PENN STATE STORMWATER PROGRAM

Link to Penn State's Stormwater homepage:
http://www.opp.psu.edu/environment/stormwater/index.cfm

ARTICLE 1 - GENERAL

1.1 Intent

Since the passage of the Clean Water Act, the quality of our Nation's waters has improved dramatically. Despite this progress, degraded water bodies still exist. According to the 1996 National Water Quality Inventory, approximately 40 percent of surveyed water bodies are still impaired by pollution and do not meet water quality standards. A leading source of this impairment is polluted storm water runoff.

In order to address this problem, the Environmental Protection Agency initiated the two-phased National Pollutant Discharge Elimination System (NPDES) storm water program. Phase I of the program requires operators of "medium" and "large" municipal separate storm sewer systems (MS4s), that is, those that generally serve populations of 100,000 or greater, to implement a storm water management program as a means to control polluted discharges from these MS4s. Phase II extends this coverage to certain "small" MS4s. This includes educational institutions that are located in urbanized areas such as your Penn State Campuses.

The NPDES Phase II regulation requires that each affected MS4 incorporate Minimum Control Measures into their normal operation. As part of this requirement, the University must author and adopt an enforceable "ordinance" that will encode all of our policies regarding storm water issues. This is that document.

University campuses Abington, Altoona, Beaver, Behrend, Delaware, Harrisburg, Hazelton, Hershey, McKeesport, Shenango, University Park, Worthington Scranton, and York are located in Urbanized Areas as defined by the Municipal Separate Storm Sewer System (MS4) Stormwater Management Program. This federal (EPA) and state (PaDEP) permit program that requires specific measures dealing with storm water be followed.

1.2 Purpose

The purpose of this Program is to promote health, safety, and welfare within the University and its watershed by minimizing the harm to the environment by stormwater from the campus through provisions designed to:

A. Manage stormwater runoff impacts at their source by regulating activities that cause the problems and by using minimum structural controls, relying on natural processes.
B. Provide review procedures and performance standards for stormwater planning and management.
C. Utilize and preserve the existing natural drainage systems as much as possible.

D. Focus on infiltration of stormwater, to maintain groundwater recharge, to prevent degradation of surface and groundwater quality and to otherwise protect water resources.
E. Maintain existing flows and quality of streams and watercourses.
F. Meet legal water quality requirements under state law, including regulations at 25 Pa. Code Chapter 93.4a to protect and maintain "existing uses" and maintain the level of water quality to support those uses in all streams, and to protect and maintain water quality in "special protection" streams.
G. Prevent scour and erosion of stream banks and streambeds.
H. Provide for proper operations and maintenance of all permanent stormwater management Best Management Practices (BMPs) that are implemented on University property.
I. Provide a mechanism to identify controls necessary to meet the National Pollutant Discharge Elimination System (NPDES) permit requirements.
J. Implement an illegal discharge detection and elimination program to address non-stormwater discharges into the University's separate storm sewer system.
K. Provide for public participation in maintaining MS4 and in reporting incidents.

1.3 Permits

A permit for each of the listed campuses has been obtained and copies have been provided to all effected campuses.

CAMPUS	PERMIT NUMBER
Abington	PAG130112
Altoona	PAG133608
Behrend	PAG138319
Delaware	PAI130538
Harrisburg	PAG133607
Hazelton	PAG132259
Hershey	PAG133606
Shenango	PAG138320
University Park	PAI134807
Worthington/Scranton	PAG132260
York	PAG133605

Penn State also applied for MS4 permits at Beaver and McKeesport, but the campuses were not issued permits by the SW Region of PaDEP

These permits delineate minimum control measures be followed which include:

- Public Education and Outreach
- Public Participation and Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-construction Stormwater Management in New Development and Redevelopment

- Pollution Prevention and Good Housekeeping for Municipal Operations and Maintenance

1.4 Applicability

The permits are all-inclusive covering activities on campus including but not limited to:

- Construction projects by campus personnel and outside contractors
- Operations and maintenance activity by campus personnel and outside contractors
- Purchased services such as floor cleaning and re-surfacing provided to the campus by outside contractors.
- All earth disturbances over 5000 square feet including;
    - New Construction
    - Renovations
    - Utility projects
    - Landscape projects

1.5 Annual Reporting

The permit requires an annual report to be submitted to the PaDEP that documents all activities performed during the reporting year. The Director of Business Services at all above listed campuses except for University Park shall be responsible for the annual reports. The Manager of Engineering Services shall be responsible for the annual report at University Park.

A list of Best Management Practice (BMP's) can be found at the U.S. Environmental Protection Agency web page – http://cfpub.epa.gov/npdes/stormwater/menuofbmps/BMP_files.cfm

ARTICLE 2 - DEFINITIONS

Certain terms and words used herein shall be interpreted as follows:

Accelerated Erosion - The removal of the surface of the land through the combined action of human activities and the natural processes, at a rate greater than would occur because of the natural process alone.

BMP - Activities, facilities, designs, measures or procedures used to manage stormwater impacts from Regulated Earth Disturbance activities, to meet State Water Quality Requirements, to promote groundwater recharge and to otherwise meet the purposes of this.

BMPs include but are not limited to infiltration, filter strips, low impact design, bioretention, wet ponds, permeable paving, grassed swales, forested buffers, sand filters and detention basins.

Conservation District - The local County Conservation District.

PaDEP - The Pennsylvania Department of Environmental Protection.

Earth Disturbance Activity - A construction or other human activity which disturbs the surface of the land, including, but not limited to, clearing and grubbing, grading, excavations, embankments, road maintenance, building construction and the moving, depositing, stockpiling, or storing of soil, rock or earth materials.

Erosion - The process by which the surface of the land, including channels, is worn away by water, wind, or chemical action.

Erosion and Sediment Control Plan - A plan for a project site that identifies BMPs to minimize accelerated erosion and sedimentation.

Groundwater Recharge - Replenishment of existing natural underground water supplies.

Impervious Surface - A surface that prevents the infiltration of water into the ground. Impervious surface includes, but is not limited to, any roof, parking or driveway areas, and any new streets and sidewalks. Any surface areas designed to initially be gravel or crushed stone shall be assumed to be impervious surfaces.

MS4 – Municipal Separate Storm Sewer System.

NPDES - National Pollutant Discharge Elimination System, the federal government's system for issuance of permits under the Clean Water Act, which is delegated to DEP in Pennsylvania.

Outfall - "Point source" as described in 40 CFR § 122.2 at the point where the storm sewer system discharges to surface waters of the Commonwealth.

Point Source - any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, or conduit from which stormwater is or may be discharged, as defined in State regulations at 25 Pa. Code § 92.1.

Project Site - The specific area of land where any Regulated Earth Disturbance activities on campus are planned, conducted or maintained.

Redevelopment - Earth Disturbance activities on land that has previously been disturbed or developed.

Regulated Earth Disturbance Activity (Erosion Control Plan with NPDES permit) - Earth disturbance activity one acre or more with a point source discharge to surface waters storm sewer system, or five acres or more regardless of the planned runoff. This includes earth disturbance on any portion of, part, or during any stage of, a larger common plan of development. This only includes road maintenance activities involving 25 acres or more or earth disturbance.

Regulated Earth Disturbance Activity (Erosion Control Plan only) – All earth disturbance activity 5000 square feet or more up to one acre.

Road Maintenance - earth disturbance activities within the existing road cross-section, such as grading and repairing existing unpaved road surfaces, cutting road banks, cleaning or clearing drainage ditches and other similar activities.

Separate Storm Sewer System - A conveyance or system of conveyances (including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) primarily used for collecting and conveying stormwater runoff.

State Water Quality Requirements - As defined under state regulations -- protection of designated and existing uses (See 25 Pa. Code Chapters 93 and 96)--including:

A. Each stream segment in Pennsylvania has a "designated use," such as "cold water fishery" or "potable water supply," which are listed in Chapter 93. These uses must be protected and maintained, under state regulations.
B. "Existing uses" are those attained as of November 1975, regardless whether they have been designated in Chapter 93. Regulated Earth Disturbance activities must be designed to protect and maintain existing uses and maintain the level of water quality necessary to protect those uses in all streams, and to protect and maintain water quality in special protection streams.
C. Water quality involves the chemical, biological and physical characteristics of surface water bodies. After Regulated Earth Disturbance activities are complete, those characteristics can be impacted by addition of pollutants such as sediment, and changes in habitat through increased flow volumes and/or rates as a result of changes in land surface area from those activities. Therefore, permanent discharges to surface waters must be managed to protect the stream bank, streambed and structural integrity of the waterway, to prevent these impacts.

Stormwater - The surface runoff generated by precipitation reaching the ground surface.

Surface Waters of the Commonwealth - Any and all rivers, streams, creeks, rivulets, impoundments, ditches, watercourses, storm sewers, lakes, dammed water, wetlands, ponds, springs, and all other bodies or channels of conveyance of surface water, or parts thereof, whether natural or artificial, within or on the boundaries of this Commonwealth.

University – The Director of Business Services at all campuses except for University Park. The Manager of Engineering Services or a designee at University Park.

Watercourse - A channel or conveyance of surface water, such as a stream or creek, having defined bed and banks, whether natural or artificial, with perennial or intermittent flow.

Watershed - Region or area drained by a river, watercourse or other body of water, whether natural or artificial.

ARTICLE 3 - STORM WATER MANAGEMENT FOR WATER QUALITY

3.1 General Requirements for Stormwater Management

A. All Regulated Earth Disturbance activities on Campus shall be designed, implemented, operated and maintenance to meet the permit, through two elements:
   1. Erosion and Sediment control during the earth disturbance activities (e.g., during construction), and
   2. Water quality protection measures after completion of earth disturbance activities (e.g., after construction), including operations and maintenance.

B. No Regulated Earth Disturbance activities on Campus shall commence/continue until the requirements of the permit are met.

C. Erosion and sediment control during Regulated Earth Disturbance activities shall be addressed as required by Section 3.3.

D. Post-construction water quality protection shall be addressed as required by Section 3.4. Operations and maintenance of permanent stormwater BMPs shall be addressed as required by Article IV.

E. All BMPs used to meet the requirements of the permit shall conform to the State Water Quality Requirements, and any more stringent requirements as determined by the University.

3.2 Permit Requirements by Other Government Entities

The following permit requirements may apply to certain Regulated Earth Disturbance activities, and must be met prior to commencement of Regulated Earth Disturbance activities, as applicable:

A. All Regulated Earth Disturbance activities subject to permit requirements by DEP under regulations at 25 Pa. Code Chapter 102.

B. Work within natural drainageways subject to permit by DEP under 25 Pa. Code Chapter 105.

C. Any stormwater management facility that would be located in or adjacent to surface waters of the Commonwealth, including wetlands, subject to permit by DEP under 25 Pa. Code Chapter 105.

D. Any stormwater management facility that would be located on a State highway right-of-way, or require access from a state highway, shall be subject to approval by the Pennsylvania Department of Transportation (PENNDOT).

E. Culverts, bridges, storm sewers or any other facilities which must pass or convey flows from the tributary area and any facility which may constitute a dam subject to permit by DEP under 25 Pa. Code Chapter 105.

3.3 Erosion and Sediment Control During Regulated Earth Disturbance Activities

A. No Regulated Earth Disturbance activities on Campus shall commence/continue until approval and favorable inspections by the local

soil conservation office and or the Manager of Engineering Services or his designee of an Erosion and Sediment Control Plan for construction activities has been obtained.

B. DEP regulations require an Erosion and Sediment Control Plan for any earth disturbance activity of 5,000 square feet or more, under 25 Pa. Code § 102.4(b).

C. In addition, under 25 Pa. Code Chapter 92, a DEP "NPDES Construction Activities" permit is required for Regulated Earth Disturbance activities.

D. Evidence of any necessary permit(s) for Regulated Earth Disturbance activities from the appropriate DEP regional office or County Conservation District shall be maintained.

E. A copy of the Erosion and Sediment Control plan and any required permit(s), as required by Federal or DEP regulations, shall be available at the project site at all times.

F. The University currently pursuing a memorandum or agreement with the local Conservation District to assist in coordinating the erosion and sedimentation and NPDES efforts described above.

3.4 Water Quality Requirements After Regulated Earth Disturbance Activities are Complete

A. DEP has regulations that require entities to ensure design, implementation and maintenance of Best Management Practices ("BMPs") that control runoff from new development and redevelopment after Regulated Earth Disturbance activities are complete. These requirements include the need to implement post-construction stormwater BMPs with assurance of long-term operations and maintenance of those BMPs.

B. The University intends to follow the local municipalities Post Construction Stormwater Management ordinance for all University projects. The University will develop a memorandum of agreement with local municipalities to review and approve the post construction stormwater management plans.

C. BMP operations and maintenance requirements are described in Article IV.

ARTICLE 4 - STORMWATER BMP OPERATIONS AND MAINTENANCE PLAN REQUIREMENTS

4.1 General Requirements

A. It is the intent of this Section to insure that all stormwater BMP’s are properly operated and maintained by providing a plan for all new facilities. No Regulated Earth Disturbance activities Campus shall commence until approval by the University of BMP Operations and Maintenance plan which describes how the permanent (e.g., post-construction) stormwater BMPs will be properly operated and maintained.

B. The following items shall be included in the BMP Operations and Maintenance Plan:

Map(s) of the project area the contents of the maps(s) shall include, but not be limited to:

a. Clear identification of the location and nature of permanent stormwater BMPs,
b. The location of the project site relative to highways, Campus boundaries or other identifiable landmarks,
c. Existing and final contours at intervals of two feet, or others as appropriate,
d. Existing streams, lakes, ponds, or other bodies of water within the project site area,
e. Other physical features including flood hazard boundaries, sinkholes, streams, existing drainage courses, and areas of natural vegetation to be preserved,
f. The locations of all existing and proposed utilities, sanitary sewers, and water lines within 50 feet of the project site,
g. Proposed final changes to the land surface and vegetative cover, including the type and amount of impervious area that would be added,
h. Proposed final structures, roads, paved areas, and buildings, and
i. A fifteen-foot wide access area around all stormwater BMPs that would provide ingress to and egress from an existing road.

C. A description of how each permanent stormwater BMP will be operated and maintained, and the identity any special needs for operations and maintenance,

4.2 Responsibilities for maintenance of BMP's

A. All permanent stormwater BMP shall be maintained by the appropriate Campus maintenance staff.

4.3 Adherence to BMP Operations and Maintenance Plan

A. The University shall review the BMP Operations and Maintenance Plan for consistency with the purpose and requirements of this Program, and any permits issued by DEP.
B. The University may require an "As-Built Survey" of all stormwater BMPs, and an explanation of any discrepancies with the Operations and Maintenance Plan.
C. It shall be unlawful to remove or modify any permanent stormwater BMP, unless an exception is granted in writing by the University.

ARTICLE 5 - INSPECTIONS AND RIGHT OF ENTRY

5.1 Inspections by Regulators

A. DEP or its designees (e.g., County Conservation Districts) normally ensure compliance with any permits issued, including those for stormwater management.

B. During any stage of the Regulated Earth Disturbance activities, if the Regulators or its designee and/or the Manger of Engineering Services or his designee determines that any BMPs are not being implemented in accordance with the approved plan the University may suspend or revoke any existing work, permits or other approvals until the deficiencies are corrected.

ARTICLE 6 – PROHIBITIONS

6.1 Prohibited Discharges

A. No person on Campus shall allow, or cause to allow, stormwater discharges into the Universities separate storm sewer system which are not composed entirely of stormwater, except (1) as provided in subsection B below, and (2) discharges allowed under a state or federal permit.

B. Discharges that may be allowed, based on a finding by the University that the discharge(s) do not significantly contribute to pollution to surface waters of the Commonwealth, are:

- Discharges from fire fighting activities
- Uncontaminated water from foundation or from footing drains
- Potable water sources including dechlorinated water line and fire hydrant flushings
- Flows from riparian habitats and wetlands
- Lawn watering
- Irrigation drainage
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used
- Routine external building wash down (which does not use detergents or other compounds)
- Air conditioning condensate
- Water from individual residential car washing
- Dechlorinated swimming pool discharges
- Springs
- Uncontaminated groundwater
- Water from crawl space pumps

C. In the event that the University determines that any of the discharges identified in Subsection B significantly contribute to pollution of waters of the Commonwealth, or is so notified by DEP, the University will notify the responsible person to cease the discharge.

D. Upon notice provided by the University under subsection C, the discharger will have a reasonable time, as determined by the University, to cease the discharge consistent with the degree of pollution caused by the discharge.

E. Nothing in this Section shall affect a discharger's responsibilities under state law.

6.2 Prohibited Connections

A. The following connections are prohibited, except as provided in the Section above:
    1. Any drain or conveyance, whether on the surface or subsurface, which allows any non-storm water discharge including sewage, process wastewater, and wash water, to enter the separate storm sewer system, and any connections to the storm drain system from indoor drains and sinks; and
    2. Any drain or conveyance connected from a commercial or industrial land use to the separate storm sewer system that has not been documented in plans, maps, or equivalent records, and approved by the University.

6.3 Roof Drains

A. Roof drains shall not be connected to streets, sanitary or storm sewers or roadside ditches, except as provided in Section 6.3.B.

B. When it is more advantageous to connect directly to streets or storm sewers, connections of roof drains to streets or roadside ditches may be permitted by the University.

C. Roof drains shall discharge to infiltration areas or vegetative BMPs to the maximum extent practicable.

6.4 Alteration of BMP's

A. No person shall modify, remove, fill, landscape or alter any exiting stormwater BMP, unless it is part of an approved maintenance program, without the written approval of the University

B. No person shall place any structure, fill, landscaping or vegetation into a stormwater BMP or within a drainage easement, which would limit or alter the functioning of the BMP, without the written approval of the University.

ARTICLE 7 - ENFORCEMENT AND PENALTIES

7.1 Enforcement

A. Whenever the University finds that a person has violated a prohibition or failed to meet a requirement of this Program, the University may order compliance by written notice to the responsible person. Such notice may require without limitation:

1. The performance of monitoring, analyses, and reporting;
2. The elimination of prohibited connections or discharges;
3. Cessation of any violating discharges, practices, or operations;
4. The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property;
5. Payment of a fine to cover administrative and remediation costs;
6. The implementation of stormwater BMPs; and
7. Operation and maintenance of stormwater BMPs.

B. Such notification shall set forth the nature of the violation(s) and establish a time limit for correction of these violations(s). Said notice may further advise that, if applicable, should the violator fail to take the required action within the established deadline, the work will be done by the University or designee and the expense thereof shall be charged to the violator.

7.2 Penalties

A. Any person violating the provisions of shall be subject to the penalties provided under the Federal Water Pollution Control Act (Clean Water Act). The Clean Water Act gives the US Environmental Protection Agency broad enforcement authority including civil administrative, civil judicial, and criminal. The law also provides for citizens suits to enforce the provisions of the Clean Water Act.