

## OBJECTIVES

- Prevent or reduce polluted discharges associated with landscape maintenance activities
  - Operational Protocols
  - Chemical Applications
  - Other Considerations
  - General Practices
  - Waste Management
- Implement and conduct activities aimed at pollution prevention
  - Training
  - Spill Response and Control
  - Material Storage
  - Special Considerations

## DESCRIPTION

Landscape Maintenance includes a number of activities such as vegetation removal, pesticide/fertilizer applications, pet waste removal, pruning, watering, mowing, and so on. All such maintenance practices have the potential to contribute pollutants to receiving waterways or establishing a "channel" for pollutants to reach waterways or storm sewer systems.

## CONSIDERATIONS

Consider an integrated pest management (IPM) program that is developed with a combination of biological, physical, and holistic approaches and tools.

Consider a comprehensive landscape management plan that addresses an IPM program, planning & design, plant selection, soil analysis, maintenance schedules, TMDL BMPs, and water use.

Alternative landscaping techniques such as xeriscaping may be more cost effective and allow incorporation of alternative filtering methods to reduce the potential of polluted stormwater runoff to receiving waterways or recharge areas.

## RECOMMENDATIONS AND PROTOCOLS

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

### **Prevent or reduce polluted discharges associated with landscape maintenance activities**

#### *Operational Protocols*

- Consider native vegetation where feasible
- Avoid placing landscape waste at or near inlets
- Perform mowing at optimal times, which does not include prior to significant forecasted rain events
- Consider low water-use groundcovers when planting in large areas as a cost effective solution as well
- Promote environmentally friendly landscape practices that include all or several of the following: public education, planning & design that recognizes regional and climatic conditions and caveats, soil analyses to better address proper fertilizer practices or soil retention, native plant selections, practical turf

## BMP Fact Sheet: GH-35 Landscape Maintenance

selections that can resist drought, proper irrigation (if applicable), use of mulch, fertilizer/pesticide management (IPM), and maintenance requirements & schedules

- Protect lakes, ponds, wetlands, and/or lagoons adjacent to landscape maintenance activities

### *General Practices*

- Use mechanical methods for vegetation removal where possible
- Avoid loosening soil when removing weeds or vegetation
- Use mulch or a temporary-type binder on exposed soils until permanent landscape is installed.
- Collect and dispose lawn trimmings, clippings, vegetation, etc.
- Do not conduct landscape equipment fueling at or near inlets or waterways
- Reduce or prevent exposed soil areas

### *Chemical Applications*

- See BMP Fact Sheet GH-36 for lawn fertilizers and pesticides for more information
- Reduce the use of high nitrogen fertilizers
- Use pesticides only if there is an actual problem or presence of pests

### *Waste Management*

- Consider pet waste stations or bags as necessary for problem areas or dog parks
- Properly dispose of collected lawn/yard waste. See BMP Fact Sheet GH-7 regarding waste handling and disposal

### *Other Considerations*

- If irrigation systems are used, only irrigate as needed and ensure minimal runoff
- Consider Green Infrastructure for stormwater management
- Consider ordinances outlining effective and environmentally friendly landscape maintenance practices
- Do not allow dumping of lawn/yard waste at unauthorized locations

## **Implement and conduct activities aimed at pollution prevention**

### *Training*

- Refer to BMP Fact Sheet GH-1 regarding training for more information
- Ensure contractors are trained for services provided by other entities
- 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*

- Place landscape material stockpiles away from waterways. Install temporary-type BMPs (e.g. silt fence, straw wattles, etc.) as applicable and if necessary
- Keep liquid landscaping materials in designated areas
- Cover wood-treated products in storage with tarps or similar plastic coverings
- See BMP Fact Sheet GH-21 regarding Outdoor 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 landscape maintenance crews

#### *Special Considerations*

- During design and planning phases, consider required maintenance practices prior to implementation or acceptance of a design to minimize excessive maintenance operations or create a potential to produce polluted discharges
- All employees handling pesticides should be familiar with the most recent MSDS
- Consider monetary fines for dumping violations in problem areas where frequent dumping is observed

## **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 landscape maintenance, 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 landscape maintenance.
- **Training and Education Log:** Enter a completed training record in the log.
- **Event Record:** Complete an event record if landscape maintenance activities resulted in an observed polluted discharge.
- **Activity Record:** Complete only for significant improvements to the landscape maintenance program such as the installation of pet waste control stations in a park.
- **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 landscape maintenance into the log as outlined within this BMP.

## **INSPECTIONS AND MEASUREMENTS**

Frequency of inspections for parks and open spaces is recommended as follows:

- *Regular Inspection:* Conduct a regular inspection of parks and open spaces based on an applicable frequency. An applicable frequency should be determined based on the use of the park or open space along with required maintenance activities. Focus should be afforded to parks and open spaces with inlets or direct points of entry to waterways for illegal dumping activities or exposed soils.

Items that should be inspected, observed, and maintained:

*Parks and Open Spaces:* generally clean and free of dumping sites, remove litter

*Erosion and Sediment:* look for signs of erosion or sediment build-up; address with temporary-type BMPs until a permanent fix is implemented

*Pet Waste:* remove excessive waste, stock waste stations and ensure receptacles

## BMP Fact Sheet: GH-35 Landscape Maintenance

are structurally sound and emptied on a frequent basis

*Special Maintenance Considerations:* develop an inspection checklist for special items as a result of green infrastructure or IPMs

*Inlets or Drains:* structurally sound, remove landscape debris if applicable

*Mowing/Landscape Equipment:* ensure in proper working order; repair any observed leaks

*Exposed soils:* immediate response should be temporary-type BMPs (especially with forecasted rain events), plan for permanent coverage

*Temporary-type BMPs:* Silt fences, straw "wattles, covers, and so on installed as applicable are in working order

Effectiveness is difficult to measure with landscape maintenance. However, improved landscapes generally increase land values (as well as adjacent lands). 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/>

Monroe County, New York Pet Waste Management BMP Summary Sheet at <http://www.monroecounty.gov/>