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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 IIA.

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

Marshall University

1.b. Mailing Address:

One John Marshall Drive, Huntington, West Virginia 25755-5320

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	Karen Kirtley, Ed.D.
1.d. Title	Assistant Vice President for Administration
1.e. Phone	(304) 696 3328
1.f. Email address	kirtley@marshall.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 Karen E. Kirtley
(Mayor or Principle Executive Officer)

2.b. Print name Karen E. Kirtley

2.c. Title Assistant Vice President for Administration

2.d. Date May 2, 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: Area is unknown, but is believed minimal. City of Huntington-owned storm sewers running under city streets along the campus perimeter could direct stormwater from outside the Marshall MS4 boundary into the MS4 permit boundary.

4.b. Area (in acres) within current corporate or jurisdictional boundaries: 112 acres

4.c. For all MS4s, population (using the most recent U.S. Census data) for area served: 15,500
(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.)

Part IV.B.

4.d. Latitude and Longitude of representative outfall:
Longitude- Degrees: Minutes: Seconds: 38° 25' 23.99"
Latitude- Degrees: Minutes: Seconds: 82° 25' 27.90"

> 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. Manhole near 19th Street and College Avenue.

Part IV.B.

4.f. Describe your monitoring plan to include the frequency and parameters.

Marshall University will sample one representative outfall located in a densely populated area twice per year. Samples will be obtained twice per year, once in the spring and once in the fall. Samples will be obtained during the "first flush." Parameters to be included in the analysis will include:

Parameter	EPA Method No.	Method Detection Limit (mg/1)
Total Kjeldahl Nitrogen	351.4	0.03
Nitrate Nitrogen	300.0	0.002
Nitrite Nitrogen	300.0	0.004
Total Phosphorous	365.4	0.01

Storm Sewer Infrastructure

Provide the most accurate number possible.

S.a. Storm sewers, in feet	54,000
S.b. Open ditches, in feet	0
S.c. Outfalls	10
S.d. Catch basins	230
S.e. Detention* facilities	1
S.f. Retention** facilities	0
S.g. Treatment facilities	0
S.h. Regional storm water facilities	0

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? No

6.b. Does your MS4 discharge into WVDOT storm sewer systems or right-of-ways? No

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, storm drains connect to the City of Huntington storm sewer system.

8. Does your municipality contain combined sewer systems? No
9.a. What percentage is drained by Combined Sewer System? None
9.b. What percentage is drained by separate storm sewer system? Entire Campus

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 – See MCM #6 for additional information.

> 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? 4

(Item 11 is intentionally empty)

Map Requirements

Please provide a legible map that identifies the following information:

12.a. City, County or jurisdiction boundaries
12.b. State or Federal operated vocational/college/university campuses and military institutions
12.c. Urban area as defined by the 2000 Census, use 2010 Census data if available
12.d. Municipal, County, or State wastewater treatment plants and their associated outfalls
12.e. Landfills
12.f. Municipal, County or State operated vehicle or fleet maintenance garages
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.
12.h. Arterial, Municipal, or State roads
12.i. Stormwater discharge points and receiving streams
12.j. Streams and waterways within the MS4
12.k. Delineation of watershed area that drains into your MS4

Part II.C.b.3.a.iv.
12.1. Submit paper maps folded to 8.5" x 11".

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
Ohio River (Lower)	Yes	Bacteria, Iron	Yes- Dioxin, PCB's

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, Marshall University drains to only one watershed. TMDLs addressing dioxin and PCBs are written for the watershed. This SWMP does not address these pollutants. There are no sources of dioxin on the campus of Marshall University. Although PCBs are a pollutant of concern, they were banned in 1979 and are no long manufactured. Therefore, sources of PCBs to the Ohio River (Lower) are limited to sources such as disturbed sediments, uncontrolled scrap yards, and nonpoint source runoff washing traces of material into the waterway from historic deposits.

Stormwater is a potential source of Bacteria pollution. As runoff from the campus ultimately drains to the Ohio River (Lower), Marshall will consider implementing BMP's that will control discharge of bacteria across its campus. A preliminary assessment reveals that the sources of Bacteria at Marshall's campus that could discharge from the MS4 are pet waste and potential combined sewers. This SWMP addresses these potential sources of bacteria in the following ways:

- Pet waste education. Although it is prohibited for students to have pets in the dorm rooms, Marshall does realized that they have an open campus and that it is located in the middle of the City of Huntington. This allows the opportunity for the public to bring their animals on to the grounds of the campus. Marshall does not believe that improper disposal of pet waste on campus is widespread. However, Marshall will include information on proper pet waste disposal on its stormwater webpage and promote the use of the physical plant's hotline as a way for the students to report improper waste management
- Combined Sewers. Marshall currently has a preliminary storm sewer and utility map. This map is not complete in that it does not include locations of storm sewers for all parts of the University property. Marshall will work toward updating and maintaining a map showing the storm sewer system. If a cross connection is located during the process of mapping the system, Marshall will implement measures to eliminate the combined sewer. Marshall University has a history with providing separate storm water and sanitary sewer lines on new construction projects. For the last 12 years new construction has separate sewer systems. Marshall will continue with this practice for future construction projects.

Stormwater is a potential source of iron pollution. Marshall will consider implementing BMP's that will control discharge of iron across its campus. A preliminary assessment reveals that the source of iron on Marshall's campus that could discharge from the MS4 is runoff from construction sites. This SWMP addresses the potential source of iron in the following ways:

- Construction projects: Contractors will be required to obtain the necessary permits for construction (Construction Stormwater NPDES permit). Contractors must abide by the rules and regulations of the permit and must use appropriate BMPs as stated in the West Virginia Erosion and Sediment Control BMP Manual (2006). A member of the staff will review the Contractor's permit to verify that appropriate BMPs will be used. During the construction phase, a member of the staff will perform monthly inspections of the construction site to determine if BMPs are in place and function properly.

> 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 son of outreach campaigns to the community about pet waste do you plan to conduct, etc.?

Part III.B.1.b & Part III.D.2

14.b. Describe your monitoring plan for impaired waterbodies and those with TMDLs. Give locations and frequencies.
When WVDEP approves TMDL for iron and bacteria, Marshall will amend its SWMP within six months to address any wasteload allocations prescribed. As stated above, Marshall will map the current storm sewer system to locate any sources of combined sewers and will monitor the construction process of new projects to verify that appropriate BMPs are in place.

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?
Photographs will be taken before, during and at the end of new construction projects.

<u>Evaluating the effectiveness of your SWMP for impaired waterbodies/TMDLs</u>

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. Not Applicable

14.e. Explain how will you determine if your SWMP and mix of BMP's need to be modified to meet wasteload allocations? Not Applicable

> 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.

Section III. Minimum Control Measures

Instructions:

For each Minimum Control Measure (MCM), state your control objective and describe BMPs selected for implementation in your jurisdiction. For each BMP, include a brief description, measurable goals, and milestones as appropriate towards achieving each goal. Indicate if the BMP is part of an existing program and if another entity will share responsibility for implementing that BMP.

In cases where another entity will perform one or more BMPs or components thereof on behalf of the permittee, specifically describe the activities each entity will conduct and include reference to legal agreement where appropriate.

Describe as many BMPs as necessary to fulfill the requirements of the small MS4 General Permit. If you need more space attach additional pages.

Measurable Goals

Measurable goals are numeric or narrative standards used to gauge program effectiveness. These are design objectives or goals that quantify the progress of program implementation. For each BMP a measurable goal must be established. Describe what you expect to accomplish or achieve by certain dates or milestones, when you implement that particular BMP. Your expected outcome or accomplishment should be expressed as a measurable goal. You should have a variety of short and long term goals.

Milestones are a quantifiable target to measure progress toward achieving the activity or implementation of that BMP.

Additional guidance on selecting BMPs and developing measurable goals can be found at the following EPA Website: www.epa.gov/npdes/stormwater/measurablegoals/index.ctm

USEPA's measureable goal guidance can be found here:
http://cfpub.epa.gov/npdes/stormwater/measurablegoals/index.cfm

Your stormwater management program should specify:

- *What* needs to happen (Specific stormwater control measure)
- *Who* needs to do it (Which department of the MS4 will be implementing this stormwater control measure?)
- *How much* they need to do (milestones and measurable goals)
- *When* they need to get it done
- *Where* it is to be done

There must be specific performance measures. Without a goal, you will have a difficult time measuring progress.

Public Education and Outreach on Storm Water Impacts-MCM #1

Part II.C.b.1

Responsible Person:

Identify the responsible person(s) for implementing this MCM. (There may be more than one person or different departments that provide outreach to various targeted groups. If so, discuss.)

15.a.	Name:	Karen E. Kirtley
15.b.	Title:	Assistant Vice President for Administration
15.c.	Department:	Administration
15.d.	Address:	One John Marshall Drive, Huntington, West Virginia 25755-5320
15.e.	Phone number:	(304) 696-3328
15.f.	Email address:	kirtley@marshall.edu

Part II.C.b.1.

15.g. State your overall objective for this minimum control measure.

Marshall University will implement a public education program to educate the public on the impacts of stormwater discharges to water bodies. Students, employees, contractors, and the general public will be the groups targeted for education and outreach to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts.

15.h. State and describe your BMPs. Indicate if BMP are part of your existing program.

a. Create a stormwater webpage to provide information to students, faculty, staff, and the public on the impacts of storm water runoff and what students, faculty, staff, and the public can do to reduce stormwater pollution. This will take place one year after the final approval of the permit.
b. Include stormwater pollution and its impacts as part of the curriculum.
c. Provide information regarding recycling, sustainability and waste management on the Marshall University website. Work with the campus student organizations to advance these issues. Student organizations will be determined one year after the final approval of the permit.
d. Marshall University will encourage and support articles in the student .newspaper (Parthenon) regarding storm water, pollution prevention, recycling, and sustainability. Marshall University will provide information for newspaper articles and will rely heavily on information obtained from the Center for Watershed Protection (www.cwp.org). The first article will be published within 6 months after the final approval of the permit.
e. Marshall University will publicize the physical plant telephone number for use by students and staff to report suspected illicit discharges or other pollution concerns. The telephone number will be published in articles in the Parthenon and will be posted on the storm water website. Information will be provided to the student newspaper and website pertaining to when it is appropriate to contact the physical plant for suspected illicit discharges or other pollution concerns. This will take place 6 months after the final approval of the permit.

The above BMPs are new. They are not part of an existing program.

15.i. Is another entity sharing responsibility for the BMP? If so, who? No

MCM Components

Part II.C.b.1.a.i

15.j. Describe your education and outreach strategy targeting the general public.

a. Create a stormwater webpage to provide information to students, faculty, staff, and the public on the impacts of stormwater runoff and what students, faculty, staff, and the public can do to reduce stormwater pollution.

b. Include stormwater pollution and its impacts as part of the curriculum. Stormwater surveys will be performed at the beginning, during and at the end of the curriculum to gauge change in awareness. Classes to have storm water pollution as part of it curriculum will be determined one year from the date of final approval of the permit. Sources for the curriculum and credit hours will be determined within the same timeframe.

c. Provide information regarding recycling, sustainability and waste management on the Marshall University website. Work with the campus student organizations to advance these issues.

d. Marshall University will encourage and support articles in the student newspaper (Parthenon) regarding stormwater, pollution prevention, recycling, and sustainability. Marshall University will provide information for newspaper articles.

e. Marshall University will publicize the physical plant telephone number for use by students and staff to report suspected illicit discharges or other pollution concerns.

Part II.C.a.ii

15.k. Describe your education and outreach strategy targeting businesses including home-based and mobile businesses. Not Applicable

Part II.C.b.l.a.iii.

15.1. Describe your education and outreach strategy targeting homeowners, landscapers, and property managers. Not Applicable

Part II.C.b.l.a.iv

15.m. Describe your education and outreach strategy targeting engineers, contractors, developers, review staff, and land use planners.

Marshall University will educate all contractors coming onto campus to do work by placing an 'educational stormwater page' in the contract document. This educational page will contain specific information about certain prohibited activities such as dumping or placing liquid or solid wastes on the ground, street, grass, sidewalk, gutter or storm drain. This educational page will also explain why certain activities have the potential to cause pollution in stormwater runoff. Certain practices such as rinsing out paint brushes, or washing down equipment will be specifically discussed on this page. Marshall intends to have this educational page ready within six months of final approval of the permit so that all contractors coming onto the campus, this date and beyond will receive this information. Marshall will disseminate this page to all our procurement personnel who deal with contracts and contractors so they will know that this page is mandatory for placement in all contracts. Staff that oversee procurement and/or contractor work will be trained on proper stormwater management and what to look for onsite to prevent stormwater pollution. On an annual basis Marshall will tally the number of contractors that received this page in their contracts.

Schedule

Part II.C.a.l

15.n. Provide a schedule for implementing each component, including dates for interim and full implementation. Webpage and curriculum will be implemented within one year of final approval of the permit.

Measurable Goals

Part II.B.4

15.o. List and fully describe your Measurable goal(s) for this MCM.

a. Goal 1 - Create webpage during the first year of the program.
Goal 2 - Track the number of bits or visits to the webpage.
b. Track the number of classes *and* the number of students enrolled in those classes incorporating storm water pollution and its impacts as part of the curriculum.
c. Evaluate the quantity of materials recycled each year. Document sustainability measures adopted. Information on this BMP will be included in the annual report.
d. Evaluate the number of articles appearing in the newspaper annually and include in the annual report.
e. Track the number of calls received at the physical plant related to illicit discharges or pollution concerns.
f. Creation of an educational page, placement into contracts, and annually counting the number of contractors that received this page in their contracts.

Tracking

Part II.C.b.1.c.

15.p. Describe your plan to track the activities associated with this MCM.

a. Goal 1- Create webpage during the first year of the program.
Goal 2– Track the number of hits or visits to the webpage.
b. Track the number of classes and the number of students enrolled in those classes incorporating storm water pollution and its impacts as part of the curriculum. Students will be surveyed at the beginning, during, and at the end of the curriculum to gauge change in awareness. This will be documented and will be included in the annual report.
c. Evaluate the quantity of materials recycled each year. Document sustainability measures adopted. Information on this BMP will be included in the annual report.
d. Evaluate the number of articles appearing in the newspaper annually and include in the annual report.
e. Track the number of calls received at the physical plant related to illicit discharges or pollution concerns. These calls will be tallied and placed in the annual report to see the impact of outreach during the permit period.
f. Survey staff that will oversee the contractors on-site and ask specific stormwater questions regarding the actions of the contractor. The surveys will be documented and will be included in the annual report.

Evaluation

Part II.B.7 & Part II.C.b.1.b.

15.q. Explain how you plan to gauge the effectiveness of your public education and outreach efforts.

a. Goal 1 - Create webpage during the first year of the program.
   Goal 2 - Track the number of hits or visits to the webpage.
b. Track the number of classes and the number of students enrolled in those classes incorporating stormwater pollution and its impacts as part of the curriculum. Evaluate the student surveys at the beginning, during, and at the end of the curriculum during the permit period. Adjust curriculum if progress in survey evaluations are not satisfactory.
c. Evaluate the quantity of materials recycled each year. Document sustainability measures adopted. Information on this BMP will be included in the annual report. Evaluate the quantity of materials recycled during the permit period to evaluate if outreach material is effective.
d. Evaluate the number of articles appearing in the newspaper annually and include in the annual report.
e. Track the number of calls received at the physical plant related to illicit discharges or pollution concerns. These calls will be tallied and placed in the annual report to see the impact of outreach during the permit period.
f. Survey staff that will oversee the contractors on-site and ask specific stormwater questions regarding the actions of the contractor. The surveys will be documented and will be included in the annual report.

TIP: Changes in awareness, knowledge, and attitudes can be measured effectively using statistically valid surveys or questionnaires. Other approaches include monitoring attendance at public meetings, tracking requests for information, and counting hits on web sites. Keep in mind that simply reporting the number of meetings held or the number of brochures printed is not an effective method to document changes in stormwater knowledge.

Assess behavior changes. Measurement of change in pollution-generating behavior in a watershed can be an important indicator of progress toward achieving SWMP goals. Examples include: A. Changes in lawn fertilizer sales in response to a publicity campaign, B. Pounds of hazardous waste turned in at collection events, participation in streambank clean-up events, and C. Sign-ups for environmental action pledges.

Public Involvement and Participation–MCM #2

Part II.C.b.2

Responsible Person:

Identify the responsible person(s) for implementing this MCM. There may be more than one person or different departments responsible for various projects. If so, discuss.

16.a.	Name:	Karen E. Kirtley
16.b.	Title:	Assistant Vice President for Administration
16.c.	Department:	Administration
16.d.	Address:	One John Marshall Drive, Huntington, West Virginia 25755-5320
16.e.	Phone number:	(304) 696-3328
16.f.	Email address:	kirtley@marshall.edu

16.g. State your overall objective for this minimum control measure.

Marshall University will provide opportunity for public involvement and participation in the implementation of the stormwater management program.

16.h. State and describe your BMPs. Indicate if the BMP is part of the existing program.

a. Marshall University will publish the facility's MS4 stormwater management program, plan, updates to the plan, and annual reports on the University's website.
b. Involve students as part of classroom activity/coursework to assist with the development of stormwater system inventory and mapping.

16.i. Is another entity sharing responsibility for the BMP? If so, who? No

MCM Components

Part II.C.b.2.

16.j. Describe at least two methods you plan to use to engage the public in your SWMP.

a. Marshall University will publish the facility's MS4 stormwater management program, plan, updates to the plan, and annual reports on the University's website.
b. Involve students as part of classroom activity/coursework to assist with the development of stormwater system inventory and mapping.
c. Marshall University will hold two contests, the first open to students to create catchy slogans/phrases to make people (student and faculty/staff) aware of how their actions could cause pollution in stormwater runoff. These slogans will be used in the design of posters that will constitute the second contest. The posters will contain artwork and the winning slogans of the first contest. The posters will be displayed in appropriate locations around campus, specifically in the cafeteria, dormitories and various offices where both students and staff frequent. The contest for the slogans will begin in the fall semester of 2011. The poster contest will start during the spring semester of 2012. Marshall will utilize the principles contained in the website: "Water Words That Work," in the rules for both contests in order to make the slogans and the test on the posters effective and understandable (www.waterwordsthatwork.com). In other words, not using 'shop talk.'

Marshall will choose at least three winning posters to have art students professionally print/duplicate at least ten copies of each for placement around campus. Posters will be in place by the fall semester 2012. The winning designs will display the student's name who

designed the poster and the slogan. All posters will contain the URL for Marshall's stormwater webpage. A press release about the winners will be issued to the Parthenon newspaper for publication.

Part II.C.b.2.a

16.k. Describe how you will accommodate public participation in the decision making process for your SWMP.

a. Through public awareness in publishing stormwater documents on the website and opportunities for student participation.
b. Judges for slogans and poster contests will potentially include one faculty, one Huntington official, and one WVDEP official.

Part II.C.b.2.b

16.1. Describe your communication process for notifying groups of opportunities to become involved in stormwater activities in your watershed(s).Webpage will be utilized, advertisement in the student newspaper (Parthenon), information will be placed on campus calendars/message boards and bi-annual flyers will be passed out by volunteers. Posters from the contest will be displayed annually.

Part II.C.b.2.c

16.m. List the URL of your *Stormwater* website. Website will be established within one year after the final approval of the permit.

Schedule

Part II.C.a.1l

l6.n. Provide a timeline of implementation of each component of your program for this MCM, including dates for interim and full implementation. Website will be established within one year after the final approval of the permit. Staff will attempt to involve students one year after the final approval of the permit and beyond.

Measurable Goals

Part IV.A. & Part II.B.4

16.o. List and fully describe your measurable goal(s) for this MCM.

a. Marshall will track the number of hits or visits to the stormwater webpage. A quiz or survey will be placed on Marshall's stormwater website inviting students and staff to answer certain questions about the posters/flyers and what they have learned pertaining to storm water management.
b. As time and opportunity allows, students will assist in developing the inventory of campus stormwater system. This information will be used to create a storm water system map.
c. Marshall will track the slogans and the artwork from the contests to see how they are used in other outreach opportunities, such as flyers and website pages.

Tracking

Part II.B.7.

16.p. Describe your plan for tracking activities associated with this MCM.

a. Marshall will track the number of hits or visits to the storm water webpage and will track the number of times someone has utilized the quiz or survey.
b. As time and opportunity allows, students will assist in developing the inventory of campus stormwater system. This information will be used to create a stormwater system map.

c. Marshall will track the slogans and the artwork from the contests to see how they are used in other outreach opportunities, such as flyers and website pages.

Evaluation

Part II.B.7

16.q. Explain how you plan to gauge the effectiveness of your Public Involvement and Participation program.

a. Marshall will track the number of hits or visits to the stormwater webpage.
b. A quiz or survey will be placed on Marshall's stormwater website inviting students and staff to answer certain questions about the stormwater program. Marshall will gauge the effectiveness of the program based off of the answers to the quiz/survey and will adjust their approach accordingly.

Illicit Discharge Detection and Elimination – MCM #3

Part II.C.b.3.

Responsible Person

Identify the responsible person(s) for implementing this MCM. If there is more than one person or department responsible for implementation of this MCM, please discuss.

17.a.	Name:	Karen E. Kirtley [Brian Carrico]
17.b.	Title:	Assistant Vice President for Administration (Director of Health & Safety]
17.c.	Department:	Administration
17.d.	Address:	One John Marshall Drive, Huntington, West Virginia 25755-5320
17.e.	Phone number:	(304) 696-3328 [(304) 696-3432]
17.f.	Email address:	kirtley@marshall.edu [carrico8@marshall.edu]

17.g. Is another entity sharing responsibility for the MCM? If so, who? No

Control Objective & BMPs

17.h. State your overall objective for this MCM.

Marshall University will develop, implement and enforce a program to detect and eliminate illicit discharges.

17.i. State and describe your BMPs. Indicate if any BMPs are part of your existing program.

a. Marshall University currently has a very preliminary storm sewer and utility map. This map is not complete in that it does not include locations of storm sewers for all parts of the University property. Marshall University will work toward updating and maintaining a map showing the storm sewer system. This map will be used for illicit discharge detection and elimination. The campus will be divided up in sectors. Once a sector has been mapped another sector will be started. Mapping will start within six months after final approval of the permit.

b. Conduct observations of storm water system/outfalls for evidence of illicit discharges.

c. Select and sample one representative discharge point as described in Part 1 of this application.

MCM Components

Part II.C.b.3.a.

17.j. Do you have a current map of your municipal storm sewer system?

No. The current map is limited in the areas covered and detail of the stormwater system.

Do your map components include/do you plan to include:

Part II.C.b.3.ai

17.k. All known storm sewer outfalls?

As described in MCM #2, Marshall plans to work on completing the stormwater map and inventory over time. This will include outfalls and connections to the City of Huntington system.

17.l. Receiving waters? See 17.k. above.

17.m. Structural BMP's owned, operated or maintained by the permittee? See 17.k. above.

17.n. The location and type of all other stormwater conveyances located within the boundaries of the permittees MS4 watershed? See 17.k. above.

17.o. Updating the known connections to the municipal separate storm sewer authorized after July 22, 2009? Yes, future connections or additions will be added to the MS4 mapping.

17.p. Geographic areas that discharge stormwater into the permittees MS4, which may not be located within the municipal boundary? We believe these areas are minimal, if present at all.

> Tip: Your map should show new outfalls, structural stormwater BMPs owned by the MS4, other stormwater conveyances, and other pertinent information. You must update your map on an annual basis.

Part II.C.b.3.b.

17.q. Do you have an IDDE Ordinance? No.

Part II.C.b.3.b.

17.r. Describe your Ordinance review and update procedure, including milestones of IDDE Ordinance review. Marshall will establish an IDDE Plan of Action that will effectively prohibit non-stormwater, illegal discharges and/or dumping into the storm system. These policies will be placed in the student handbook, new hire handbook, distributed to existing faculty, distributed to contractors/vendors and posted on the website. Marshall will complete the IDDE Plan of Action within one year after final approval of the permit. Marshall will consider input from the staff, students and contractors/vendors annually to ensure it is effective in finding, remediating and preventing illicit discharges.

Does your IDDE Ordinance prohibit the following:

Part II.C.b.3.ii

17.s. Discharges from hyperchlorinated water line flushing? Yes or No. If not, how are these discharges handled when they occur?

According to EPA's – Stormwater Phase II Final Rule, Fact Sheet 2.5 – Illicit Discharge Detection and Elimination Minimum Control Measure January 2000 [Revised December 2005), the MS4 program does not need to address hyperchlorinated water line flushing. Marshall does not consider this discharge as a significant contributor of pollutants in the MS4.

17.t. Lawn watering and other irrigation runoff? Yes or No. If not, have you addressed lawn watering in your public education and outreach activities?

According to EPA's – Stormwater Phase II Final Rule, Fact Sheet 2.5 – Illicit Discharge Detection and Elimination Minimum Control Measure January 2000 [Revised December 2005] the MS4 program does not need to address lawn watering or other irrigation runoff. Marshall does not consider this discharge as a significant contributor of pollutants in the MS4.

17.u. Street, parking lot, and sidewalk wash water, and external building wash down? Yes or No. If not, have you addressed these types of runoff in your public education and outreach activities?

According to EPA's Stormwater Phase II Final Rule, Fact Sheet 2.5 – Illicit Discharge Detection and Elimination Minimum Control Measure January 2000 [Revised December 2005], the MS4 program does not need to address street, parking lot, and sidewalk wash water. Marshall does not consider this discharge as a significant contributor of pollutants in the MS4.

The frequency of the above discharges is not anticipated to be high.

Part II.C.b.3.b.v.

17.v. Does your IDDE Ordinance include escalating enforcement procedures and actions? N/A

Part II.C.b.3.b.v.

17.w. Briefly describe your enforcement strategy. No enforcement since this is a university campus.

> Tip: The IDDE Ordinance shall be reviewed on an annual basis. The Ordinance shall be reviewed to ensure that it contains the necessary required information that the 2009 small MS4 general permit requires.
>
> Your Ordinance is required to prohibit and eliminate non stormwater discharges, illegal discharges, and/or dumping into the storm sewer system, and any necessary procedures for evaluation, assessment, investigation and enforcement to prevent polluted stormwater discharges from entering local streams, lakes or rivers. Except for newly permitted entities, MS4's should already have this Ordinance in place.

Part II.C.b.3.c.

17.x. Describe your field assessment activities, including how many assessments you plan to conduct each year.

a. Marshall University will develop a prioritized list of locations across the campus where a greater potential may exist for illicit discharges to the stormwater system. These locations will be monitored on a quarterly basis. Starting in the spring of 2012 Marshall will research the infrastructure as it becomes available through the mapping system.
b. Checklists, inspection forms and written protocol used for the IDDE program will be developed within this first year, so that it is ready for the first reconnaissance mission in spring of 2012. The source for our checklists and forms will be the IDDE Manual published by the Center for Watershed Protection.

c. Marshall University will conduct outfall/manhole reconnaissance twice per month. We will have a two member team walk drainage areas in the selected sub-watershed. All sub-watersheds on Marshall 's campus will receive reconnaissance once per year. Our priority areas will be inspected once per quarter.
d. Outfalls, pipes, and catch basins will be screened for any dry weather flow. The flow will be checked for discoloration, odors, including sewage and chlorine in accordance to our inspection protocol and recorded on the inspection form. When non-flowing outfalls and pipes are observed, Marshall will utilize the protocol outlined in the IDDE Guidance Manual recommended by WVDEP, including off hours monitoring, caulk dams, and optical brighteners.
e. When intermittent or non-intermittent flows are discovered. Marshall will initiate procedures to determine whether or not the flow is ground or spring water or if it is indeed an illicit discharge.

Part II.C.b.3.c.i.

17.y. Describe how you will locate "priority areas".
a. Priority areas will be based on the probability for contaminants to be introduced into the stormwater system.
b. Marshall will research the infrastructure as it becomes available through the mapping system. Priority areas will be prioritized based on age of the system.

Part II.C.b.3.c.iii

17.z. Describe your procedures for characterization of illicit discharges.
Conduct visual observations and screenings. Follow-up monitoring on suspicious discharges (i.e., dye-tests, smoke tests), and removal of illicit discharges that are found due to screening and monitoring of priority areas once per quarter. Non-priority areas will be monitored once a year.

Part II.C.b.3.c.iv

17.aa. Describe your procedures for tracing the source of the discharge.
a. Promptly investigate suspected illicit discharges using the storm sewer map to help identify the location and source of the discharge. Evaluate options, select the preferred option, and eliminate the source of the illicit discharge.

Part II.C.b.3.c.v

17.bb. Describe your procedures for removing the source of the discharge.
In the event that the discharge is caused by something that cannot be stopped immediately, Marshall will immediately start the process (work orders, etc.), to remove the cause of the discharge. For instance, if a sewer line is broken and raw sewage is flowing into the storm system, an emergency work order will be initiated. In the event that the discharge is coming from a site off campus, the City of Huntington public works department will be notified immediately: the notification will be properly documented and maintained on campus at the physical plant. All of Marshall's activities to inspect and remove illicit discharges will be documented on a spreadsheet and updated on a quarterly basis. Marshall will rely heavily on the procedures defined in the Center for Watershed Protection publication, Illicit Discharge Detection and Elimination (2004), to develop its procedures for characterization, tracing and removing the sources of illicit discharges.

Tip: Each permittee shall continue to assess, update and implement an ongoing program to detect and address non-stormwater discharges, spills, illicit connections and illegal dumping into the MS4.

C.b.3.d.

17.cc. Describe how you will inform public employees, businesses and the general public of hazards associated with illegal discharges and improper disposal of waste. Training of employees.

Part II.C.b.3.f.

17.dd. Describe your plan to training your staff on the identification and reporting of illicit discharges. Include the number of training sessions planned for each year.

Marshall will train all staff responsible for field assessments on the identification and reporting of illicit discharges. Marshall will also train administrative staff who support field staff on how to administer the IDDE program. Marshall will also train other field staff who may come into contact with illicit discharge through their field work. Training will occur annually.

Schedule

Part II.C.a.1

17.ee. Describe how and when you will implement each component of program, including dates for interim and full implementation.

Monitoring of priority areas will be implemented during Spring of 2012. Development of the stormwater system map will begin within six months after final approval of the permit and continue until completed. Storm system mapping will be updated on an ongoing basis to document revisions or upgrades to the system.

Measurable Goals

Part II.B.4

17.ff. List and fully describe your Measurable goal(s) for this MCM:

a. Evaluate stormwater map and inventory annually to determine areas where additional information is needed. Work with students, faculty, and staff to collect information and update map.
b. Marshall University staff will conduct dry weather observations in the stormwater system using visual observation, odor, and other indicators to identify possible illicit discharges.
c. The prioritized list of locations will be developed by the end of 2011. Illicit discharge monitoring visits will be documented through the Physical Plant's Maximo work order system.
d. Track the number of illicit discharges investigated and eliminated through the Physical Plant's Maximo work order system.

Tracking:

Part II.C.b.3.d.ii & Part II.C.b.3.e.

17.gg. Describe your procedures for tracking activities related to each component of this MCM. a. Continue progress on updating map to keep it current and up-to-date.

b. Marshall University will maintain records of when and where observations were made and the number of illicit discharges detected or suspected through the Physical Plant's Maximo work order system. Observations will be made at least quarterly.

c. Develop prioritized list by the end of 2011. Conduct quarterly observations of each location.

d. Timely eliminations of illicit discharges once identified.

Evaluation

Part II. B.7

17.hh. Fully explain how you plan to gauge the effectiveness of your IDDE program.

Physical Plant Maximo work order system will be used to track and maintain records. The database will be utilized for information such as tracking the number and type of spills, illicit discharges discovered and identified, inspections conducted, illicit connections removed, and any feedback received from public education efforts. Over the period of the permit the information will be used to determine trends and whether or not the IDDE program is effective.

Tip: The IDDE program evaluation can consist of a data base that contains the information including tracking the number and type of spills, illicit discharges identified, inspections conducted, illicit connections removed, and any feedback received from public education efforts. If you have a hotline, you may also be able to determine trends of awareness to your IDDE program.

Construction Site Run-off Control – MCM #4

Part II.C.b.4.

Responsible Person:

Identify the responsible person(s) for implementing this MCM. There may be more than one person or different departments responsible for various projects. If so, discuss.

18.a.	Name:	Karen E. Kirtley [Ron May]
18.b.	Title:	Assistant Vice President for Administration [Director of Facilities, Planning and Management]
18.c.	Department:	Administration
18.d.	Address:	One John Marshall Drive, Huntington, West Virginia 25755-5320
18.e.	Phone number:	(304) 696-3328 [(304) 696-2585]
18.f.	Email address:	kirtley@marshall.edu [mayr@marshall.edu]

18.g. Is another entity sharing responsibility for this MCM? lf so, who? No

Control Objective & BMPs

18.h. State your overall objective for this minimum control measure.
Marshall University will develop and implement a program to address stormwater runoff for construction projects that disturb 1acre or more to minimize water quality impacts.

18.i. State and describe your BMPs. Indicate which BMPs are part of your existing program.

a. Marshall University will ensure that construction projects disturbing over 1 acre of land have an approved registration under the WVDEP's General National Pollutant Discharge Elimination System (NPDES) Permit for stormwater associated with construction activities.

b. Marshall University will review WVDEP stormwater requirements with contractors at the beginning of projects. If projects last longer than one year, a follow-up review will be conducted on a yearly basis.

c. Marshall will prepare language for the contract documents describing the stormwater management responsibilities that the contractor must abide by.

d. Marshall University will train staff on site review, inspection, and enforcement procedures. Marshall University will include on the bid documents procedures for stormwater management. These procedures will be designed by the civil engineer of record and approved by Marshall University. Staff will enforce requirements per the pre-determined guidelines set forth on the contract drawings. Enforcement procedures will follow the same guidelines as all other contractual agreements beginning with verbal notifications to written notifications and then work performed by another entity at the contractor's expense.

e. Marshall University will develop lines of communication with contractors in case of spills or releases. Marshall will aid the contractor with resources needed to contain the spills or releases.

MCM Components

Part II.C.b.4.a.

18.j. Do you have an Ordinance to control construction site run-off? No

Part II.C.b.4

18.k. Does your program regulate disturbance of one acre or more and also less than one acre if part of a larger common plan? Does your Ordinance regulate disturbances of less than one acre? If so, what is the size threshold?

Marshall University does not have an ordinance regulating stormwater discharges from construction sites. Marshall University will completely follow and abide by WVDEP's general NPDES permit for construction site stormwater. Marshall University will utilize the one acre threshold.

Part II.C.b.4.a.i-ix.

18.l. Does your Ordinance contain the nine required components?

Marshall University does not have the capacity to enact ordinance. However, Marshall will prohibit and reduce the pollutants emanating from construction sites by:

a. Informing the contractor that appropriate BMPs (as stated in the WVDEP BMP handbook) must be used. A section in the contract documents will include the necessary measures.
b. Reviewing the construction drawings prior to construction to determine if appropriate BMPs are on the site plan and how water quality at the site will be protected.
c. Performing weekly site inspections to determine if BMPs are being used correctly. The inspector will also perform inspections within 24 hours after a storm event greater than 0.5 inches of rain per 24-hour period to ascertain the BMP's effectiveness. If appropriate BMPs are not being used, the inspector will inform the contractor and shall oversee that the BMPs are installed/constructed. Inspection reports will be kept and input in a database.
d. Enforcing the contract documents. If the contractor does not abide by the contract documents, he will be in default of contract.
e. Providing a sign at the construction site for the public to provide any comments or concerns. Telephone numbers to the appropriate staff and the web address to Marshall 's MS4 website will be provided.
f. Provide information and/or training to people that are on construction sites, including site operators. The WVDEP BMP Manual will be used as reference material. If training classes become available by the WVDEP, Marshall will pass along the information to current and potential contractors.

> Tip: The nine required components your ordinance must address include: Sediment & erosion control BMPs; requirements for construction site operators to actually implement these BMPs and to control waste; demonstration of appropriate NPDES registration; authority for site plan review; authority for public input; authority for site inspections & enforcement; adequate funding for inspections & enforcement; and training for construction site operators.

Part II.C.b.4.b.

18.m. Describe the plan review process for your construction site run off program.

Marshall will use WVDEP general NPDES permit standards to review construction plans. Administrators will review the plans and comment on (if needed) changes needed to the plans. The contractor will make the changes and resubmit.

18.n. Describe the inspection process of your construction site run off program.

Inspectors will perform weekly site inspections. The inspector will also perform inspections within 24 hours after a storm event greater than 0.5 inches of rain per 24-hour period to ascertain the BMP's effectiveness.

18.o. Describe the enforcement process of your construction site run off program.

Inspectors will inform the contractor that items need addressed. If the contractor continues to not use

BMPs correctly, he could become in default of the contract.

Part II.C.b.4.b.

18.p. Discuss how your program will address the regulation of both private and public sector construction site run-off.

Marshall University will abide by the WVDEP general NPDES permit for construction site stormwater. Marshall University will not adopt an ordinance.

Schedule

Part II.C.b.4.a.

18.q. The Ordinance shall be reviewed on an annual basis. Describe your Ordinance review and update procedures.

Administrators will review inspector's comments, contractor's comments and the public's comments to determine if the procedures are adequate. Also, a review of the WVDEP general NPDES permit will be reviewed to see if any information was changed and needs to be updated.

18.r. If your Ordinance does not contain the standards required by the permit, provide a schedule for implementation and measureable goals for getting these components into your Ordinance. Include a mid-point and full implementation date.

Mid-point date – Six months after approval of the MS4 general permit. Full implementation date: Twelve months after approval of the MS4 permit.

Tip: The components of your construction site runoff control program must include:

- Plan review and approval process for new development and redevelopment projects
- Inspection protocol
- Development of enforcement strategy
- Education and training for construction site operators
- Development of an application process.
- Record keeping for approved projects, inspections. and enforcement.

Measurable Goals

Part IV.A. & Part II.B.4

18.s. List and fully describe your measurable goal(s) for this minimum control measure.

a. Complete training of staff that will perform review, inspections, and enforcement at construction sites.
b. Verify that each construction project disturbing 1 acre or greater has an approved site registration prior to the commencement of construction. Record the number of projects with a site registration under the general permit.
c. Document that stormwater compliance will be addressed during a pre-construction conference with the contractor(s).
d. For each construction project, Marshall University will establish contact for quick reference by project team members for reporting and emergency response following spills or releases. Any spills or releases will be addressed per the Marshall University emergency management plan.
e. Inspectors will perform monthly site inspections. The inspector will also perform inspections

within 24 hours after a storm event greater than 0.5 inches of rain per 24-hour period to ascertain the BMP's effectiveness.

f. Inspectors will inform the contractor that items need addressed. If the contractor continues to not use BMPs correctly, he/she could become in default of the contract and possibly removed from the project.

Tracking

Part II.B.7.

18.t. Describe your plan for tracking activities associated with this minimum control measure.

a. Verify that each construction project disturbing 1 acre or greater has an approved site registration prior to the commencement of construction. Record the number of projects with a site registration under the general permit.

b. Document that stormwater compliance was addressed during a pre-construction conference with the contractor(s).

c. For each construction project, Marshall University will establish contact for quick reference by project team members for reporting and emergency response following spills or releases.

Evaluation

Part II.B.7

18.u. Explain how you plan to gauge the effectiveness of your Construction Site Run-off Control program.

Marshall will evaluate the effectiveness by keeping record of the number of violations found on site. Inspectors will note violations in their logs. If an excessive amount of violations are being reported additional education pertaining to Site-Runoff Control will be required for the contractors.

Controlling Run-off from New Development and Redevelopment-MCM #5

Part II.C.b.5

Responsible Person(s):

Identify the responsible person(s) for implementing this MCM. There may be more than one person or department responsible for various portions of this control measure, If so, discuss.

19.a.	Name:	Karen E. Kirtley [Ron May]
19.b.	Title:	Assistant Vice President for Administration [Director of Facilities, Planning and Management]
19.c.	Department:	Administration
19.d.	Address:	One John Marshall Drive. Huntington, West Virginia 25755-5320
19.e.	Phone number:	(304) 696-3328 [(304) 696-2585]
19.f.	Email address:	kirtley@marshall.edu [mayr@marshall.edu]

19.g. Is another entity sharing responsibility for this MCM? If so, who? No

> Tip: This MCM will likely have more than one department responsible for implementation. Often planning, zoning, building, public works; sewer boards, and stormwater managers are involved in the new development and re-development program. Explain who deals with each component of this MCM.

Control Objectives & BMPs

19.h. State your overall objective for this MCM.

a. Marshall University will develop and implement a program to evaluate new development and redevelopment projects for projects disturbing 1 acre or greater to minimize impacts to stormwater.
b. Marshall University will attempt to reduce the amount of new impervious surfaces in future projects.
c. Marshall University will use non-structural BMPs (i.e., minimization of disturbance and imperviousness, and maximization of open space) and structural BMPs (i.e., catch basins, trenches, grass swales, etc.) where applicable.
d. Marshall University will continue communicating with the Huntington Sanitary Board regarding the discharge of stormwater at Huntington's combined sewer lines.
e. Marshall University will attempt to manage the first one inch of rainfall on site when able. Marshall University will contact the WVDEP for further discussions when this cannot be achieved.

MCM Components

Watershed Protection Elements

Part II.C.b.5.ai.

19.i. Have you incorporated the six watershed protection elements into your subdivision ordinance or equivalent document? Name the document(s) where each element is found & give the review date for the document. * If there is no review, describe how you will incorporate the element into your document(s).

As a newly permitted MS4, Marshall must begin implementation of this MCM within two years of SWMP approval. Implementation includes the process of incorporating the six watershed protection elements into Marshall's planning documents. During the design phase the six watershed protection elements will be placed in the scope of work to attempt to address the issues. If unachievable Marshall University will contact the WVDEP for further discussions.

Watershed Protection Elements	Name of document that contains the element	*Review Date
1. Minimizing impervious surfaces		
2. Preserving ecologically sensitive areas		
3. Reducing thermal impacts		
4. Reducing or avoiding hydromodification		
5. Tree protection		
6. Protection of native soils, prevention of compaction of soils		

Part II.C.b.5.a.i.B

19.j. List your quantifiable objectives for each watershed protection element, including time frames to achieve them.

Watershed Protection Element	Short term quantitative objectives (through July 2013)	Long term quantitative objectives (through July 2015)
1. Minimizing impervious surfaces	Develop design guidelines that require new development to attempt to manage on site the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no precipitation.	Establish a Plan of Action to consider impervious cover reduction through the redevelopment process.
2. Preserving ecologically sensitive areas	Develop design guidelines that buffer ecologically sensitive areas from new construction and redevelopment.	Establish a Plan of Action to consider creating new buffers through the redevelopment process.
3. Reducing thermal impacts	Develop design guidelines that minimized minimize the area of connected impervious cover flowing to the MS4	Establish a Plan of Action to consider using the development and redevelopment process to expand the green infrastructure network on campus
	Develop design standards that establish a minimum standard for green infrastructure components in new construction and redevelopment.	
4. Reducing or avoiding hydromodification	Develop design guidelines that minimize hydromodification occurring through the development and redevelopment process.	Establish a Plan of Action to consider reconstruction of culverts and channels on campus through the development and redevelopment process.
5. Tree protection	Develop design guidelines that require tree protection during construction, including construction site inspection and enforcement strategies. Develop design guidelines that require replacement of trees removed during construction.	Establish a Plan of Action to consider adding more canopy trees on campus.
6. Protection of native soils, prevention of compaction of soils	Develop design guidelines to minimize the limit of disturbance on construction sites. Develop design guidelines to establish minimum standards for topsoil replacement after construction.	Enforce limits of disturbance on all construction sites. Establish a Plan of Action to consider naturalizing turf grass areas on campus to increase groundwater infiltration.

19.k. State and describe your BMPs. Indicate if any BMPs are part of your existing program.

a. Add post-construction stormwater management concepts and projects in planning documents
b. Develop a Plan of Action to define authority and procedures for Post-Construction Stormwater Management plan review, site inspections, and enforcement for all projects disturbing one acre or greater.
c. Develop design guidelines and construction standards for new development and redevelopment, including the requirement to develop maintenance plans for new BMP's.
d. Minimize the potential for new spots to discharge pollutants to the MS4 or surface waters.
e. Train staff on Post Construction Stormwater management concepts and Plan of Action
f. Develop an inventory of existing impervious surfaces at Marshall's campus.

Site Design Standards

Part II.C.b.5a.ii.A.1.

19.l. Do you have an ordinance or other enforcement mechanism for the required site design standards? If not, what is your schedule of implementation? Include mid-term and full implementation dates for Ordinance review and enactment.

As a newly-permitted MS4, the permit requires that Marshall begin implementation of a Post-Construction Stormwater Management Program that meets permit standards within four years of SWMP approval. Marshall will have a Plan of Action in place to meet this schedule following the Milestones listed below.

a. Present stormwater management concepts to the University Planning Committee.
b. Identify the timeframe for the updates needed for the planning documents.
c. Consider staff input and begin drafting the Post-Construction Stormwater Management Plan of Action.
d. Identify if there are current documents that pertain to the site planning and site design review process.
e. Identify if there are current documents that pertain to the Post-Construction Stormwater Management.
f. Begin drafting or consider amendments to existing documents to require the attempt to manage the first one inch of rainfall in a 24-hr storm, preceded by 48 hours of no precipitation from all new impervious surfaces greater than 3000sf.
g. Begin drafting or consider amendments to existing documents to incorporate the six Watershed Protection Elements.
h. Identify the staff and their roles participating in the Post-Construction Stormwater Management Program.
i. Develop training programs for the different staff functions in the Post-Construction Stormwater Management Program.

Tip: The site design standards should include managing the 1st l-inch of rainfall in a 24-hr storm following 48 hrs without rain.
There are several practices that manage rainfall on site including: canopy interception, soil amendments, evaporation, rainfall harvesting, engineered infiltration, extended infiltration, and evapotranspiration and any combination of these practices.

Part II.C.b.5.ii.A.2.i.ii

19.m. Does your Ordinance have provisions for reducing pollutant loadings for stormwater discharges from Hot Spots? If the project is a potential hot spot and cannot meet water quality treatment with on-site controls, are there provisions for proper disposal of stormwater discharges at a treatment/disposal facility? No

Part II.C.b.5.ii.A.2.iii

19.n. Do you know where drinking water source protection areas are located within your MS4 watershed? Describe how this information will be kept confidential, and made available to WVDEP only when requested.

There are no drinking water source protection areas within the Marshall University MS4 boundary.

> Tip: You may need to coordinate with your local Health Department about where additional discharge protections may be needed to comply with source water protection. Document any obstacles that you encounter in regards to this component.

19.o. Describe your program for reducing impervious surfaces.

Marshall University will evaluate reducing and minimizing impervious surfaces on a project by project basis.

19.p. If you choose mitigation/payment in lieu for those projects that cannot implement the one inch runoff reduction requirement, please provide a time frame for creating an inventory of appropriate mitigation projects, and your process to develop standards to value, evaluate, and track transactions.
(Note: WVDEP has plans to create standard criteria and guidance material to assist MS4's in developing a mitigation and payment in lieu program. If your MS4 does not already have a mitigation or payment in lieu program – make a statement in the SWMP that you do not have one. If you want to use what WVDEP develops, then make a statement to that effect. If you are planning to develop your own mitigation and payment in lieu program, then your SWMP has to include a time frame for development of this program.)

As a non-municipal MS4, the creation of a payment in lieu program does not apply to Marshall. However, to support an off-site mitigation program, Marshall will conduct an inventory of areas on campus where new infiltration and retention areas could be installed. By developing this inventory, Marshall may find logical areas on campus to create stormwater infiltration BMPs that could be used to offset detention and infiltration requirements from other construction projects across campus.

Part II.C.b.5.ii.B. (1)

19.q. Describe the planning process for new development and redevelopment projects in your MS4.

Marshall will evaluate each project on a case by case basis and will present the plan to the WVDEP. See Item 19.p. above.

Part II.C.b.5.ii.B (2)&(3)

19.r. Describe your plan review and approval process for new development and redevelopment projects.

Marshall will evaluate each project on a case by case basis.

Tip: Plan review, approval and enforcement processes include:
a. Procedures for review and approval of a pre-application concept plan
b. Procedures for site plan review and approval
c. Submittal of as-built drawings
d. Post construction verification
e. An educational program targeting internal staff and external project proponents about the stormwater management requirements.

Part II.C.b.5.ii.C

19.s. Describe your maintenance procedures for structural stormwater control practices including a detailed discussion about maintenance agreements & your ability to enforce them.

If Marshall constructs any retention structures, Marshall will maintain the structures.

Part II.C.b.5.ii.D

19.t. Describe your method of inventory and tracking of stormwater control practices for this MCM.

Marshall will place structural stormwater structures on the site map.

Tip: The tracking system should accommodate: Source control practices, treatment practices, GIS locations, digital photographs, maintenance requirements, and inspection data.

Part II.C.b.5.ii.E

19.u. Describe your inspection protocol for ensuring stormwater control BMPs/practices function as designed and constructed: How many per year? How often?

Marshall will inspect structural stormwater controls on a quarterly basis as to performance.

Part II.C.b.5.b.

19.v. Does your MS4 have requirements for street design, parking, and parking lots? If so, which departments regulate this? _____

Marshall will develop design criteria for development projects on a case by case basis.

Schedule

Part II.C.b.5

19.w. Describe how and when you will implement each component of this minimum control measure. Include mid-point and full implementation dates for Ordinance revisions, implementation of plan review and approval, inspection and enforcement procedures, and for developing/acquiring and using a tracking system.

Applicable components of the MCM will be implemented by July 2013 and will be fully implemented by July 2015.

Measurable Goals

Part IV.A

19.x. List and describe your measurable goals for this MCM.

a. Incorporate low impact design practices where feasible considering space utilization, cost, and function.

Evaluation

Part II.B.7

19.y. Describe how you plan to gauge the effectiveness of your program for this MCM.

Marshall will gauge the effectiveness of the program on a case by case basis.

Pollution Prevention/Good Housekeeping for Municipal Operations- MCM #6

Part II.C.b.6

Responsible Person(s):

Identify the responsible person(s) for implementing this MCM. There may be more than one person or different departments responsible for various projects. If so, discuss.

20.a.	Name:	Mark Cutlip
20.b.	Title:	Director of Physical Plant
20.c.	Department:	Administration
20.d.	Address:	One John Marshall Drive, Huntington, West Virginia 25755-5320
20.e.	Phone Number:	(304) 696-3328
20.f.	Email address:	cutlipm@marshall.edu

20.g. Is another entity sharing responsibility for this MCM? If so, who? No

Control Objectives & BMPs

20.b. State your overall objective for this MCM.

Marshall University will develop and implement on operation and maintenance program with the ultimate goal of reduction or eliminating pollutant runoff from campus operations.

20.i. State and describe your BMPs. Indicate if any BMPs are part of your existing program.

a. Review current activities performed by maintenance crews and the materials and methods utilized to identify operations on campus with the potential to cause pollution of surface water.
b. Review existing policies and guidelines needed to ensure compliance.
c. Educate and train employees on policies.
d. Prioritize and/or develop new guidelines where needed, update guidelines and procedures as necessary.
e. Currently annual stormwater management training is provided to all trade supervisors and employees. All lab personnel and medical students are given training specifically addressing proper disposal methods and management of chemicals.

MCM Components

Part II.C.b.6

20.j. List the municipal facilities and their locations owned by your MS4.

1. Marshall University's Physical Plant and Athletics Department performs ground maintenance on campus. The grass clippings are mulched in places and additional vegetation (i.e. leaves and vegetative debris) are collected and removed from campus to a WVDEP permitted landfill. Lawn mowers, weeders, blowers, etc. are fueled, maintained and stored within the Sorrell Maintenance Building on concrete floors.

2. Fertilizers, pesticides/herbicides are stored within the Physical Plant on concrete floors.

3. Vehicles are washed at the Physical Plant and Marshall University Police Department.

Cleaning materials used are biodegradable.

4. Salt and other deicing materials are stored under roof on concrete floors at the Dewco and Sorrell Maintenance Building. Pre-bagged calcium chloride is used for deicing.

5. Vehicle Maintenance Garage — The vehicle maintenance garage does not have floor drains; therefore, the likelihood on discharging contaminated runoff or stormwater is very low.

Tip: List municipally owned or operated facilities that would reasonably be expected to discharge contaminated runoff and are not covered under a NPDES permit. For example; vehicle maintenance garages, vehicle fueling centers, waste transfer operations, golf courses, recreation areas with fertilizer or herbicide storage, salt or other materials storage, municipal construction activities, waste water treatment plant, potable drinking water treatment plant or open landfills.

Part II.C.b.6.a

20.k. Briefly describe your operation and maintenance program for each municipal facility.

Leaves and vegetative debris is removed from campus and disposed of at a WVDEP approved landfill. Fertilizers, pesticides/herbicides and deicers are stored within buildings with concrete floors. Vehicles are washed using biodegradable materials. Vehicle maintenance is performed inside the vehicle maintenance building. The used oil is collected and recycled.

Part II.C.b.6.a

20.l. Does each site have a pollution prevention plan? Is there a spill response plan included in the pollution prevention plan? If not, provide a time frame for developing pollution prevention plans at all MS4 owned municipal facilities, including mid-point and full completion dates.

No. A Pollution Prevention Plan will be developed and implemented within one year after the final approval of the permit.

Part II.C.b.6.b

20.m. Have you identified all the lands owned or operated by your MS4? (Such as parks, road right-of-ways, maintenance yards, and water/sewer/stormwater infrastructure.) Yes

Part II.C.b.6.b

20.n. Describe your overall pollution control approach policy and procedures for these lands.

Vehicle maintenance is performed inside the vehicle maintenance building. The used oil is collected and recycled. Gas is purchased commercially. Chemicals (i.e., fertilizers, pesticides, herbicides, deicers) are stored under roof on concrete floors. Biodegradable materials are used for washing of vehicles. Leaves and vegetative debris is removed offsite to a WVDEP approved landfill.

Tip: Your policy and procedures plan should address fertilizers, pesticides, and herbicides; sediment and erosion control; landscape maintenance and vegetation disposal; trash management; cleaning and maintenance of building exteriors; chemical and material storage; street sweeping & cleaning of inlets/catch basins.

Part II. C.b.6.c

20.o. Describe your training program including your target employees, and how often training occurs.

Annual environmental health and safety training is conducted and will incorporate a review and training for the Pollution Prevention Plan.

20.p. For any industrial facilities owned or operated by your MS4, list each facilities registration number under the WV NPDES General Permit for Storm Water Discharges Associated with Industrial Activities or the individual WV NPDES permit number. If your industrial facilities are not covered under another NPDES permit, you must will prompted to provide additional information below.

None.

Schedule

Part II.C.b.6

20.q. Describe how and when you will implement each component of your program for this minimum control measure. Include mid-point and full implementation dates.

By the end of 2012.

Part II.C.b.6

20.r. Describe the inspection schedule for ensuring municipal facilities are in compliance with pollution prevention plans.

Quarterly inspections.

Measurable Goals

Part IV.A

20.s. List and fully describe your measurable goals for this MCM.

a. Marshall University will develop and review the list of activities annually.
b. Marshall University will evaluate existing policies and guidelines on an annual basis.
c. Employees will be trained on the procedures applicable to their work area annually.
d. Work will be completed as needs are identified.

Tracking

Part II.B.7 & Part II.C.b.6.a.iii

20.t. Describe your plan for record keeping and tracking of facilities, employee training, pollution prevention plans, and inspections for this MCM.

Annual training, quarterly inspections, and annual review/update of vehicle maintenance garage Pollution Prevention Plan. The Physical Plant's Maximo work order system will also be utilized

Evaluation

Part II.B.7

20.u. Explain how you plan to gauge the effectiveness of your good housekeeping/ municipal operations program efforts?

Review inspections to determine if further Pollution Prevention Plan is required and record the number of events throughout the permit period.

Industrial Stormwater Coverage for Municipal Operations

If your facility/s discharges stormwater from any industrial operation that is not covered under another NPDES permit, you must now obtain coverage for those discharges.

20.v. For each facility, provide the name and contact information of the operator if applicable.
No industrial activities within the MS4.

20.w. For each outlet, list the latitude and longitude to the nearest second and the River Mile Point (if known).
Not Applicable.

Outlet Nwnber	Longitude			Latitude			River Mile
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	

20.x. List the Standard Industrial Classification (SIC) Code designated for your facility/s. Not Applicable.

20.y. List the nature of activity at the industrial facility. Not Applicable.

20.z. Is there a wet pond at your facility that collects runoff from areas on which industrial activities occur? If so, how many acres drain into it? Not Applicable.

20.aa. Is there a dry pond at your facility that collects runoff from areas on which industrial activities occur? If so, how many acres drain into it? Not Applicable.

20.bb. Do any of your stormwater outlets discharge through an oil water separator? If yes, provide the outlet numbers. Not Applicable.

Based on your responses to this section, a Discharge Monitoring Report may be issued.