



National Pollutant Discharge Elimination System (NPDES)

Storm Water Management Program

Site Registration Form

for

West Virginia

Municipal Separate Storm Sewer Systems (MS4s)

General Permit WV0116025

The site registration application (SRA) is for local governments or other regulated entities to submit the required information necessary for their Stormwater Management Program (SWMP) for compliance under the National Pollutant Discharge Elimination System (NPDES) MS4 General Permit to discharge stormwater runoff from a small municipal separate storm sewer system (MS4).

An authorized signature as required by 47CSR10 is needed to complete the application. All information should be included on this form or if needed, additional information can be attached at the end of the SRA.

Two (2) copies of the site registration application form shall be mailed to the address below.

**West Virginia Department of Environmental Protection
Division of Water and Waste Management – MS4 Program
601 57th Street, SE
Charleston, WV 25304**

Section I. General Information

MS4 Operator

Part II A.

1.a. Name of City, County or other public entity that operates a small MS4:
West Virginia University

1.b. Mailing Address:
P.O. Box 6551, Morgantown, WV 26506

Local staff contact, person responsible for overall program implementation and coordination. (This is the person DEP will contact as the need arises for more information and/or details about your stormwater management program or general questions concerning stormwater in your community.)

1.c. Name Katherine K. Powell
1.d. Title Associate Director, Environmental Health and Safety, P.O. Box 6551, Morgantown, WV 26506
1.e. Phone (304) 293-7431
1.f. E-mail address kathy.powell@mail.wvu.edu

1.c. Name John A. Principe
1.d. Title Director, Environmental Health and Safety, P.O. Box 6551, Morgantown, WV 26506
1.e. Phone (304) 293-5853
1.f. E-mail address john.principe@mail.wvu.edu

Certification

47CSR10

By completing and submitting this application, I have reviewed and understand and agree to the terms and conditions of #WV0116025 small MS4 General Permit issued on June 22, 2009. I understand that provisions of the MS4 general permit are enforceable by law. Violations of any term and condition of the general permit and/or other applicable law or regulations can lead to enforcement action.

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.

2.a. Authorized signature Narvel G. Weese, Jr.
(Mayor or Principle Executive Officer)

2.b. Print name Narvel G. Weese, Jr.

2.c. Title Vice President, Administration and Finance

2.d. Date January 20, 2011

Co-permittees (Complete this section if co-permitting with another MS4 entity)
Part III. A.

- 3.a. Name of MS4 Operator Not applicable
- 3.b. Contact person
- 3.c. Telephone
- 3.d. Address
- 3.e. Email address
- 3.f. Have legal agreements been finalized between co-permittees?
- 3.g. If yes, provide agreement with this application. (With signatures)

Section II. Storm Sewer System

Description of storm sewer system

4.a. Area (in acres) that drains into the MS4 from outside the corporate or jurisdictional boundaries:

As a newly permitted MS4, West Virginia University (WVU) does not currently have its contributing watersheds mapped to the level of detail required to provide accurate acreages. WVU will submit updated acreage figures to DEP along with its third Annual Report. This calculation will be integrated into the larger MS4 mapping activities that will be part of MCM3 implementation.

4.b. Area (in acres) within current corporate or jurisdictional boundaries:

In the Morgantown area, WVU owns and operates the storm sewer system at 11 locations. Except for the Animal Sciences Farm, all 11 areas lie entirely within the Urbanized Area as defined by the U.S. Census Bureau. The Animal Science Farm lies partly in the Urbanized Area, but is fully included in this permit. The acreages for each of the 11 regulated areas are listed below.

- Downtown Campus: 113 acres
- Evansdale Campus: 576 acres
- Core Arboretum: 91 acres
- Robert C. Byrd Health Sciences Center Campus: 347 acres

Animal Sciences Farm and Wolfe Property: 1,258 acres
Plant Sciences Farm (Agronomy Farm): 227 acres
Horticulture Farm and Mileground Property: 88 acres
General Woodworking: 5 acres
University Apartments: 19 acres (approximate)
Morgantown Airport Facility: 9 acres (approximate)
Research Park: 88 acres

Total MS4 jurisdictional acreage: 2,821 acres

- 4.c. For all MS4s, population (using the most recent U.S. Census data) for area served: (Universities: give current enrollment plus staff and faculty. Transportation agencies: give population of your MS4 in urbanized areas. Prisons; give current inmate plus staff population.)
Current enrollment: 29,306
Staff: 5,368
Faculty: 3,025

Total MS4 population: 37,699

Part IV.B.

- 4.d. Latitude and Longitude of representative outfall:
Longitude- Degrees: 39 Minutes: 39 Seconds: 0.04
Latitude- Degrees: -79 Minutes: 58 Seconds: 21.72

Tip: The MS4 general permit requires that you sample from one representative outfall twice a year. The location of this outfall will be in your most densely populated area.

Part IV.B.

- 4.e. Describe the physical location of your representative outfall. If a street address is not possible use cross street descriptions.

The representative outfall is located on the Evansdale Campus near the Communications Building along Patterson Drive where the MS4 discharges to Popenoe Run.

Part IV.B.

- 4.f. Describe your monitoring plan to include the frequency and parameters.
WVU will comply with the stormwater monitoring standards described in Part IV.B of WV DEP's General NPDES Water Pollution Control Permit. WVU will monitor the outfall designated above once every six months, during the spring and fall seasons. Samples will be collected during the "first flush" of rainfall runoff, for at least 20 minutes, but for not more than 50 minutes after a rainfall of at least 0.5 inches has begun, preceded by a period of dry weather of at least 48 hours. WVU will monitor for the following parameters:

Parameter	EPA Method No.	Method Detection Limit (mg/l)
Total Kjeldahl Nitrogen	351.4	0.03
Nitrate Nitrogen	300.0	0.002
Nitrite Nitrogen	300.0	0.004
Total Phosphorus	365.4	0.01

The Total Nitrogen value to be reported on the Discharge Monitoring Reports' (DMRs) will be the sum of the following parameters; Total Kjeldahl Nitrogen, Nitrate, and Nitrite. If all three constituents of total nitrogen are not detected at its method detection limit (MDL), WVU will sum the actual MDLs for each constituent and report the result as less than the calculation. When calculating the sum of the constituents for total nitrogen, WVU will use actual analytical results when these results are greater than or equal to the MDL for a particular constituent and use zero for a constituent if one or two of the constituents are less than the MDL. The methods and detection levels in the table above will be used unless WVU desires to use an EPA-approved method with a detection level equal to or lower than those specified above.

Storm Sewer Infrastructure

Provide the most accurate number possible.

As a newly designated MS4 entity, WVU does not yet have a complete MS4 map. WVU will begin mapping the MS4 soon after SWMP approval. MCM3 includes milestones for the phases of MS4 map completion. The MS4 map is critical for creating accurate figures for storm sewers, open ditches, outfalls, and catch basins. The numbers provided for the structures and features listed below will be updated and provided in WVU's third Annual Report.

5.a. Storm sewers, in feet	Unknown
5.b. Open ditches, in feet	Unknown
5.c. Outfalls	Unknown
5.d. Catch basins	Unknown
5.e. Detention* facilities	16 (Silver lot UGS, Parking lot ST4 UGS, Parking lot ST6 RG, Rec Center UGS, Parking lot 72 UGS, Parking lot 81 SDP, Parking lots 82 & 84 SDP, Chestnut Ridge Research SDP, Evansdale Housing/Lincoln Hall UGS, Research Park SDP, Parking lot 201 SDP, Mountaineer Tent City SDP, Research Park SDP, Oglebay Hall UGS, Parking lot 5 UGS & SDP, Brooks Hall Green Roof)
5.f. Retention** facilities	1 (Parking lots 76 & 200 SRP)
5.g. Treatment facilities	0
5.h. Regional stormwater facilities	1 (New Alumni Facility SDP)

(UGS) underground storage, (RG) rain garden, (SDP) stormwater detention pond, (SRP) stormwater retention pond

What's the difference between Detention and Retention?

*DETENTION- short-term storage of stormwater.

The objective of a detention facility is to regulate the runoff from a given rainfall event and to control discharge rates to reduce the impact on downstream stormwater systems.

**RETENTION– permanent storing of stormwater indefinitely.

Water is stored until it is lost through percolation, taken in by plants, or through evaporation. Retention systems do not have any discharge of stormwater and associated pollutants.

6.a. Does your MS4 receive stormwater discharges from WVDOT storm sewer system, roads or right-of-ways?

Yes. WV 705, US 19, US 119

6.b. Does your MS4 discharge into WVDOT storm sewer systems or right-of-ways?

Yes. WV 705, US 19, US 119

7. Is your MS4 interconnected with another MS4? (Does stormwater flow into or out of your storm sewer system to or from another MS4?) If yes, describe.

Yes. The WVU MS4 is adjacent to the following MS4s: Star City, Morgantown, Westover, WV DOT.

WVU property in Westover lies adjacent to the Monongahela River; therefore, it is likely that stormwater only flows from Westover onto and through WVU land. No stormwater flows from WVU to Westover's MS4. In the other three jurisdictions, it is likely that stormwater flows across MS4 boundaries from WVU to adjacent entities, and vice versa. As MS4 mapping proceeds, more detailed information about interconnections will be available and submitted to DEP in the Annual Report.

8. Does your municipality contain combined sewer systems?

Morgantown, WV is known to have combined sewer systems. WVU is not aware of combined sewer systems on its downtown campus. The status of combined sewer systems on the downtown WVU campus will be updated as mapping is conducted and completed.

9.a. What percentage is drained by Combined Sewer System?

This percentage is unknown. More information will be available when MS4 mapping is completed.

9.b. What percentage is drained by separate storm sewer system?

This percentage is unknown. More information will be available when MS4 mapping is completed.

Industrial Facilities owned by the MS4 entity

Part II.C.b.6.d.

10.a. Does your MS4 own and/or operate an industrial facility that discharges stormwater into the MS4?

Yes.

Tip: These types of facilities include vehicle maintenance garages, vehicle washing or fueling areas, parks and recreational facilities that may store chemicals, pesticides and/or fertilizers, salt storage facility, waste transfer facility, wastewater treatment plants and any other industrial facility. Please note, additional information about your facilities must be provided under Minimum Control Measure #6.

10.b. If yes, how many?

Five. A discussion of these facilities is included in SRA §20.j and Table 6.2 of this application.

(Item 11 is intentionally empty)

Map Requirements

Please provide a legible map that identifies the following information:

Appendix A includes a map with all pertinent and currently available information requested below. As WVU is a non-municipal MS4, the map focuses on WVU's Morgantown area facilities and does not include municipally-based facilities. As discussed above (SRA §4.a), WVU has not yet completed its MS4 mapping. WVU will provide the features requested in §12.i and §12.k below in its third Annual Report.

- 12.a. City, County or jurisdiction boundaries. The WVU jurisdictional boundaries are provided.
- 12.b. State or Federal operated vocational/college/university campuses and military institutions. No additional WVU campuses or military institutions exist within the extent of the map provided.
- 12.c. Urban area as defined by the 2000 Census, use 2010 Census data if available. The Urban area, as defined by the 2000 Census, is provided on the Location Map inset.
- 12.d. Municipal, County, or State wastewater treatment plants and their associated outfalls. Not applicable.
- 12.e. Landfills. No landfills exist with WVU jurisdictional boundaries.
- 12.f. Municipal, County or State operated vehicle or fleet maintenance garages. WVU vehicle and fleet maintenance garages are provided. These are shown on the map with the number corresponding to their more detailed description in Table 6.2 of this SRA (2. Campus Support Services; 3. Facilities Management; 4. Transportation Services).

- 12.g. Any other Municipal, County or State operated industrial activities, these could include; salt storage areas, parks and recreational areas, chemical storage areas, etc. In addition to the three facilities listed in §12.f, Table 6.2 includes two more facilities that operate industrial activities. These are shown on the map with the number corresponding to their more detailed description in Table 6.2 of this SRA (1. Animal Science Farm; 5. Zone Shop).
- 12.h. Arterial, Municipal, or State roads. Provided.
- 12.i. Stormwater discharge points and receiving streams. WVU will update map with discharge points after MS4 mapping is complete. Receiving streams provided.
- 12.j. Streams and waterways within the MS4. Provided.
- 12.k. Delineation of watershed area that drains into your MS4. WVU will update map with watershed delineations after MS4 mapping is complete.

Part.II.C.b.3.a.iv.

- 12.l. Submit paper maps folded to 8.5" x 11". See Appendix A.

Part.II.C.b.3.a.iv.

- 12.m. Multiple maps must be of the same scale, 1:1000 or 1:2000.

Receiving Streams and Impaired Waterbodies/TMDLs

Part III.D.1

List all named receiving waters within your MS4 jurisdiction. Indicate those identified as impaired pursuant to Clean Water Act Section 303(d). For a listing of West Virginia's impaired water bodies and the source of impairment please use WVDEP's most recent 303d list found at this website: http://www.dep.wv.gov/WWE/watershed/IR/Pages/303d_305b.aspx

Part III.D.1.a.

13. Locations & Pollutants of Concern

Name of receiving stream	Impaired? Yes or No	Parameters of impairment	Has a TMDL been established? Yes or No
Deckers Creek	No		Yes – aluminum, iron, manganese, pH
Falling Run	No		No
Hartman Run	No		Yes – aluminum, iron, manganese, pH
Monongahela River	Yes	Fecal Coliform, PCBs	Yes – aluminum, iron, manganese, pH
Popenoe Run	No		No
West Run	No		Yes – aluminum, iron, manganese, pH

Please add additional pages if needed to list your Receiving Waterbodies and any impairments.

****IMPORTANT****

MS4s that discharge into a receiving water which has been listed on the West Virginia Section 303(d) list of impaired waters, and with discharges that contain the pollutant(s) for which the water body is impaired, ***must document in the SWMP how the BMPs will control the discharge of the pollutant(s) of concern.*** They must demonstrate that there will be no increase of the pollutants of concern. As you work your way through, describing the various practices, consider how that BMP will address or control the pollutant of concern.

If your MS4 discharges into a water body with an approved TMDL, and that TMDL contains requirements for control of pollutants from the MS4 stormwater discharges, then your SWMP must include BMPs ***specifically targeted to achieve the wasteload allocations prescribed by the TMDL.*** A monitoring component to assess the effectiveness of the BMPs in achieving the wasteload allocations must also be included in the SWMP. Monitoring shall be specific for the pollutants of concern and be of sufficient frequency to determine if the stormwater BMPs are adequate to meet wasteload allocations. Monitoring can entail a number of activities including but not limited to: outfall monitoring, in-stream monitoring, and/or modeling.

14.a. List and quantify the BMPs you plan to implement to address each impairment. For each BMP describe how it is expected to control the pollutant of concern.

As listed in the table above, WVU drains to six watersheds. TMDLs addressing aluminum, iron, pH, and manganese are written for four of these. This SWMP does not address these pollutants for two reasons. First, the streams are not impaired from these pollutants (2010 WV DEP 303(d) List, p.13). Second, these pollutants are not related to stormwater runoff, but other sources such as abandoned mine drainage and regulated point source discharges.

The Monongahela River is the only water body to which WVU drains that is listed on the 303(d) list. The Monongahela is impaired by Fecal Coliform and PCBs. Although PCBs are a pollutant of concern, they were banned in 1979 and are no longer manufactured. Therefore, sources of PCBs to the Monongahela are limited to sources such as disturbed sediments, uncontrolled scrap yards, and nonpoint source runoff washing traces of the material into the waterway from historic deposits. EPA states that “natural attenuation may be the best implementation method” to remove PCBs from surface water. WVU is not aware of any mechanism or source to limit PCBs from entering the Monongahela River and so this pollutant is not addressed in the SWMP.

Stormwater is a potential source of Fecal Coliform pollution. As runoff from all six of the WVU watersheds ultimately drains to the Monongahela, WVU will consider implementing BMPs that will control discharge of Fecal Coliform across its Morgantown area campuses. A preliminary assessment reveals that the sources of Fecal Coliform at WVU’s Morgantown area campuses and facilities that could discharge from the MS4 are pet waste, manure management facilities at the Animal Science Farm, and potential combined sewer overflows under the Downtown Campus. This SWMP addresses these potential sources of Fecal Coliform in the following ways:

- Pet waste education. Interviews with WVU staff and a preliminary survey of areas of campus grounds reveal that incidents of improper disposal of pet waste on campus are not widespread. WVU will include information on proper pet waste disposal in its Education

and Outreach Program (BMP 1-1) and promote the use of the hotline as a way for the general public to report improper waste management (BMP 3-6).

- Animal Science Farm. WVU manages the manure generated by the pigs, cattle, and sheep at the Animal Science Farm with the three facilities recommended by the Animal Science Farm's Conservation Plan. WVU wrote this plan based on USDA-NRCS guidelines.

The first is a new 500,000-gallon manure storage lagoon completed in November 2010. This state-of-the-art BMP will replace the existing lagoon and improve manure management. Liquid waste from the manure pit drains into the manure tank and then is spread on pasture and crop fields when conditions are appropriate. Solids are used in the extensive composting operation on site.

The second facility drains the liquid from the manure and runs it through a 1,100-foot septic field to discharge in a pond before flowing into the West Run. The solids from this operation are also used at the compost facility.

No Fecal Coliform should discharge from the land application or from the processed compost. On occasion, water discharges from the two ponds at the Farm. WVU will monitor discharge to the West Run from the ponds to identify if these are sources of Fecal Coliform (BMP 5-6). WVU will report the results of this monitoring in its first Annual Report.

The third facility is a 450-foot flat-bottom swale that infiltrates any manure liquid from a small portion of the farm. Most of the runoff infiltrates and evapotranspires. On the rare occasion that runoff makes it to the end of the swale, it discharges to sanitary sewer and is therefore not a source of Fecal Coliform.

- Combined sewer mapping. WVU's Downtown Campus may have areas where combined sewer overflows contribute Fecal Coliform to the Falling Run and Monongahela River during high runoff events. Through the MS4 mapping process, WVU will identify any of the interconnections for which WVU is responsible (BMP 3-1) and develop a Plan of Action to address them (BMP 3-2). WVU will also educate the general public about the impacts of runoff and impervious cover on water resources to raise awareness of how a combined sewer conveys stormwater and sanitary sewage (BMP 1-1).

Tip: BMPs for Fecal Coliform might include a robust pet waste program; sewer line inspections and repair; procedures for identifying and repairing failing septic tanks.

Your plan needs to be quantifiable. For example: how many sewer line inspections do you plan to conduct each year? How many and of what sort of outreach campaigns to the community about pet waste do you plan to conduct, etc.?

14.b. Describe your monitoring plan for impaired waterbodies and those with TMDLs. Give locations and frequencies.

WVU will track the progress of the Monongahela Fecal Coliform TMDL. When DEP approves the TMDL, WVU will amend its SWMP within six months to address any wasteload allocations prescribed. As stated above (§14.a), WVU will monitor outfalls from the ponds at the Animal Science Farm twice per year to identify if they are sources of Fecal Coliform.

14.c. If visual documentation of removal of pollutant sources, is a component of your plan please describe fully. For example, do you plan to use before and after photos?

WVU will conduct a visual IIDE-type monitoring and take before and after photos of projects undertaken, as needed, that will reduce the discharge of Fecal Coliform into the Monongahela River. WVU will also include photos of each outfall as part of the visual assessment for the Illicit Discharge Detection and Elimination Program.

Evaluating the effectiveness of your SWMP for impaired waterbodies/TMDLs

14.d. Explain how your approach is expected to achieve wasteload allocations for waterbodies with established TMDLs. Discuss flow monitoring, outfall monitoring, in-stream monitoring, modeling, and/or other methodology to evaluate effectiveness.

WVU's Morgantown area campuses do not discharge to any streams for which TMDLs have been approved. No wasteload allocations have been assigned.

If a TMDL is approved during this permit cycle by USEPA for any waterbody into which the MS4 discharges, WVU will review the TMDL and modify the SWMP if necessary to include BMPs specifically targeted to achieve the wasteload allocations prescribed in the TMDL within six months TMDL approval.

14.e. Explain how will you determine if your SWMP and mix of BMP's need to be modified to meet wasteload allocations?

Because no TMDL has been developed for any pollutants of concern listed on the 303(d) list, no wasteload allocation have been defined for WVU.

You are required to evaluate the effectiveness of your stormwater management program and your chosen BMP's. There are a variety of ways to do this. By identifying appropriate evaluation methods early, you then have a road map that will guide overall program implementation and BMP implementation. For example, you might analyze all your monitoring data, assess how aggressively your chosen BMPs were used, and describe any reductions in the pollutant of concern.