

OBJECTIVES

- Prevent or reduce polluted discharges associated with fertilizer and pesticide activities
 - Operational Protocols
 - Specific Pollutants
 - General Practices
 - Other Considerations
- Implement and conduct activities aimed at pollution prevention
 - Training
 - Spill Response and Control
 - Material Storage
 - Special Considerations

DESCRIPTION

Fertilizers, herbicides, and pesticides possess a relatively high potential for contributing pollutants to stormwater runoff and non-stormwater discharges both through storage and application. Proper management of materials, effective training, and proper use of materials will reduce the potential of polluting receiving waterways.

CONSIDERATIONS

Pesticide applicators of any local government agency in the Commonwealth of Pennsylvania must be certified by the Pennsylvania Department of Agriculture. Technicians may complete applications under the supervision of a certified applicator.

Consider frequent soil analyses to ascertain the proper amount of nutrients for application in fertilizers.

Consider an Integrated Pest Management (IPM) Program to plan effective and appropriate pesticide applications.

RECOMMENDATIONS AND PROTOCOLS

For the objectives listed, the following represent further recommendations and protocols for landscape

Prevent or reduce polluted discharges associated with fertilizer and pesticide activities

Operational Protocols

- Mulching can reduce weed growth and reduce the need for herbicides
- Promote bats (bat houses), birds, and similar species with appropriate habitats that reduces the need for pesticides
- Follow all applicable regulations and laws for the storage, transport, and use of fertilizers, herbicides, and pesticides
- Fertilizers should be worked into soils rather than dumped or broadcast
- Do not apply fertilizers, herbicides, or pesticides adjacent to waterways or inlets

General Practices

- Use pesticides only when there is an actual problem
- Do not mix or prepare pesticides at or near drains or waterways
- Do not apply pesticides or herbicides in windy conditions
- Ensure fertilizer application equipment is properly calibrated to avoid excessive

applications

- Conduct soil analyses
- Do not use pesticides if rain is forecasted
- Post application notification signs before and after applications
- Sweep and remove fertilizer or dry pesticides from sidewalks and similar surfaces

Specific Pollutants

- Fertilizers generally contain nitrogen and phosphorus—both are nutrients listed in the Chesapeake Bay TMDL. Careful consideration should be provided regarding need versus want when applying fertilizers

Other Considerations

- Consider alternative products (e.g. vinegar and water) for spot-treating weeds
- Consider alternative products (e.g. soapy water) for pest control
- Over application can "burn" turf or vegetation, thus resulting in exposed soil areas
- Slugs can be captured in small cups filled with beer and recessed into the ground

Implement and conduct activities aimed at pollution prevention

Training

- Refer to BMP Fact Sheet GH-1 regarding training for more information
- Obtain pesticide applicator licenses as necessary
- Train employees regarding proper maintenance activities and recommendations outlined in this BMP fact sheet and related fact sheets

Material Storage

- Properly store materials as directed per applicable labels or as required by applicable laws and regulations
- See BMP Fact Sheet GH-13 and GH-21 regarding proper storage of materials for more information

Spill Response and Control

- See BMP fact Sheet GH-10 regarding spill prevention and response for more information
- Keep spill control materials readily available with applicator personnel

Special Considerations

- The State of Pennsylvania requires a pesticide applicator to be certified. Technicians may complete applications, but only under the supervision of a certified applicator
- Consider the residual effects of chosen pesticides

DOCUMENTATION

Proper documentation practices are essential for any municipal SWMP to show compliance with the Clean Water Act, NPDES, and generally the requirements of the permit issued to allow discharges through the defined MS4. As with all sections of an MS4 permit, all documentation should be centralized.

For fertilizers and pesticides, templates are provided within the BMP manual to assist the municipality with documentation compliance. The templates can be used for compliance; however, the following documents are recommended as a minimum for compliance:

- **Training Record:** This document is used to provide record of a training event or session relative to pesticides and fertilizers. Note a certification as an applicator with a training record.
- **Training and Education Log:** Enter a completed training record in the log.
- **Applicator Certifications:** Keep copies of applicator certifications in the SWMP.
- **Event Record:** Complete an event record if fertilizer and pesticide application activities resulted in an observed polluted discharge and a spill or leak.
- **Activity Record:** Complete when applications are completed. Note clean-up, weather conditions, application rates, and locations.
- **Inspection Record:** Complete an inspection based on the recommendations in the section titled "INSPECTIONS AND MEASUREMENTS" or as outlined in your SWMP
- **Inspection, Event, and Activity Log:** Enter an inspection or activity record for fertilizer and pesticide applications into the log as outlined within this BMP.

INSPECTIONS AND MEASUREMENTS

Frequency of inspections for fertilizer and pesticide applications is recommended as follows:

- *Regular Inspection:* Conduct a regular inspection of parks and open spaces based on fertilizer and pesticide applications.

Items that should be inspected, observed, and maintained:

Parks and Open Spaces: signs of burn spots, material in inlets or basins; remove or repair as necessary

Application Equipment: in sound working order, repair as required

Effectiveness is difficult to measure with fertilizers and pesticide applications. However, documented reduced usage of fertilizers demonstrates an improvement and effective program. A combination of appropriate documentation practices and in conjunction with a water quality monitoring program, effectiveness may be attributed to implemented recommendations and protocols of this fact sheet.

SOURCES

U.S. Environmental Protection Agency Municipal Landscaping at

<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=1&minmeasure=6>

California Stormwater Quality Association, Municipal Stormwater Best Management Practice Handbook (2004 edition) at <http://www.cabmphandbooks.com/Municipal.asp>

Monroe County, New York Landscape Maintenance BMP Summary Sheet at

<http://www.monroecounty.gov/>

State of Pennsylvania Pesticide Applicator Certification Requirements at

<http://www.ars.usda.gov/Research/docs.htm?docid=7524>

BMP Fact Sheet: GH-36 Lawn Fertilizers and Pesticides

City of Chattanooga Municipal Pesticides-Herbicides-Fertilizers BMP Guidance Document at <http://www.hamiltontn.gov/waterquality/bmps/11.2.pdf>