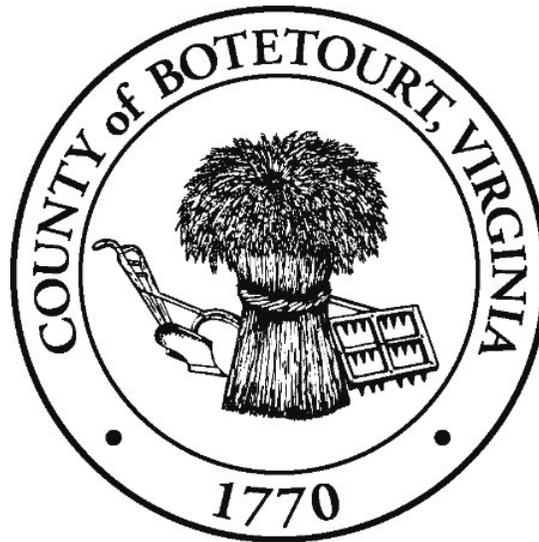


Virginia Stormwater Management Program  
Phase II Annual Report

VSMP Permit # VAR040023

Year 4 (2012)



Botetourt County Public Works

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**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."

Print Name: Kathleen O Gazi Title: County Administrator  
Signature: Kathleen O Gazi Date: 10/11/12

**For Department of Conservation and Recreation Use Only**

Accepted/Not Accepted by: \_\_\_\_\_ Date: \_\_\_\_\_

Basin \_\_\_\_\_ Stream Class \_\_\_\_\_ Section \_\_\_\_\_ Special Standards \_\_\_\_\_

### **History of the Program**

In compliance with Federal and State Stormwater Quality regulations as outlined in the Federal Clean Water Act (CFR 40) and the State of Virginia regulation (9 VAC 25-750-10 et seq. - General Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation For Discharges Of Stormwater From Small Municipal Separate Storm Sewer Systems), the County of Botetourt, Virginia, implemented a comprehensive stormwater management program in May 2003. Coverage under the first (Municipal Storm Sewer System) MS4 General Permit issued to Botetourt County ended in 2008. Coverage under the current Virginia Stormwater Management Program (VSMP) MS4 General Permit became effective as of July 9, 2008.

Botetourt County's Stormwater management program was developed to fulfill all of the Minimum Compliance Measures (MCM) as required by state and federal mandate. Botetourt County Public Works Department designed and developed targeted Best Management Practices (BMP) to reach a diverse group of County residents and businesses at all economic and social levels. This report documents the status of the program for Year 4 of the Permit. The main components of the stormwater management program areas are:

- MCM 1: Public Education and Outreach
- MCM 2: Public Participation/Involvement
- MCM 3: Illicit Discharge Detection and Elimination
- MCM 4: Construction Site Stormwater Runoff Control
- MCM 5: Post Construction Stormwater Runoff Control
- MCM 6: Pollution Prevention/Good Housekeeping

### **MCM 1: Public Education and Outreach**

Botetourt County makes education and outreach a priority of the stormwater program. It is envisioned that the County will continue to maintain a commitment to education in the stormwater program by continuing the stormwater education field trips, utilizing Standards of Learning (SOL) correlated stormwater curricula, educating developers and builders at pre-construction meetings, providing informative classes & workshops, developing a stormwater ordinance, and updating the stormwater website.

*BMP 1:1 Hold a preconstruction conference before each new Land Disturbing Permit (LDP) project; give minimum standard pamphlet to Responsible Land Disturbers (RLDs) that have not previously conducted projects in Botetourt County.*

Botetourt County's Erosion and Sediment Control Administrator educates contractors and developers at all pre-construction meetings on proper E&S measures. Site specific Erosion and Sediment control measures and areas of critical concern are identified on proposed plans and BMP designs are discussed. A pamphlet created by DCR outlining the nineteen minimum standards is distributed at pre-construction conferences and given to individuals applying for Agreements in Lieu of an E&S plan.

See Supporting Documentation BMP 1:1 for a summary of all new LDP projects in Botetourt County during permit year.

*BMP 1:2 Make Botetourt County's MS4 program plan available to the public by posting the plan and most recent annual report to [www.botetourt.org](http://www.botetourt.org)*

The current VSMP registration statement with BMP's in place upon submittal and the most recent annual report are available for the public to view at [http://www.botetourt.org/government/env\\_mgmt.php](http://www.botetourt.org/government/env_mgmt.php).

*BMP 1:3 Reach a minimum of 250 students within Botetourt County Public Schools with programs involving stormwater, waste reduction and reuse, and recycling education.*

Clean Valley Council (CVC), a non-profit organization sponsored by local governments, including Botetourt County, provides in-school educational programs using part-time educators. They conducted six (6) stormwater programs in Botetourt County Public Schools reaching 435 students between July 2011 and June 2012. In addition, they also conducted six (6) recycling programs, reaching 433 students.

See Supporting Documentation BMP 1:3 for a summary of those programs.

*BMP 1:4 Ensure that printed stormwater educational materials are on display at Botetourt County Public Works and libraries.*

Five (5) stormwater related brochures are available for the public at Botetourt County Public Works and in Botetourt County Public Libraries.

See Supporting Documentation BMP 1:4 for a copy of materials on display.

*BMP 1:5 Ensure that stormwater educational information is available at [www.botetourt.org](http://www.botetourt.org) and update annually.*

Information added to the website this year includes the Year 3 report. All other links were tested for accuracy. The webpage includes information, forms, photos, and related links on Erosion & Sedimentation Control, Stormwater Management, and Environmental Education. This site also provides an email address for stormwater, drainage, and E&S complaints. The County will continue to expand, update, and enhance this site for the purpose of educating the public on various environmental topics and issues.

Visit [www.botetourt.org/government/env\\_mgmt.php](http://www.botetourt.org/government/env_mgmt.php) to view the information posted about stormwater management.

**MCM 2: Public Participation/Involvement**

Public involvement and participation has been a major focus of the stormwater program efforts. Botetourt County staff serves on the Boards of Directors for the Clean Valley Council, Upper James River Roundtable, and the Upper Roanoke River Roundtable.

*BMP 2:1 Partner with CVC to sponsor at least two clean up events.*

Botetourt County partnered with the Clean Valley Council (CVC), the Upper Roanoke River Roundtable (URRR), and several localities to hold the Fall Waterway Clean Up on October 1, 2011. Valley-wide, nearly 780 volunteers collected 31 tons of trash and 355 tires.

Botetourt County partnered with the CVC to hold the Clean Valley Day event on April 7, 2012. The event drew 1400 participants that collected 34 tons of trash and 430 tires valley-wide. *\*All statistics provided by CVC.*

*BMP 2:2 Attend at least 75% of meetings, per year, of the Upper Roanoke River Roundtable (URRR) Board of Directors.*

Botetourt County Project Specialist serves as a member and regularly attends meetings of the Board of Directors for the URRR. Ten (10) URRR Board meetings were held during this reporting year, eight (8) of which were attended by a representative of Botetourt County, yielding a percentage of 80% of meetings being attended.

See Supporting Documentation BMP 2:2 for meeting minutes of the Upper Roanoke River Roundtable.

*BMP 2:3 Attend at least 75% of meetings, per year, of the Clean Valley Council Board of Directors.*

The Botetourt County Project Specialist is currently a board member of the Clean Valley Council (CVC) and attends regular meetings of the CVC Board of Directors. Ten (10) CVC Board meetings were held during this reporting year, nine (9) of which were attended by a representative of Botetourt County, yielding a percentage of 90% of meetings being attended.

See Supporting Documentation BMP 2:3 for meeting minutes of the Clean Valley Council Board of Directors.

*BMP 2:4      Conduct at least one HHW collection annually.*

Botetourt County held its third independent HHW collection event on October 15, 2011 at the Botetourt County Convenience Center with 163 citizens participating and 6.14 tons of waste collected.

### **MCM 3: Illicit Discharge Detection and Elimination**

Botetourt County's stormwater program activities focused on efforts to distribute educational materials in conjunction with MCM 1 & 2 of the program. Botetourt County staff researched the issues related to the development of an illicit discharge detection and elimination program and ordinance.

*BMP 3:1      Conduct at least one HHW collection annually.*

See BMP 2.4.

*BMP 3:2      Map 80% of the storm sewer system owned by Botetourt County within the watersheds of the Botetourt County urbanized area (UA).*

Mapping conducted in Year 4 involved connecting the points representing above ground features with each other using information from as-built and plan drawings for the in-ground portions of the infrastructure. An estimated 85% of the required mapping is complete at this time.

See Supporting Documentation BMP 3:2 for GIS maps of the stormwater infrastructure.

*BMP 3:3      Develop a stormwater and/or illicit discharge ordinance.*

Botetourt County has evaluated its current ordinances and feel that the following sections of Botetourt County Municipal Code meets the state requirements:

- Chapter 10, Sec. 10-32. **Local erosion and sediment control program.**
- Chapter 10, Sec. 10.34. **Guidelines, criteria, etc., for preparation.**
- Chapter 10, Sec. 10-34.1. **Stormwater management infrastructure maintenance agreement.**

See Supporting Documentation 3:3 for the full text of Chapter 10.

*BMP 3:4 Inspect all Botetourt County owned outfalls annually during dry weather and document the current condition of the outfall.*

Botetourt County owns and maintains two (2) outfalls at East Park Commerce Center, two (2) outfalls at the Greenfield Education and Training Center, one (1) outfall at the Botetourt Sports Complex at Greenfield, and one (1) outfall at Vista Corporate Park. Botetourt County Public Works and Utility staff visually inspect these outfalls while in the field and are instructed to report abnormalities to the Utility Supervisor, Public Works Director, or County Engineer. A formal inspection of all outfalls will be conducted and recorded in Year 5.

*BMP 3:5 Document and take actions to correct any illicit discharges discovered during the inspection of outfalls or through other means.*

No illicit discharges were discovered.

#### **MCM 4: Construction Site Stormwater Runoff Control**

The DCR website currently lists Botetourt County's Erosion & Sediment Control program as "consistent". Botetourt County has an alternative inspections program for Erosion and Sediment Control and maintains an Erosion and Sediment Control ordinance that adopts all current State of Virginia Erosion and Sediment Control regulations.

The County Erosion and Sediment Control program reviews E&S plans for all proposed construction projects. Information on E&S and litter control is currently distributed at all pre-construction meetings. Botetourt County's Erosion and Sediment Control Administrator tracks E&S projects through a spreadsheet that includes project name, disturbed acreage, Responsible Land Disturber (RLD), project status and project description. Botetourt County will continue to remain dedicated to the protection of Virginia's waters through the implementation of the County Erosion and Sediment Control Program. Botetourt County staff will continue to review and inspect all required projects in compliance with DCR E&S regulations and will continue to inspect projects consistent with state law. The Botetourt County Stormwater Maintenance Agreement (SWMA) and local E&S ordinance were revised in 2005. Changes to these items included an updated SWMA and adoption of the Virginia Stormwater Management Handbook.

All of the designated VSMP MS4 regulated urban area drains to the Roanoke River basin. Therefore, Botetourt County is exempt from the additional permit reporting requirements related to MS4s draining into the Chesapeake Bay and its tributaries.

*BMP 4:1 Perform formal plan review on all construction sites requiring a Land Disturbing Permit (LDP) to assure compliance with the nineteen minimum standards.*

There were five (5) projects submitted, reviewed, and permitted during Year 4 which required an LDP.

See Supporting Documentation BMP 4:1 for summary of all projects reviewed during program year.

*BMP 4:2 Inspect all sites with an active LDP once every two weeks or within 48 hours of a runoff-producing event OR per set alternative inspection schedule.*

Botetourt County staff strives to visit and inspect each active LDP site every two weeks and within 48 hours of each significant rain event. As such, the ESC program in Botetourt County is listed as "consistent" on the DCR website ([http://www.dcr.virginia.gov/stormwater\\_management/eslpr.shtml](http://www.dcr.virginia.gov/stormwater_management/eslpr.shtml)).

See Supporting Documentation BMP 4.2 for a sample of an inspection report, a notice to comply, and a stop work order.

*BMP 4:3 Report newly approved land disturbance sites determined to be eligible for the VSMP permit to the Stormwater Compliance Specialist at the DCR Christiansburg Regional Office.*

Botetourt County issued two (5) new Land Disturbing Permits in permit Year 4 that may meet the requirement to register for a VSMP permit. Per the request of the DCR Christiansburg Regional Office, plan approval letters for these sites included the following language informing the applicants of the possible requirement:

“Approval and issuance of a land-distributing permit from this office does not affect any other permits or permission that you may need to complete this project. According to the submitted plans, the Virginia Department of Conservation and Recreation (DCR) may require this project to register for a Virginia Stormwater Management Program (VSMP) Permit since all construction activities associated with this project disturb more than 1 acre. However VSMP permit determinations are the responsibility of DCR. DCR may be contacted at (540) 394-2581 to register.”

The Monthly LDP report sent to DCR Christiansburg Regional Office can be found in Supporting Documentation for BMP 1:1.

### **MCM 5: Post Construction Stormwater Runoff Control**

Post construction stormwater runoff control is relatively new in Botetourt County and will take several years to fully implement into the stormwater program. In 2005, Botetourt County laid the foundation for future development by requiring stormwater facility maintenance agreements for all projects resulting in an increase in impervious area and/or stormwater runoff. The requirement is outlined in the current Botetourt County Erosion and Sediment Control Ordinance (adopted July 26, 2005) and required through adoption of Minimum Standard 19 of the Virginia Erosion and Sediment Control regulations and the Virginia Stormwater Management Handbook.

*BMP 5:1 Enforce Botetourt County Code, Chapter 10, Erosion and Sediment Control; evaluate current ordinances upon approval of state stormwater ordinance.*

Botetourt County has evaluated its current ordinances and feel that the following sections of Botetourt County Municipal Code meet the state requirements:

- Chapter 10, Sec. 10-32. **Local erosion and sediment control program.**
- Chapter 10, Sec. 10.34. **Guidelines, criteria, etc., for preparation.**
- Chapter 10, Sec. 10-34.1. **Stormwater management infrastructure maintenance agreement.**

See Supporting Documentation 3:3 for the full text of these ordinances.

*BMP 5:2 Require a stormwater management infrastructure maintenance agreement on all areas of new development and redevelopment needing permanent stormwater protection measures.*

Per Botetourt County Municipal Code, Chapter 10, Sec. 10-34.1, stormwater management infrastructure maintenance agreements must be recorded onto the plat of all new development and redevelopment areas with stormwater management systems. The maintenance and monitoring of these stormwater management systems is the sole responsibility of the property owner or persons signing the agreement.

See Supporting Documentation BMP 5:2 for sample stormwater management infrastructure maintenance agreement.

### **MCM 6: Pollution Prevention/Good Housekeeping**

Botetourt County administers multiple pollution prevention/good housekeeping practices. Staff completes an annual inventory of hazardous materials at County facilities. Botetourt County sponsored its third independent household hazardous waste collection event in Year 4. Additionally, Parks and Recreation reduce phosphorus released into the environment by establishing a soil amendment schedule that utilizes soil testing to minimize the amount of fertilizers needed at county-owned facilities.

*BMP 6:1 Maintain an inventory of hazardous materials used by the Utilities Division and training certifications of those who handle hazardous materials.*

Public Works Department staff performed an inventory of all county facilities and determined that Botetourt County Utility Division stores up to four (4) 55-gal drums of sodium hypochlorite and/or RE-OX at a time. All chemicals have containment pallets and are only handled by certified personnel. Three (3) employees are certified as water and wastewater operators and are the only employees authorized to handle these materials.

See Supporting Documentation BMP 6.1 for a copy of the inventory MSDS and training certifications.

*BMP 6:2 Maintain a level of recycling in Botetourt County which is higher than the state mandated 15% for rural jurisdictions.*

The [Annual Recycling Rate Report](http://www.deq.state.va.us/Portals/0/DEQ/Land/RecyclingPrograms/Reports/AnnualReportRRR2010Final.pdf) produced by DEQ lists the recycling rate for Botetourt County as 17.4%. This report can be found at the link below:  
<http://www.deq.state.va.us/Portals/0/DEQ/Land/RecyclingPrograms/Reports/AnnualReportRRR2010Final.pdf>.

*BMP 6:3 Apply appropriate fertilizers at Botetourt County Parks and Recreation facilities as defined by the results of soil tests.*

Botetourt County Parks and Recreation staff performed soil test on 14 facilities before applying fertilizer in Year 4. Staff currently spreads the application of recommended fertilizers out over a two-year period.

See Supporting Documentation BMP 6:3 for documentation of soil tests and the recommended fertilizer applications for each facility.

*BMP 6:4 Conduct at least one HHW collection annually.*

See BMP 2.4.

**Stormwater Management Facilities**

No new stormwater management facilities covered under the VSMP have been added in Year 4. Current, only four (4) stormwater management facilities are owned and operated by Botetourt County. Of those, Vista Corporate Park is the only SWM facility that discharges directly into a body of water with Waste Load Allocations. Waste Load Allocations within the Botetourt County urbanized area are listed in the table below.

<b>Waste Load Allocations</b>	<b>Number of Discharges</b>
4.36E+11 cfu/yr to Laymantown Creek	0
1.19E+11 cfu/yr to Glade Creek	0
1.28E+11 cfu/yr to Carvin Creek	0
1.95E+12 cfu/yr to Tinker Creek	1

Information regarding the one discharge in an impaired body of water is as follows:

- Vista Corporate Park
  - Estimated drainage area: 56 acres
  - Impaired receiving water: Tinker Creek Middle
  - Land use: Vista Park is an industrial park currently occupied by two companies. The area consists of approximately 40% impervious area with the remaining area having grassy vegetative cover. The stormwater from this drainage area passes through a detention basin and is discharged via an outfall located on Tinker Creek. The stormwater detention basin is owned and maintained by Botetourt County.

Stormwater management facility data has been submitted in Microsoft Excel format to [StormBMP@dcr.virginia.gov](mailto:StormBMP@dcr.virginia.gov). Details regarding the drainage area and design of the basin at Vista Park are found in the attached supporting documentation.

**Future Program Goals**

Botetourt County will continue to maintain a dedicated effort to fulfill all of the requirements in its stormwater program as outlined in **VSMP Permit # VAR040023**. Future program goals are described in the BMP Summary Table located in the attached supporting documentation.