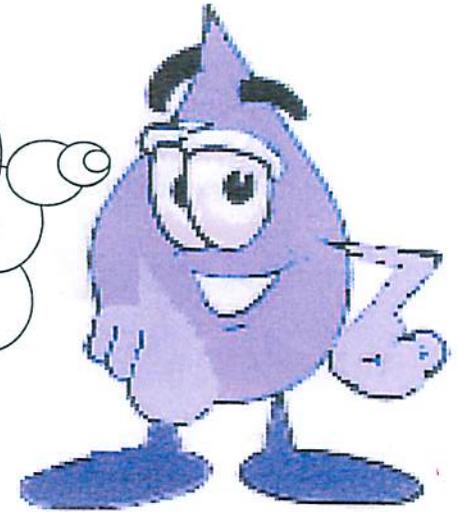
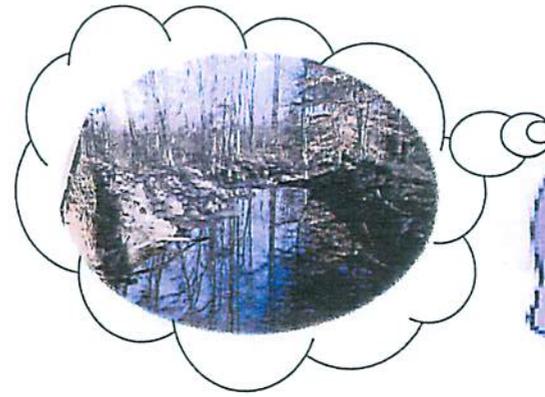


<p>1. A Rain Barrel collects rain water that falls on your roof. You can use the water later to water your garden or lawn.</p>	<p>2. A Rain Garden is a natural way to help with the water infiltrate (soak in) into the ground.</p>
<p>3. When you wash your car on pavement all the dirt, soap and other chemicals run off into streams. When you wash your car on grass or in the gravel, the water into the ground.</p>	
<p>4. NO LITTERING IS IMPORTANT BECAUSE THE LITTER CAN WASH INTO STORM INLETS AND END UP IN STREAMS.</p>	<p>5. When you use too much fertilizer and lawn chemicals, they can wash off during the rain and end up in streams, which flow to the Chesapeake Bay.</p>
<p>6. Storm water inlets Collect the rain water from the street. Then water flows into pipes and ends up in the local streams. <u>Don't put trash in storm water inlets!!</u></p>	









Fill in the blank

1. Rain Barrel
2. Rain Garden
3. Washing Car
4. No Littering
5. Fertilizer and lawn chemicals
6. Storm water inlets









Mach these words with
the right picture.



YOU CAN DO IT

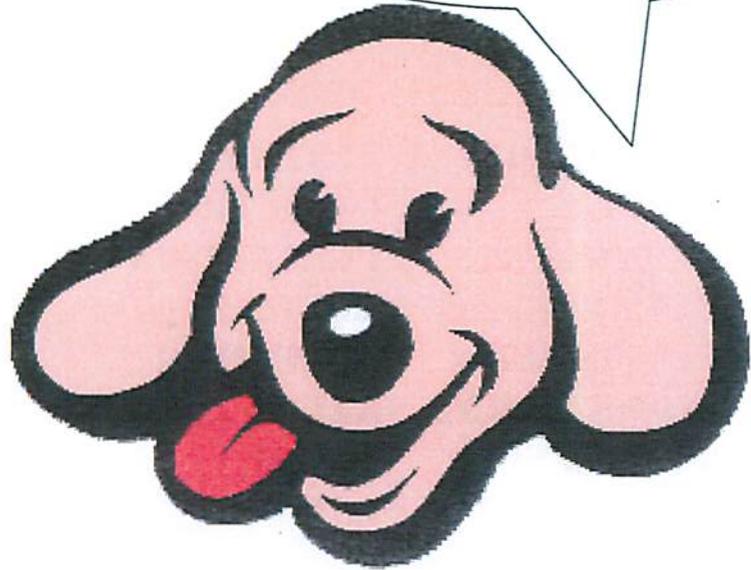
**POLLUTION
PREVENTION
WORD SEARCH**

h m b m e y f l o w s t o b a y
t o y d q n r e z i l i t r e f
q t e y p t v f g t y u i o k i
c o l l e c t i o n c e n t e r
n r t i s j t p r u k r a p d e
e o o t t b s s k o e d r m n t
e i x y i q w e o c n e h o w s
r l i h e s c n y p v m i a m a
g k c f i u u c o e m t e w q w
o d q r d a l o n d u o e n w o
g y z e e e z t d l u t c i t r
q n r u s u i w l r o m q d r e
u i e m q o s o b m a m p e u z
c j f g n y p e b x b z b i p f
w a t e r s h e d r w l a z n o
r u n o f f y r u c r e m h s g

- | | |
|---------------------|-------------------|
| COLLECTION | PESTICIDES |
| CENTER | POLLUTION |
| COMPOST | PREVENTION |
| ENVIRONMENT | RECYCLE |
| FERTILIZER | REDUCE |
| FLOWS TO BAY | REUSE |
| GO GREEN | RUNOFF |
| HAZARDOUS | TOXIC |
| MERCURY | WATERSHED |
| MOTOR OIL | ZERO WASTE |
| NO DUMPING | |

Find the listed words in the diagram. They will run in all directions:

DON'T BE IN THE
DOG HOUSE
KEEP OUR STREAMS



*When you pick
up after your pet,
it keeps bacteria
out of our streams*



Attachment 4: Stormwater TV Slides

Town of Ashland



Channel 17

**When it rains in
Ashland....**



...where does the water
go???



An aerial photograph showing a large watershed area with a river flowing into the Chesapeake Bay. The land is a mix of green forest and brownish urban or agricultural areas. The water in the bay is a deep blue.

**ALL our stormwater drains
to the Chesapeake Bay!**

REMEMBER:

Only **RAIN**
down the
DRAIN!



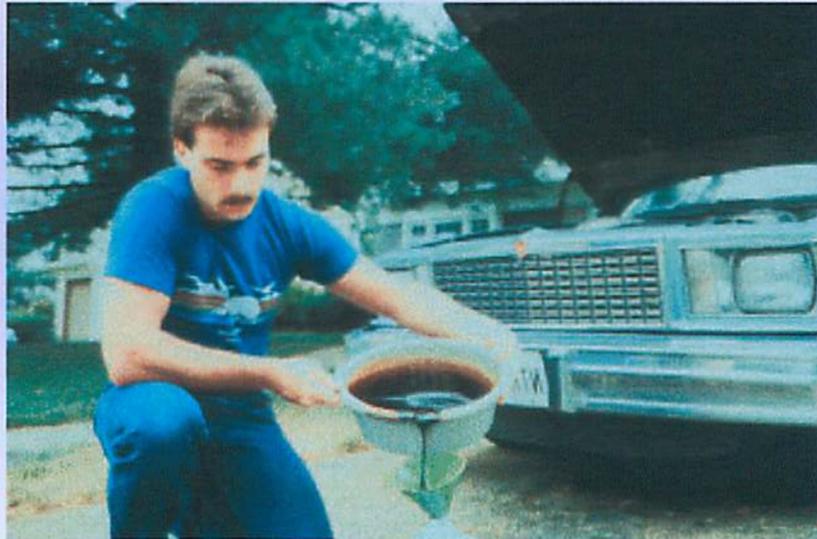
Do not use
fertilizer to melt
ice and snow

The nitrogen and phosphorus in fertilizer can harm your local streams and the Chesapeake Bay.

Questions? Call Town Hall at
798-9219 or e-mail
CleanWater@town.ashland.va.us

Dispose of your unwanted household chemicals properly.
DO NOT POUR THEM DOWN DRAINS!

Dispose of Household Hazardous Waste Properly!



For information contact the Town of Ashland at 798-9219

Or go to www.cvwma.com/local_info/hanover.wbp

For local solid waste collection sites.

Protect our Streams
Scoop the Poop!

IT'S NOT JUST A COURTESY

Rainwater drains into Ashland's streams washing everything with it.

Scoop the poop and keep our streams clean and healthy.

You can find bag dispensers
at these locations:



- Carter Park
- DeJarnette Park
- Pufferbelly Park
- Railside Park
- Stony Run Trail

Protect our Streams
Scoop the Poop!

**Attachment 5: LID
Educational material for
Town Council**

Low Impact Development Options

June 2011



Town of Ashland

Permeable Pavers



Permeable pavers can be used to replace asphalt pavement in parking lots. In a parking, such as the one shown, stormwater is allowed to infiltrate into the ground so there is less runoff. Less runoff means a lower impact on stream (e.g., erosion, sedimentation, bank under cutting, etc.).



Also, stormwater washes contaminants from paved surfaces and fertilized lawns, and carries them to stream. So less runoff also means less contamination to streams...streams drain to rivers, rivers drain to the Chesapeake Bay.

Rain Gardens



It is best to plant native vegetation, which requires little or no maintenance, in rain gardens. Native plants also do not need fertilizer, have a solid root system, and thrive better than non native species as they utilize nutrients and water better in soil.



Recommended Trees, Plants and Groundcover for Rain Gardens

Trees

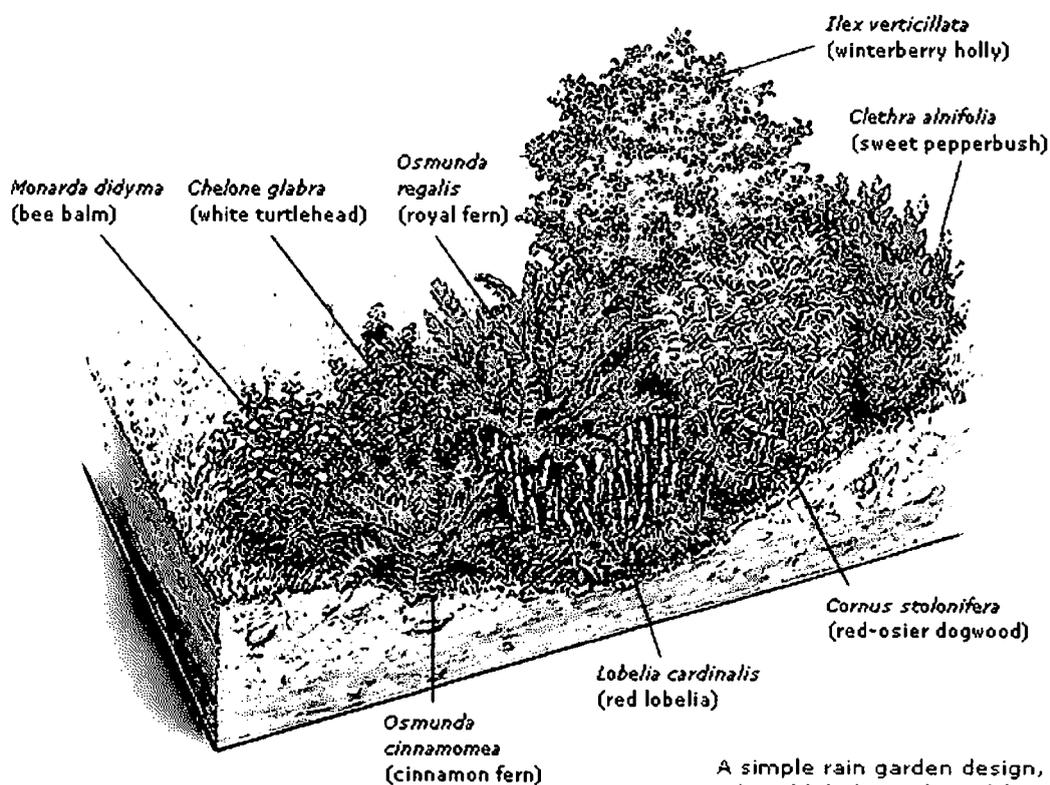
Common Name	Botanical Name
Red Maple	<i>Acer rubrum</i>
Water Locust	<i>Gleditsia aquatic</i>
Black Gum	<i>Nyssa sylvatica</i>
Sycamore	<i>Platanus occidentalis</i>
Bald Cypress	<i>Taxodium distichum</i>
Scarlet Oak	<i>Quercus coccinea</i>
Sweetgum	<i>Liquidambar styraciflua</i>
River Birch	<i>Betula nigra</i>
Pin Oak	<i>Quercus palustris</i>
Green Ash	<i>Fraxinus pennsylvanica</i>

Groundcover

Common Name	Botanical Name
Virginia Wild Rye	<i>Elymus virginicus</i>
Switchgrass	<i>Panicum virgatum</i>
Little Bluestem	<i>Schizachyrium scoparium</i>
Fox Sedge	<i>Carex vulpinoidea</i>
Tussock Sedge	<i>Carex stricta</i>
Bottlebrush Grass	<i>Hystrix patula</i>
River oats	<i>Uniola latifolia</i>
Palm Sedge	<i>Carex muskingumensis</i>
Gray's Sedge	<i>Carex grayii</i>
Slender Path Rush	<i>Juncus tenuis</i>

Shrubs

Common Name	Botanical Name
Silky Dogwood	<i>Comus amomum</i>
Buttonbush	<i>Cephalanthus occidentalis</i>
Sweet Pepperbush	<i>Clethra alrifolia</i>
Swamp Azalea	<i>Rhododendron viscosum</i>
Elderberry	<i>Sambucus canadensis</i>
Spice Bush	<i>Lindera benzoin</i>
Fetterbush	<i>Lyonia lucida</i>
Bayberry	<i>Morella pensylvanica</i>
Inkberry Holly	<i>Ilex glabra</i>
Virginia Sweetspire	<i>Itea virginica</i>



A simple rain garden design, with red lobelia and royal fern occupying the lowest, wettest zone.



Maintenance of a rain garden is fairly simple:

- Clear of dead vegetation, pet waste, and debris.
- Water needs are minimal but should be done right after planting, during the first growing season, and during any droughts.
- If a plant does not look like its thriving, relocate to a wetter or dryer place in the rain garden.
- Mulching is essential! It helps rain water to infiltrate, protects plants, and makes weeding easier. A rain garden should be re-mulched approximately 2-3 inches every spring.
- To keep rain gardens looking healthy and clean, pruning and weeding is necessary.



Although rain gardens act as filtration systems for rainwater runoff they do not have standing water for long periods of time. The rain garden drains typically within a 48 hour period. Therefore, there is little concern with regard to mosquito breeding.



Rain gardens significantly reduce stormwater runoff volumes and improve storm water quality. It has been reported that approximately 70% of pollution in surface waters may be attributed to stormwater runoff; therefore, rain gardens may significantly reduce water pollution.



Rain gardens reduce runoff volumes and improve storm water quality, and can be aesthetic, too.

**Attachment 6: Photos of
Town Staff making
presentation at Gandy
Elementary School**





Attachment 7: Material on Illicit Discharge

Illicit Discharge-

What you don't know can hurt you...
and the environment!

An illicit discharge is anything that goes down the storm drain that is not storm water.

Some discharges are considered cleaner, such as tap water from leaking water pipes and irrigation, groundwater and spring water.

Other discharges are more dangerous, such as wash water from laundry, car or shop floor cleaning, sewage from pipes and septic systems, and liquid wastes such as oil, paint, and any automotive fluids.

Illicit discharges may be intentional or unintentional. Intentional dumping of waste into storm drains by a business or/and individual has legal consequences, as local, state, and federal laws protect the streams and water bodies into which they flow.

Unintentional illicit discharges occur daily, because many people do not realize the ways in which their daily activities contribute to the polluting of our waters. Soapy water from car washing, pet feces that are not picked up, waste water from household appliances that drain directly to the outside, pesticide and fertilizer use, and improper disposal of motor oil and paint are some of the ways in which an individual may unwittingly be damaging our ecosystem.

Other illicit discharges occur when sewer pipes are connected directly to storm water pipes, or when sewer pipes or septic systems leak.

FOR MORE INFORMATION
CONTACT

THE TOWN OF ASHLAND:
(804) 798-9219

CleanWater@town.ashland.va.us

OR VISIT US ONLINE:

www.town.ashland.va.us



03/08

printed on recycled paper

ONLY RAIN
DOWN
THE DRAIN!



- WHAT DOES IT MEAN?
- WHY SHOULD I CARE?
- WHAT CAN I DO?

**ILLICIT DISCHARGE AND
WATERSHED PROTECTION**

*Because today's actions
affect tomorrow's world*

What does it mean?

ONLY RAIN DOWN THE DRAIN!

No, we are not talking about the sink or bathtub drain, so what ARE we talking about?



STORM WATER DRAINS!

These can be open channels or enclosed pipes that rain water flows into whenever there is a storm. They take the water running off of roadways and property to help prevent or minimize flooding or standing water. This water flows into nearby rivers and streams, and eventually into the Chesapeake Bay.



ONLY RAIN!

Because the water flowing into a storm water drain does not pass through a treatment plant before discharging into rivers and streams, it is important that the water be as clean as possible and not contaminated with pollutants such as sewage, oil, paint, and other chemicals.



Why should I care?

TO PROTECT OUR LOCAL STREAMS AND RIVERS-

Local waters that we enjoy every day for fishing, swimming, and boating receive our storm water runoff, along with anything else that washes down the storm drain. Creeks and Rivers such as the James, South Anna, Stoney Run, Lickinghole, and Mechumps are dependent upon us to ensure that the water flowing into them remains clean.

TO PROTECT THE CHESAPEAKE BAY-

All of the storm water that flows down our streams and rivers ends up in the Chesapeake Bay, which is used constantly for fishing (both commercial and private) and public enjoyment. When polluted storm water enters the bay via the rivers, it dumps lots of things that we certainly wouldn't want to swim in, much less have the food that we consume swim in! Pollutants such as heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria can threaten aquatic, wildlife, and human health. If you've ever had a fish tank, just think of what would happen if you dumped these contaminants into your aquarium – not good!

BECAUSE THERE ARE LAWS-

Laws protecting our waters ensure that those who contribute to their pollution will face legal consequences if caught.

What can I do?

THERE ARE MANY WAYS THAT YOU CAN HELP KEEP OUR WATER CLEAN:

When washing a car or other vehicle, do the work on the lawn instead of the driveway. Not only will the ground become a natural filter for the soapy water, but you will be watering your grass at the same time! Taking your automobile to a car wash center also prevents illicit discharge because the water drains into sewer pipes instead.

If you have a dog, be sure to pick up fecal matter in your yard or when walking your dog and dispose of it either in the trash or toilet. Feces left behind can be swept down the drain in the next storm and can contain harmful bacteria and viruses that would contaminate water supplies.

Limit pesticide and fertilizer use in your yard. Find out what plants thrive best in your area, reducing the need for chemicals. Look into the ever-increasing ways that you can care for your lawn and garden naturally. Not only will you be keeping chemicals out of the water, but you will have a naturally healthier lawn and garden that requires less care!

Be mindful of automotive fluids. When changing the oil or other fluids in a vehicle, take the used fluids to a location that accepts such materials for recycling or proper disposal. If you are unsure as to where to take waste fluids, contact the Town of Ashland for area locations. Check your vehicle regularly for leaks as well, as fluids leaking onto roadways are washed down the drain with every rainfall.



Town of Ashland

Center of the Universe

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ASHLAND, VIRGINIA 23005-4600

TELEPHONE (804) 798-9219
FAX (804) 798-4892

Vehicle Washing Guidelines Phase II (MS4) Stormwater Program Town of Ashland

Water from vehicle washing can make its way across a hard surfaced parking lot and enter the storm drainage system. From there, wash water may enter our creeks and streams potentially harming fish and other aquatic life, and make its way to rivers and, eventually, the Chesapeake Bay. Water from vehicle washing may contain contaminants such as nutrients and hydrocarbons and should not discharge to the storm drainage system, creeks or streams.

According to State Regulations and the Town of Ashland's Municipal Separate Storm Sewer System (MS-4) Management Program Ordinance, only individual residents washing cars may discharge wash water to storm sewers (although it is discouraged). All others discharging from vehicle washing activities to storm sewer are in violation of the Town ordinance.

Areas for Vehicle Washing

The following are recommendations for anyone washing vehicles:

- Use a commercial car wash where wastewater is properly treated.
- Wash vehicles in an area designed for vehicle washing where the water is discharged to the sanitary sewer system for treatment. Or collect wash water for proper disposal later.
 - If vehicle washing will be done outside, designate an area for on-site vehicle washing that discharges to gravel, grass, or other permeable surfaces that allows water to infiltrate (i.e., *no* discharge of wash water from the site).
 - Use hoses with nozzles that automatically turn off when left unattended.
 - Spills of wash water, cleaning products or other fluids should be immediately contained and treated or removed.

Cleaning Products

- Use products labeled "non-toxic," "phosphate free," and "biodegradable." These products can be purchased at most large retail outlets. Note that even biodegradable and nontoxic soaps can be harmful to aquatic life and water quality, and must be kept out of the storm drain system.
 - Do not use acid-based wheel cleaners or engine degreasers unless the waste can be properly disposed of.
 - Reduce the amount of soap used by using a bucket of soapy water to re-soap rags or sponges rather than adding more soap directly to rags or sponges.

Revised 5/27/11

S:\PUBWKS\Storm Water Phase II\illicit discharge\Car Washing\Car Washing Guidance.doc

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PRICHARD
MAYOR

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VICE MAYOR

TERRI
WINSTON-ABRI
COUNCIL MEMBER

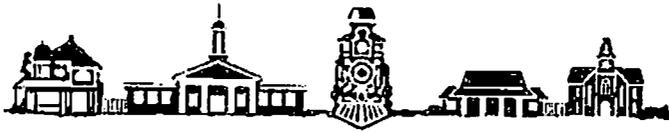
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TOWN MANAGER

ANDREA E.
ERARD
TOWN ATTORNEY

LOIS A. SMITH
CLERK OF COUNCIL



TOWN OF ASHLAND
101 THOMPSON STREET / P.O. BOX 1600
ASHLAND, VIRGINIA 23005

Car Wash Application

Contact Jennifer Schöntag at 804-798-9219

Name of Group: _____

Contact Person: _____

Phone: _____ **E-mail:** _____

Car Wash Event Date/Time: _____

Car Wash Event Location (*see "Areas for Vehicle Washing" below*): _____

Cleaning Products to be Used (*see "Cleaning Products" below*): _____

Areas for Vehicle Washing

- Use a commercial car wash where wastewater is properly treated.
- Wash vehicles in an area designed for vehicle washing where the water is discharged to the sanitary sewer system for treatment. Or collect wash water for proper disposal (in sanitary sewer or recycled) later.
- **For fund raiser/non-profit car wash events only:** If vehicle washing will be done outside, designate an area for on-site vehicle washing that discharges to gravel, grass, or other permeable surfaces that allows water to infiltrate (i.e., no discharge of wash water from the site).
- Use hoses with nozzles that automatically turn off when left unattended.
- Spills of wash water, cleaning products or other fluids should be immediately contained and treated or removed.

Cleaning Products

- Use products labeled "non-toxic," "phosphate free," and "biodegradable." These products can be purchased at most large retail outlets. Note that even biodegradable and nontoxic soaps can be harmful to aquatic life and water quality, and must be kept out of the storm drain system.
- Do not use acid-based wheel cleaners or engine degreasers unless the waste can be properly disposed of.
- Reduce the amount of soap used by using a bucket of soapy water to re-soap rags or sponges rather than adding more soap directly to rags or sponges.

For Town of Ashland Use

Approved By: _____
(name and title of approving authority)

Date: _____

Attachment 8: Table of Stormwater Management Facilities

Town of Ashland, Permit No. VAR040011
Storm Water Management Facilities
Permit Year 3, FY 2010-2011

Site Name	BMP Type	Drainage Basin *	HUC Code	Treated Area (ac.)	Interval Inspections	Inspected in FY10-11	Date Agreement Signed	Date Site Accepted
Ashland Christian Center	Detention Basin	Falling Creek	Y011	9	3		1/13/2006	1/13/2006
Ashland Christian Church	Infiltration Trench	Mechumps Creek	Y027	0.5	3	Yes	3/31/2003	3/31/2003
Ashland Junction Shopping Center	Detention Basin	Mechumps Creek	Y027	4.03	3	Yes	1/27/1989	1/27/1989
Ashland Simply Storage	Detention Basin	Mechumps Creek	Y027	6.46	3		9/13/1999	9/13/1999
Autozone	Manufactured BMP System	Mechumps Creek	Y027	0.9	3	Yes	11/13/2001	11/13/2001
Berkley Woods Subdivision	Retention Basin	Falling Creek	Y011	10.5	3	Yes	8/2/2005	8/1/2006
Blair Manor	Filtrerra	Mechumps Creek	Y027	1.01	3		11/24/2004	2/2/2006
Cracker Barrel	Detention Basin	Mechumps Creek	Y027	4.6	3	Yes	4/5/1995	4/5/1995
East Coast Car Wash	Detention Basin	Mechumps Creek	Y027	2.35	3	Yes	3/19/1999	3/19/1999
First Baptist Church - Ashland	Retention Basin	Stony Run	JL17	6.75	3		3/8/2005	5/20/2008
First Capital Bank	Filtrerra	Mechumps Creek	Y027	0.85	3		1/26/2005	2/2/2006
Fleetwood Homes	Retention Basin	Lickinghole Creek	JL17	2.97	3		4/21/1999	4/21/1999
Hampton Inn	Detention Basin	Mechumps Creek	Y027	0.41	3		6/1/1998	6/1/1998
Hanover Business Center	Retention Basin	Lickinghole Creek	JL17	10.9	3	Yes	7/25/2007	12/20/2007
Hanover Manor	Detention Basin	Falling Creek	Y011	2.3	3	Yes	4/2/1992	4/2/1992
Holiday Inn	Sand Filter	Mechumps Creek	Y027	2.2	3	Yes	4/28/2003	4/28/2003
McDonalds 103 South Carter	Filtrerra	Mechumps Creek	Y027	1.87	1	Yes	9/8/2006	9/8/2006
Saint Ann's Catholic Church Parking Lot Addition	Filtrerra	Stony Run	JL17	0.45	3		4/19/2006	4/19/2006
Sleep Inn Hotel	Sand Filter	Mechumps Creek	Y027	1.59	3	Yes	2/3/2003	2/3/2003
Tower Optometry	Filtrerra	Mechumps Creek	Y027	1	3		5/28/2004	5/28/2004
North Macon Terrace, Section 1	Retention Basin	Falling Creek	Y011	12	3	Yes	9/13/1999	9/13/1999
Maple Street Subdivision	Retention Basin	Stony Run	JL17	10.753	3		5/7/2007	4/23/2009
Sheehy AutoGroup Center	Filtrerra	Lickinghole Creek	JL17	2.08	1		3/20/2007	Under Const.
Commercial Plaster and Drywall	Filtrerra	Lickinghole Creek	JL17	1.24	1		1/11/2007	1/21/2008
Hanson Block Plant	Retention Basin	Stony Run	JL17	9.7	3	Yes	5/18/2007	6/30/2008
Ashland Business Park	Retention Basin	Mechumps Creek	Y027	2.22	3		11/10/1988	11/10/1988
Whittaker Warehouse	Sand Filter	Slayden Creek	Y011	5.181	3	Yes	12/17/2007	4/7/2008
Myrtle Street Commons	Sand Filter	Mechumps Creek	Y027	0.97	3		11/1/1996	11/1/1996
Ashland Gardens	Retention Basin	Mechumps Creek	Y027	3.4	3	Yes	7/25/2007	12/6/2007
Ruby Tuesday	Detention Basin	Mechumps Creek	Y027	2.9	3	Yes	7/25/2007	3/24/2008
The Shoppes at Tompkins Green	Filtrerra	Mechumps Creek	Y027	1.732	1	Yes	2/23/2007	11/4/2008
Ashland Woods, Phase 1	Retention Basin	Mechumps Creek	Y027	15.9	3		12/21/1998	12/21/1998
Ashland Church of God	Detention Basin	Mechumps Creek	Y027	1.78	3			6/14/2002
Amerilube	Filtrerra	Mechumps Creek	Y027	1.47	3		10/7/2007	7/31/2008
Meineke Car Care	Detention Basin	Mechumps Creek	Y027	0.98	3		2/29/2008	8/25/2008
Hanover Fire-EMS Station #1	Detention Basin	Falling Creek	Y011	1.38	3		3/20/2008	9/8/2009
Everhart Building	BioFiltration	Mechumps Creek	Y027	0.183	3		4/7/2008	11/5/2009
Melvin T. Morgan Roofing	Detention Basin	Lickinghole Creek	JL17	2.32	3		4/4/2008	7/29/2008
Century Concrete	Retention Basin	Mechumps Creek	Y027	1.46	3		5/8/2008	11/20/2008

Town of Ashland, Permit No. VAR040011
Storm Water Management Facilities
Permit Year 3, FY 2010-2011

Site Name	BMP Type	Drainage Basin *	HUC Code	Treated Area (ac.)	Interval Inspections	Inspected in FY10-11	Date Agreement Signed	Date Site Accepted
Ashland Ford (Sheehy)	Detention Basin	Stony Run	JL17	6.35	3			9/14/1995
Cottage Greene Condominiums	BioFiltration	Mechumps Creek	Y027	7.55	3		4/17/2008	Under Const.
RMC Tennis Courts	BioFiltration	Mechumps Creek	Y027	15.55	3	Yes	5/5/2010	3/29/2011
Chenault Veterinary	Detention Basin	Lickinghole Creek	JL17	9.48	3	Yes	10/5/2009	5/17/2011
YMCA	Detention Basin	Stony Run	JL17	3.45	3	Yes	5/22/2009	11/23/2010
Carter's Hill Subdivision (Transferred to HOA)	Detention Basin	Falling Creek	Y011	11.9	3		8/2/2010	Under Const.
Heartland Subdivision	Biofiltration	Falling Creek	Y011	2	3		6/21/2010	Under Const.
RMC Soccer Restroom Facility	Detention Basin	Falling Creek	Y011	1.21	3		7/7/2010	Completed, not accepted
Ashland Towne Square Parking Lot Renovations	BioFiltration	Mechump's Creek	Y027	1.4	3		7/12/2010	Not yet begun

*Mechumps Creek is the only "Impaired Water" in the Town of Ashland

Attachment 9: Street Sweeping Data

Town of Ashland Street Sweeping FY 09-10			Town of Ashland Street Sweeping FY 10-11		
Month	Month Total Miles	Month Total Vol. (c.y.)	Month	Month Total Miles	Month Total Vol. (c.y.)
Jul-09	114	57	Jul-10	77	38
Aug-09	19	11	Aug-10	177	70
Sep-09	11	15	Sep-10	131	71
Oct-09	32	25	Oct-10	124	78
Nov-09			Nov-10	164	69
Dec-09			Dec-10		
Jan-10			Jan-11		
Feb-10			Feb-11		
Mar-10	133	71	Mar-11		
Apr-10	273	97	Apr-11		
May-10	211	72	May-11	17	23
Jun-10	165	65	Jun-11	135	99
Totals	958	412	Totals	825	447

**Attachment 10: E. Coli
Calculations for Mechumps
Creek**

Town of Ashland MS4 Report July 1, 2010 - June 30, 2011

Approximated E. coli into Mechumps Creek

Item	Quantity	Units	Notes
Runoff	40.11	inches	July 1, 2009 - June 30, 2010
Mechumps Creek Watershed	1,880	acres	
Total Precipitation Volume	2.74E+08	cubic feet	
Runoff Volume - 45% of precip.	1.23E+08	cubic feet	
E. Coli Concentrations			Ave. See Below
North Branch	1140	cfu/100 ml	
Middle Branch	312.5	cfu/100 ml	
South Branch	1060	cfu/100 ml	
Main Channel	180	cfu/100 ml	
Average	673.13	cfu/100 ml	
Approx E. coli to Creek	6.28E+12	cfu	

North Branch/Dates:	Quantity	Units
February 24, 2011	400	cfu/100 ml
March 17, 2011	1050	cfu/100 ml
March 30, 2011	1050	cfu/100 ml
March 31, 2011	750	cfu/100 ml
April 5, 2011	2450	cfu/100 ml
average	1140	cfu/100 ml

Middle Branch/Dates:	Quantity	Units
September 20, 2010	375	cfu/100 ml
February 24, 2011	200	cfu/100 ml
March 17, 2011	150	cfu/100 ml
March 30, 2011	50	cfu/100 ml
March 31, 2011	0	cfu/100 ml
April 5, 2011	1100	cfu/100 ml
average	312.5	cfu/100 ml

South Branch/Dates:	Quantity	Units
February 24, 2011	0	cfu/100 ml
March 17, 2011	50	cfu/100 ml
March 30, 2011	0	cfu/100 ml
March 31, 2011	100	cfu/100 ml
April 5, 2011	5150	cfu/100 ml
average	1060	cfu/100 ml

Main Channel/Dates	Quantity	Units
February 24, 2011	50	cfu/100 ml
March 17, 2011	550	cfu/100 ml
March 30, 2011	0	cfu/100 ml
March 31, 2011	150	cfu/100 ml
April 5, 2011	150	cfu/100 ml
average	180	cfu/100 ml