

**Facilities Management Department
Standard Operating Procedure
Pollution Prevention / Good Housekeeping
Program**

Purpose

Millersville University is working jointly with the Pennsylvania Department of Environmental Protection (PADEP) to reduce the quantity of stormwater and increase the quality of stormwater runoff. The University is located within US Environmental Protection Agency (EPA) designated urbanized areas; therefore, the University is required to have a Small Municipal Separate Storm Sewer System (MS4) permit. As required under the National Pollutant Discharge Elimination System (NPDES) Phase II regulations, the University is to develop stormwater management programs. This program requires that each MS4 permittee develop a *Pollution Prevention / Good Housekeeping Program (PPGHP)* which is detailed below. This plan is to prevent pollutant runoff from University facilities and activities from adversely impacting the storm sewer system or the environment.

Types of University Facilities

Millersville University owns and maintains approximately 200 acres of land in the Lancaster County, Pennsylvania area in Millersville Borough and a small portion in Manor Township.

The types of University facilities within this area consist of:

- Roads and driveways, not including municipal or State roads,
- Buildings including residence halls, administrative, academic halls, labs, recreational, etc.,
- Parking lots including pervious and impervious,
- Open space including lawns, athletic fields (both artificial turf and natural), wooded areas, etc.
- Garage operation areas including fuel stations,
- Maintenance and Grounds shops,
- Athletic maintenance shops,
- Recycling and staging areas,
- Chemical storage areas,
- Water pump house and water storage tower,
- Utilities distribution including gas, chilled water, electric, telecom, sewer, water,
- Stormwater facilities including conveyance and BMPs, and
- Active construction areas.

Types of University Operations

The following activities are performed by the University and have the potential for generating stormwater pollution:

- Pesticide and Herbicide use for research and operations,
- Landscape operations including fertilizers,
- Street sweeping,
- Snow removal and deicing,
- Utility construction, maintenance, and repair,
- Food and waste recycling,
- Vegetation composting,
- Vehicle fueling,
- Vehicle washing and maintenance,
- Chemical handling, including lab waste and chlorine storage,
- Inlet/outlet cleaning,
- Stormsewer system maintenance/repairs,

- Building maintenance,
- New construction and land disturbances, and
- Leaf and debris removal.

Related Programs

The University has developed policies and programs related to pollution prevention and good housekeeping. These components include University roads, parking lots, or other paved areas; storm sewer inlets, piping and outfalls; swales, ditches or other storm water conveyance facilities; detention/retention basins or other stormwater management structures. Below are the specific plans.

- 1) Stormwater Facilities Inspection Policy (Appendix A to this plan),
- 2) Stormwater Facilities Maintenance Policy (Appendix B to this plan),
- 3) Illicit Discharge, Detection and Elimination Program,
- 4) Construction Site Stormwater Runoff Control Standards,
- 5) Post Construction Stormwater Management Requirements.

Training Areas of Responsibility

The Facilities Management Department is responsible for the overall pollution prevention and good housekeeping policy of the University. However, because of the size of the University, the number of employees, and the scope of activities at the University, different people have direct day to day responsibility for specific areas including training activities for responsible staff. These are:

Buildings and Grounds:

- Landscape Maintenance – Supervisor, Grounds Maintenance
- Snow Removal and Deicing – Supervisor, Grounds Maintenance
- Vehicle Fueling/Garage – Supervisor, Garage Services
- Composting – Dining Services Manager
- Recycling – Manager, Ground Maintenance
- Utility Systems – Supervisors, Shop Trades (Electrical, HVAC, Plumbing)
- Stormwater systems – Director, Maintenance and Operations
- Utility line breaks – Supervisor, Shop Trades (Electrical, HVAC, Plumbing) or Construction Services
- Chemical Storage and Disposal – Safety Manager, Environmental, Health & Safety
- Spill Prevention and Cleanup – Safety Manager, Environmental, Health & Safety
- New Construction Activities – Director, Design and Construction
- Erosion and Sediment Control – Director, Maintenance and Operations
- Athletic Facilities Maintenance – Supervisor, Grounds Maintenance

Auxiliary and Business Services:

- Housing – Director, Housing Services
- Food Services – Various Food Service Directors and Managers

Transportation Services:

- Fleet – Supervisor, Garage Services
- Parking – Parking Manager, University Police Department

Training

Maintenance and Operations Director will meet with the maintenance, grounds and construction staff at least quarterly and report changes and/or updates in MS4 policies and program requirements to the supervisors.

Maintenance and Operations Director will meet with other groups on an annual basis.
Additional training is available upon request.

General training aids will also be posted on the Facilities Management Department Stormwater website.

Sources of Additional Training Materials

EPA Municipal Training and Education Website:

http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=factsheet_results&view=specific&bmp=129

EPA Pollution Prevention/Good Housekeeping for Municipal Operations Website:

http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=6

Pollutants of Concern

The tables on the following page provide lists of general facilities and activities, and what potential pollutants may be associated with them. This table is also available at the link below.

<http://epa.gov/npdes/pubs/potmunpoll.pdf>

Potential pollutants likely associated with specific *municipal facilities*

Municipality Facility Activity	Potential Pollutants								
	Sediment	Nutrients	Trash	Metals	Bacteria	Oil & Grease	Organics	Pesticides	Oxygen Demanding Substances
Building and Grounds Maintenance and Repair	X	X	X	X	X	X	X	X	X
Parking/Storage Area Maintenance	X	X	X	X	X	X	X		X
Waste Handling and Disposal	X	X	X	X	X	X	X	X	X
Vehicle and Equipment Fueling			X	X		X	X		
Vehicle and Equipment Maintenance and Repair				X		X	X		
Vehicle and Equipment Washing and Steam Cleaning	X	X	X	X		X	X		
Outdoor Loading and Unloading of Materials	X	X	X	X		X	X	X	X
Outdoor Container Storage of Liquids		X		X		X	X	X	X
Outdoor Storage of Raw Materials	X	X	X			X	X	X	X
Outdoor Process Equipment	X		X	X		X	X		
Overwater Activities			X	X	X	X	X	X	X
Landscape Maintenance	X	X	X		X			X	X

Source: California Stormwater BMP Handbook (<http://www.cabmphandbooks.com/>)(slightly modified)

Potential pollutants likely associated with *municipal activities*

Municipal Program	Activities	Potential Pollutants								
		Sediment	Nutrients	Trash	Metals	Bacteria	Oil & Grease	Organics	Pesticides	Oxygen Demanding Substances
Roads, Streets, and Highways Operation and Maintenance	Sweeping and Cleaning	X		X	X		X			X
	Street Repair, Maintenance, and Striping/Painting	X		X	X		X	X		
	Bridge and Structure Maintenance	X		X	X		X	X		
Plaza, Sidewalk, and Parking Lot Maintenance and Cleaning	Surface Cleaning	X	X			X	X			X
	Graffiti Cleaning	X	X		X			X		
	Sidewalk Repair	X		X						
	Controlling Litter	X		X		X	X			X
Fountains, Pools, Lakes, and Lagoons Maintenance	Fountain and Pool Draining		X					X		
	Lake and Lagoon Maintenance	X	X	X		X			X	X
Landscape Maintenance	Mowing/Trimming/Planting	X	X	X		X			X	X
	Fertilizer & Pesticide Management	X	X						X	
	Managing Landscape Wastes			X					X	X
	Erosion Control	X	X							
Drainage System Operation and Maintenance	Inspection and Cleaning of Stormwater Conveyance Structures	X	X	X		X		X		X
	Controlling Illicit Connections and Discharges	X	X	X	X	X	X	X	X	X
	Controlling Illegal Dumping	X	X	X	X	X	X	X	X	X
	Maintenance of Inlet and Outlet Structures	X		X	X		X			X
Waste Handling and Disposal	Solid Waste Collection		X	X	X	X	X	X		X
	Waste Reduction and Recycling			X	X					X
	Household Hazardous Waste Collection			X	X		X	X	X	
	Controlling Litter			X	X	X		X		X
	Controlling Illegal Dumping	X		X		X	X		X	X
Water and Sewer Utility Operation and Maintenance	Water Line Maintenance	X				X	X			
	Sanitary Sewer Maintenance	X				X	X			X
	Spill/Leak/Overflow Control, Response, and Containment	X	X			X		X		X

Source: California Stormwater BMP Handbook (<http://www.cabmphandbooks.com/>)

Appendix A – Storm Water Facility Inspection

1. Inspections will be conducted to evaluate the performance of stormwater or facilities and to determine the potential or amounts of pollutants, trash and debris entering and discharging from the stormwater collection system.
2. Inspection frequencies are to be established by the University or its designated design professional and will depend on the following factors, but are to be no less than once per calendar year: (1) the type, size and design of the stormwater facility (2) the size of the drainage area (3) the amount of impervious cover and (4) the type of activities that occur within the drainage area. More frequent inspections would be warranted in construction or high vehicle use areas, or in any area that is known or suspected to be at an increased risk for pollution. Severe weather conditions such as heavy rains will usually require follow up inspections to determine the impact to and performance of stormwater facilities.
3. All inspection activities, results and recommendations are to be documented in writing.
4. The overall condition and cleanliness of University roads and parking lots will be evaluated during routine travel by University staff. Those areas with excessive staining, trash or sediment are to be investigated or scheduled for cleaning. Appropriate corrective actions are to be considered for any areas exhibiting flooding or poor drainage patterns.
5. All storm sewer inlets/catch basins are to be inspected at least annually to determine the sediment load and overall condition of the structure. Cleaning is required if the depth of deposits is greater than or equal to one-third the depth from the basin bottom to the invert of the lowest pipe or opening into or out of the basin. Catch basins that accumulate deposits quickly are to be inspected more frequently and the drainage area evaluated to determine possible causes. Inlet grates will be inspected for trash or debris that may prevent stormwater from entering the storm sewer system, especially before forecasted heavy rains.
6. Storm sewer easements and rights-of-way are to be inspected at least annually to check for obstructions or any other conditions that might affect the integrity of the system.
7. Storm sewer outfall structures are to be inspected annually to check for structural integrity and erosion potential.
8. University detention/retention basins are to be inspected annually to check for sediment accumulation and overall basin conditions. Sediment exceeding 10% of the designed basin depth requires sediment removal to the original basin shape and depth. The basin is to be inspected for the presence of yard waste or other non-degradable materials. Basin dikes, berms and spillways are to be examined for structural integrity. The basin outlet structure is to be checked to determine if the trash rack is missing or plugged.
9. Other University stormwater conveyance facilities, such as swales, pipes, and ditches, are to be inspected periodically to check for trash, vegetation, sediment, and erosion conditions.
10. Other types of University stormwater BMP (i.e. wet pond, vegetated swale, infiltration facility, etc.) are to be inspected annually according to guidelines contained within the *Pennsylvania Stormwater Best Management Practices Manual*.

Appendix B – Storm Water Facility Maintenance

1. University roads and parking lots are to be cleaned on a regular basis. Those areas identified by inspections as being more prone to debris should be prioritized and cleaned. Roadway cleaning is necessary after the winter deicing season is over in order to remove accumulated materials. Roadway cleaning may also be necessary under non-deicing conditions when oil spill clean up materials such as sand or oil dry are applied to prevent oil contaminated materials from being washed into the storm sewer system.
2. The storage and application of materials used for roadway deicing or traction control is to be in a manner that reduces the impact to the storm sewer system and the environment. All storage is to be protected from precipitation. Any spillage of materials is to be cleaned up to prevent storm water runoff contamination. Low hazard materials are to be used in environmentally sensitive or protected areas.
3. Storm sewer inlets/catch basins are to be cleaned when inspections reveal an excessive accumulation of sediment or debris. Storm sewer inlet grates are to also be cleaned when blocked by debris. Structural repairs to any part of the storm sewer inlet/catch basins and storm sewer pipes will be performed as necessary. Excessive debris or sediment in storm sewer pipe is to be removed. Damaged piping is to be replaced.
4. Free flow of water from outfalls is to be maintained by removal of debris and obstructions. Outlet protection/aprons at outfalls are to be maintained or replaced as necessary.
5. Detention basin sediment removal is to occur when the basin is completely dry. Disturbed areas are to be immediately stabilized and re-vegetated. Yard waste or non-degradable waste in a basin is to be removed. Spillways and overflows are to be maintained to allow for uninterrupted flow. Nuisance or exotic/invasive basin vegetation is to be removed. Mowing and/or trimming of vegetation is to occur as needed to sustain the basin and all detritus is to be removed. Vegetative basin cover is to be maintained at 95%. Areas of bare or sparse vegetation is to be addressed by soil aerating, conditioning, seeding and mulching (as necessary) to restore a proper vegetative cover. Potential mosquito problems from unwanted standing water will be addressed by introduction of mosquito predators or by implementation of a pesticide plan.
6. Any planned herbicide or pesticide application in a basin or any part of the storm sewer collection system is to be reviewed by qualified persons in order to comply with applicable regulations and to prevent adverse water quality impacts. The use of herbicides and pesticides is to be limited as much as possible.
7. Other types of University storm water BMP (i.e. wet pond, vegetated swale, infiltration facility, etc.) are to be maintained according to guidelines contained in the *Pennsylvania Stormwater Best Management Practices Manual*.
8. Materials recovered from the storm sewer collection or treatment system are to be handled and disposed of in accordance with applicable state and federal waste management regulations.
9. All maintenance activities are to be documented in writing. Pictures are to be taken of various storm sewer system components to document pre- and post- maintenance conditions.