



Virginia Pollutant Discharge Elimination System
Phase II Annual Report

Year #2, 2004-2005

VPDES Permit # VAR040023

Botetourt County Engineering Department
May 3, 2005

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“In fulfillment of the Clean Water Act and Virginia Stormwater regulations Botetourt County is working to increase public knowledge of stormwater pollution and it’s effect on water quality.”

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 STORM WATER FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS), the County of Botetourt, Virginia, implemented a comprehensive stormwater management program in May 2003. Botetourt County's Stormwater management program was developed to fulfill all of the Minimum Compliance Measures (MCM's) as required by state and federal mandate. Botetourt County Public Works Department designed and developed targeted Best Management Practices (BMP's) to reach a diverse group of County residents and businesses at all economic and social levels. This report documents the status of the program through Year 2 of the Permit. The main components of the Stormwater program areas are:

Minimum Control Measure 1
Public Education and Outreach

Minimum Control Measure 2
Public Participation/Involvement

Minimum Control Measure 3
Illicit Discharge detection and elimination.

Minimum Control Measure 4
Construction site Stormwater Runoff Control.

Minimum Control Measure 5
Post construction Stormwater Management.

Minimum Control Measure 6
Pollution prevention/good housekeeping

MIMIMUM CONTROL MEASURE 1: PUBLIC EDUCATION AND OUTREACH

Botetourt County has continued to make education and outreach a priority through the second year of the stormwater program. It is envisioned that the County will continue to maintain its commitment to education in the stormwater program by continuing the stormwater education field trips, developing/utilizing Standards of Learning (SOL) correlated stormwater curricula, educating developers and builders at pre-construction meetings, provide informative classes & workshops, the development of a stormwater ordinance, updating the stormwater website, and continuing the targeted mailers to other businesses such as restaurants and the food service industry.

BMP 1:1 Distribute and discuss information on proper E&S measures and standards at each construction project pre-construction conference.

Botetourt County's Erosion and Sediment Control Administrator currently educates contractors and developers at all pre-construction meetings. Site specific Erosion and Sediment control measures and areas of critical concern are identified on proposed plans and BMP designs are discussed.

Erosion and Sediment control educational materials will be made available to DCR upon request.

*BMP 1:2 Lead school group outings to County landfill twice per year.
(given availability and interest from teachers and administration)*

Botetourt County developed Stormwater Educational Field Trips to the Botetourt County Landfill. The program consists of a landfill tour led by the Landfill Superintendent and the County Engineer. Students are educated in all operations of the landfill. The students are made aware of the under drain and leachate collection system. Students are also educated on the effects of pollution in stormwater systems and informed of the DEQ required groundwater monitoring system. Additionally, students are informed about the ecological effects of pollution in stormwater and are given a packet of EPA and Botetourt County stormwater informational materials.

Documentation will be made available to DCR upon request.

MCM 1: CONT.

BMP 1:3 Public Education Program created, educational materials developed and distributed to 50% of schools and libraries.

During Year 1, Botetourt County Public Works Department distributed over 500 brochures on stormwater education to all of Botetourt County's Public Libraries. In Year 2, educational materials were distributed to the remaining 50% of the schools and libraries. Educational literature is also distributed to the general public during routine site visits and other Engineering Dept. field activities. In addition to the Landfill field trips, informational brochures are distributed throughout the Botetourt schools.

In Year 2, Engineering Dept. staff collaborated with the local SWCD to utilize SOL Standard 6.7 (Living Systems) to educate children in stormwater management. 238 middle school children (6th grade) from Read Mt. Middle School were instructed in stormwater and watershed topics as related to SOL 6.7. Ground water model and Enviroscape models were utilized to provide hands-on experience and student participation. Additionally, 33 students from Troutville Elementary (3rd grade) were also instructed using the above models.

Botetourt County will continue to develop strong partnerships with other organizations to educate children in various stormwater, watershed, and NPS topics and issues.

Educational materials and school program pictures will be made available to DCR upon request.

BMP 1:4 Present and discuss materials relating to water quality impacts of urban runoff and Non Point Source (NPS) pollution at school Career Day, once per year.

Botetourt County Public Works Department staff attended Career Day at Central Academy Middle School on May 19, 2004. At this event, staff presented and discussed materials relating to the water quality impacts of urban runoff and NPS pollution. Materials included EPA and Botetourt County stormwater educational brochures, the Virginia Department of Conservation and Recreation (DCR) educational materials on Erosion and Sediment Control (E&S), and materials related to watershed education. Staff also displayed the Enviroscape watershed model.

Documentation will be made available to DCR upon request.

MCM 1: CONT.

BMP 1:5 Attend at least nine (9) meetings, per year, of the Clean Valley Council Board of Directors.

The Botetourt County Public Works Department Director is currently a board member of the Clean Valley Council and attends regular meetings of the Clean Valley Council Board of Directors.

Meeting minutes will be made available to DCR upon request.

BMP 1:6 Website expanded and stormwater management page created.

Botetourt County expanded its website to include a page dedicated to Environmental Management. This page 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.

www.botetourt.org/government/env_mgmt.php

BMP 1:7 At least one public meeting held in the development of a Stormwater Ordinance

As directed by DCR Staunton Watershed Office, Botetourt County has not conducted a public meeting. As per DCR instructions, the County is awaiting direction and a sample ordinance from DCR. The County has been informed that it will receive further direction in the Summer or Fall of 2005.

BMP 1:8 One member of County staff presenting information classes on responsible land disturbing and good E&S practices

Scheduled fulfillment in Program Year 3, 2006.

MINIMUM CONTROL MEASURE 2: PUBLIC PARTICIPATION & INVOLVEMENT

Public involvement and participation has been a major focus of the first and second year of the stormwater program efforts. In coordination with the Botetourt County Comprehensive plan update, County staff held a series of public meetings and hearings. Meetings and hearings have included education on stormwater and water quality issues and have allowed public comment on concerns regarding these issues. Botetourt County staff serve on the Boards of the Clean Valley Council, Upper James River Roundtable, and the Upper Roanoke River Roundtable. Botetourt County staff members have been appointed to a regional task force responsible for developing and administering the Roanoke Valley Household Hazardous Waste Collection Event.

In the second year of the program, Botetourt County staff continued to maintain a high level of participation and involvement in all of the current program activities including continued participation in the regional Household Hazardous Waste Collection Events. Additionally, Botetourt County Staff have attended Environment Virginia 2005 and Virginia Save-our-Streams, Stream School.

Botetourt County also participated with other Clean Valley Council members in Clean Valley Day, April 9, 2005. Furthermore, the County sponsored a community information meeting on Land Conservation and Preservation on April 21, 2005.

In an effort to partner with other cooperating organizations/agencies and to improve our public education and outreach program, Botetourt partnered with Mountain Castles Soil & Water Conservation District and the local office of the Virginia Cooperative Extension to obtain a grant for public outreach/education. The partnership received a grant (DCR # : 6-STAU-BAY-60A) to partner in an education and outreach program to target citizens of Botetourt County to improve community knowledge on non-point source pollution and stormwater run-off. An educational forum was conducted for the public on April 28, 2005, during Soil & Water Conservation Week. Additionally, the grant funded the production and printing of 1000 brochures/pamphlets titled, "Botetourt County Environmental Stewardship". This brochure educates and informs the public of stormwater run-off management practices that citizens can implement in their everyday lives. It also provides contact information of various agencies and organizations dealing with NPS and water quality.

MCM 2: CONT.

BMP 2:1 Hold a minimum of three public meetings and/or public hearings during the comprehensive plan update, which will include water quality concerns and considerations

Comprehensive Plan meetings were held on the following dates:

05/08/03	06/12/03	06/26/03	07/14/03	08/14/03
08/18/03	10/09/03	11/11/03	11/19/03	12/10/03
01/22/04	02/19/04	03/15/04	04/06/04	

At the meetings, County staff manned several poster display stations. Display stations addressing stormwater and water quality included the engineering display with information on water, flooding and stormwater. Utilities and the Parks and Recreation Department also had information related to stormwater quality and pollution prevention.

In addition, Botetourt County in cooperation with the Valley Conservation Council, Canaan Valley Institute, Botetourt Community Partnership, Botetourt Town & Country Women's Club, DCR, Mountain Castles Soil and Water Conservation District, Upper Roanoke River Roundtable, Upper James River Roundtable, and the Virginia Environmental Endowment, sponsored and participated in a series of Water Resource Workshops. Workshops were held at the Greenfield Education Center, Botetourt County, Virginia, on Thursday, October 2, 2003, Thursday, October 16, 2003, and Friday, October 24, 2003. The Land Conservation and Preservation workshop was held on April 21, 2005. The Environmental Stewardship Forum was held April 28, 2005. The Workshops focused on water quantity, water quality and stormwater management and were well attended.

Meeting/workshop minutes will be made available to DCR upon request.

MCM 2: CONT.

BMP 2:2 Attend at least nine (9) meetings, per year, of the Clean Valley Council Board of Directors

The Botetourt County Public Works Department Director is currently a board member of the Clean Valley Council and attends regular meetings of the Clean Valley Council Board of Directors.

Meeting minutes will be made available to DCR upon request.

BMP 2:3 Attend at least nine (9) meetings, per year, of the Upper Roanoke River Roundtable Board of Directors

Botetourt County staff members currently attend regular meetings of the Upper Roanoke River Roundtable Board of Directors and the Upper James River Roundtable Board of Directors.

Meeting minutes will be made available to DCR upon request.

BMP 2:4 Encourage County resident participation in the Roanoke Valley's annual Household Hazardous Waste Day, by public notice in the local newspaper, posting and distributing flyers, or by other suitable venue.

Botetourt County Public Works Department staff members are currently assigned to the regional committee supporting the Household Hazardous Waste Days for 2004 and 2005. One event was held on August 21, 2004 and another is scheduled for May 15, 2005. Botetourt County has made a commitment to this program and will continue to support it with staff time, funding, and advertising. Advertising will consist of public notice in the local newspaper, posting and distributing flyers, or by other suitable venue.

Documentation will be made available to DCR upon request.

MCM 2: CONT.

BMP 2:5 At least one Public meeting held in the development of a Stormwater Ordinance.

The County has held two public meetings/forums to inform the public of development of this proposed ordinance. The public was informed of future plans at the Environmental Stewardship Forum and the Land Conservation & Preservation meeting.

The County was advised to wait for direction from the DCR Staunton office for a sample Stormwater Ordinance. The County was advised it will receive further direction and information during the Summer or Fall of 2005.

BMP 2:6 Notices of public meetings in at least two area newspapers.

Waiting for further direction from the DCR Staunton Office.

BMP 2:7 Stormwater ordinance developed in conjunction with public meeting and public hearings.

Not required in this program year (Program Year 2, 2005).
Scheduled fulfillment in Program Year 3, 2006.

BMP 2:8 Stormwater ordinance reviewed in accordance with County Policy.

Not required in this program year (Program Year 2, 2005).
Scheduled fulfillment in Program Year 4, 2007.

MINIMUM CONTROL MEASURE 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION.

Botetourt County's stormwater program first year activities focused on efforts to distribute educational materials in conjunction with MCM 1 & 2 of the program. Starting in the second year of the program, Botetourt County staff began developing a stormsewer system map with a target of mapping 33% of the Urban Area (UA) stormsewer system outfalls. In addition to the start of the mapping program, staff researched the issues related to the development of an illicit discharge detection and elimination program and ordinance.

BMP 3:1 Information on illicit discharges distributed to the general public and targeted businesses.

Botetourt County Public Works Department has distributed over 500 brochures on stormwater education to all of the Botetourt County Public Libraries. Botetourt County has chosen to target automotive related businesses in the first permit year. Over 35 local automotive businesses were mailed educational packets in 2004.

Educational materials and mailing list will be made available to DCR upon request.

BMP 3:2 33% of stream miles within the watersheds of the UA walked to map outfalls and identify illicit discharges.

The County Engineering Dept. has walked 33% of the stream miles. Outfalls were digitally photographed, GPS points collected, and documented as to their status and condition. Data is compiled into the County's GIS database and will also be incorporated into AutoCAD Map 2000 format.

67% of streams miles within the watersheds of the UA walked to map outfalls and identify illicit discharges.

Not required in this program year (Program Year 2, 2005).
Scheduled fulfillment in Program Year 3, 2006.

MCM 3: CONT.

BMP 3:3 Stormwater and/or illicit discharge ordinance developed.

Not required in this program year (Program Year 2, 2005).
Scheduled fulfillment in Program Year 3, 2006.

BMP 3:4 Develop and implement a program to detect and eliminate non-storm water discharges.

Not required in this program year (Program Year 2, 2005).
Scheduled fulfillment in Program Year 3, 2006.

BMP 3:5 Storm sewer map complete with outfalls names and locations of surface waters receiving discharges from those outfalls. 100% of the storm drainage network inspected for illicit discharges.

Not required in this program year (Program Year 2, 2005).
Scheduled fulfillment in Program Year 4, 2007.

MINIMUM CONTROL MEASURE 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL.

Botetourt County is working with DCR to implement and maintain a state approved Erosion and Sediment Control program. Staffing, funding and increased development pressure have presented challenges to maintaining state compliance in Botetourt County's Erosion and Sediment Control (E&S) program. Balancing Botetourt County's traditionally rural character with the ever-increasing development needs has been a major priority.

Botetourt County currently has a "provisionally consistent" Erosion and Sediment Control program. Botetourt County has an alternative inspections program for Erosion and Sediment Control. Botetourt County 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 currently tracks E&S projects through the use of a dedicated "Access" database 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. No new BMPs were scheduled to be implemented in the second year of the stormwater program. However, the third year of the program will include the development of integrated project tracking and formal documentation of all land disturbing activities. Additionally, the current E&S program will be modified to reflect any changes required by the development and adoption of a stormwater ordinance. Furthermore, the Stormwater Maintenance Agreement and local E&S ordinance are currently being revised and awaiting Board of Supervisors approval. In the interim, Botetourt County will continue to implement all current E&S program requirements.

MCM 4: CONT.

Report of total number of regulated land-disturbing activities and total disturbed acreage as required:

During the second year of Botetourt County's VPDES permit the following numbers were calculated as totals for land disturbing activities and total number of disturbed acres:

Total Number of Regulated Land Disturbing Activities = 158

Total Disturbed Acreage = 1053

Currently, all of the designated VPDES regulated urban area drains to the Roanoke River basin. Therefore, Botetourt County is exempt from the additional permit reporting requirements related to MS-4's draining into the Chesapeake Bay and its tributaries.

BMP 4:1 Erosion and Sediment Control Plans. Attain and maintain a consistent E&S Program in accordance with DCR.

Botetourt County's Erosion and Sediment control program has been granted "provisionally consistent" status by the Virginia Department of Conservation and Recreation. A corrective action plan has been approved and is currently being implemented.

Documentation will be made available to DCR upon request.

BMP 4:2 Enforce provisions of solid waste ordinance addressing waste on construction sites.

Botetourt County is currently distributing, at all pre-construction meetings, a brochure on Botetourt County regulations regarding litter control on construction sites. The brochure explains county regulations and enforcement related to construction site litter control.

The Brochure will be made available to DCR upon request.

MCM 4: CONT.

BMP 4:3 Inspect all land-disturbing projects at a frequency consistent with the standards of Virginia Erosion & Sediment Control Law and Regulations, as established by the Virginia Soil and Water Conservation Board.

Botetourt County has an alternative inspections program that staff adheres to.

Documentation will be made available to DCR upon request.

BMP 4:4 Expand the current land disturbance program to formally document regulated land disturbing activities.

Botetourt County's Erosion and Sediment control administrator currently tracks land disturbing projects with an "Access" database that includes: Project name, Disturbed acreage, RLD, project status and project description.

Documentation will be made available to DCR upon request.

BMP 4:5 Modify the municipal code to require that construction site operators control waste at construction sites that may cause adverse impacts to water quality. This will be accomplished either by: amending the current E&S ordinance OR incorporating these measures into a stormwater ordinance.

Not required in this program year (Program Year 2, 2005).
Scheduled fulfillment in Program Year 3, 2006.

BMP 4:6 Formally implement updated land disturbance program.

Not required in this program year (Program Year 2, 2005).
Scheduled fulfillment in Program Year 3, 2006.

MINIMUM CONTROL MEASURE 5: POST CONSTRUCTION BMPs

Post construction stormwater management is relatively new in Botetourt County and will take several years to fully implement into the stormwater program. For year one of the program 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 and required through adoption of Minimum Standard 19 of the Virginia Erosion and Sediment Control regulations.

Botetourt County staff and area developers are continually researching new and innovative stormwater technologies that conserve water, control flooding and maintain water quality. Future efforts in this program area include the development of a regionally specific list of suitable stormwater BMP's and adoption of the Virginia Stormwater Management Handbook. Botetourt County will continue to investigate and evaluate innovative technologies in stormwater management as deemed appropriate. Botetourt County has also made a commitment to maintaining water quality in post construction by working towards adoption of all applicable state stormwater regulations and associated stormwater quality standards.

BMP 5:1 Require a stormwater detention/retention facility maintenance agreement for every project causing an increases in impervious area and/or an increase in stormwater runoff.

Botetourt County currently requires a stormwater detention/retention facility maintenance agreement for every project resulting in an increase in impervious area and/or an increase in stormwater runoff. The requirement is outlined in the current Botetourt County Erosion and Sediment Control Ordinance and required through adoption of Minimum Standard 19 of the Virginia Erosion and Sediment Control regulations.

Standard Botetourt County Stormwater maintenance agreement will be made available to DCR upon request.

BMP 5:2 Develop and implement a list of suitable BMPs and/or include Countywide adoption of the Virginia Stormwater Management Handbook.

Not required in this program year (Program Year 2, 2005).
Scheduled fulfillment in Program Year 3, 2006.

BMP 5:3 Stormwater ordinance developed.

Not required in this program year (Program Year 2, 2005).
Scheduled fulfillment in Program Year 3, 2006.

MINIMUM CONTROL MEASURE 6: POLLUTION PREVENTION/GOOD HOUSEKEEPING

Botetourt County has made good progress in pollution prevention/good housekeeping in the first year of the stormwater management program. Botetourt County staff has completed an inventory of hazardous materials at County facilities. Botetourt County staff members have been appointed to a regional task force on the Roanoke Valley Household Hazardous Waste collection event and continue to be involved in the development and implementation of the event.

Future concentrations for this program area include the development of a program to track building and grounds maintenance activities and the development of a spill prevention and pollution control plan for the Vista Park Water Treatment Facility.

BMP 6:1 Inventory hazardous materials.

Public Works Department staff performed an inventory of all county facilities and determined that Botetourt County Facilities do not currently store or use hazardous materials in regulated amounts and/or do not pose an exposure risk to storm drain systems.

BMP 6:2 Develop a Program to track Botetourt County's Building and Grounds Maintenance.

Utilities Department staff maintains records of all maintenance activities at the Troutville and Hollins Water Tanks and Vista Park Water Treatment Plant. The Utilities Supervisor maintains activity records in an Excel database file.

The Parks and Recreation Department maintains the Vista Park and East Park Commerce Center Basins. This department maintains a thorough vegetation management system on both basins. Records are also maintained through an Excel file.

Documentation will be made available to DCR upon request.

BMP 6:3 Develop a spill response and pollution prevention plan specific to Vista Park Water Treatment Facility. Ensure that all site personnel are trained in plan implementation.

Not required in this program year (Program Year 2, 2005).
Scheduled fulfillment in Program Year 3, 2006.

Program Changes (Addition or Deletion of any BMPs):

Botetourt County has found all current stormwater program BMPs to be effective. Botetourt County does not intend to modify or eliminate any BMPs in this program year (2005). Current changes in the Virginia stormwater law and the development of Total Maximum Daily Load allocation plans (TMDL's) may call for changes in the regions VPDES programs. Botetourt County recognizes these variables and will be flexible in the need for appropriate program changes and adjustments in subsequent program years.

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 **VPDES Permit # VAR040023**. Future program goals include the continuation of the public education effort, including regular updating of the stormwater website. Botetourt County plans to increase stakeholder involvement through public hearings regarding the development of a stormwater ordinance. Major focuses include the completion of a comprehensive stormsewer outfall system map, the development and implementation of a comprehensive stormwater ordinance, adoption of state stormwater regulations and the development of regulations for illicit discharges to stormsewer systems.

Botetourt County's second year stormwater program has been highly successful. All BMP target goals have been attained or are currently in progress. The County's integrated stormwater education program, public outreach effort, progressive vision for stormwater management and continued dedication to program fulfillment will continue over the next three years of the permit.

“In fulfillment of the Clean Water Act and state stormwater regulations, Botetourt County is working to increase public knowledge of stormwater pollution and it's effect on water quality.”