

OBJECTIVES

- Reduce or prevent polluted discharges associated with building and structural facility maintenance
 - Operational Protocols
 - Specific Pollutants
 - Other NPDES Permits
 - General Practices
 - Spill Response and Control
 - Special Maintenance Considerations

DESCRIPTION

Materials and activities associated with the maintenance of municipal buildings and facilities can contribute pollutants to stormwater run-off or non-stormwater discharges. Certain facilities require a separate NPDES industrial permit based on functions from time-to-time. Observing proper and safe practices for reducing or preventing polluted discharges will protect receiving waterways and the environment.

CONSIDERATIONS

Municipalities may own and operate a variety of facilities and buildings including, but not limited to municipal offices, park offices, community facilities, wastewater treatment facilities, swimming pools, and miscellaneous structures (stadiums, play equipment, public-use equipment, and so on). Application of this BMP should consider all municipal owned and maintained buildings and facilities.

Consider Low Impact Development (LID) design and implementation which provides consideration to "green" practices that generally incorporate stormwater management BMPs for new municipal facilities or renovations to existing facilities.

Each facility and building will have a different set of pollutants of concern based on operational activities, purpose, and location.

Certain maintenance activities may be subject to an NPDES Construction Permit—specifically for earth disturbance activities.

Generally, contractors are involved with facility maintenance activities. Follow recommendations outlined in BMP Fact Sheet GH-2 for contractor training. This ensures contractors are afforded an opportunity to understand the goals and objectives of your SWMP relative to pollution prevention and municipal operations.

Facility maintenance requires a variety of materials and activities including, but not limited to paints, pest control materials, treated lumber, roofing materials, landscape materials, HVAC fluids, and concrete. Control of materials and proper application procedures will reduce/prevent polluted discharges.

RECOMMENDATIONS AND PROTOCOLS

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

Operational Protocols

- Identify material staging areas away from storm drains and waterways. Provide containment devices for sloped and paved areas.
- Do not apply paints, caulks, and so on during wet weather or immediately prior to forecasted rain events where materials would not be allowed to dry.
- Provide and maintain concrete washout areas for concrete (or similar) operations
- Provide containment or filtering devices for pressure-washing activities
- Remove sediment from impervious pathways during earthwork operations
- Filter or contain by-products from saw-cutting or masonry cutting operations. Do not allow run-off into storm drains
- Store raw materials (i.e. treated lumber, roofing materials, and so on) in contained locations (recommend off the ground and under an overhead structure)
- Store materials with greased components indoors prior to replacement
- Secure general materials in pre-identified staging areas at the end of a work day.
- Periodically inspect building components (e.g. roof, rain barrels (if applicable), downspouts, exterior HVAC components, etc.) for leaks, damage, etc.

Specific Pollutants

- Sweep areas to collect and properly dispose of litter and maintenance debris
- Ensure spill response materials are readily available for operations where spills have an increased possibility (i.e. generator fueling, freon changes, etc.)
- Monitor spills or leaks from maintenance material containers daily.

General Practices

- Properly secure and store work materials at the end of work days.
- Clean-up work areas on a daily basis.
- Clean material application devices (e.g. paint brushes) in proper disposal/containment areas/sinks.
- Follow procedures for specific BMPs such as waste disposal and hazardous materials storage as it applies to facility maintenance activities
- Do not apply pest control materials in wet weather
- Establish maintenance procedures and protocols for specific facility components (e.g. green roofs, regular roofs, clean-outs, exterior paintable materials, etc.). Keep copies of the procedures and schedules in the O&M Plan (or SWPPP)
- Maintain temporary-type BMPs (i.e. check dams, concrete washout, silt fence, etc.) if used during maintenance or renovation operations

Spill Response and Control

- Secondary containment should be provided for hazardous chemicals and chemicals identified as specific pollutants (i.e. sediment as outlined in the Chesapeake Bay TMDL)
- Refer to BMP Fact Sheet GH-10, Spill Prevention and Control for more information

Other NPDES Permits

- Activities outlined in 40 CFR 122.26(b)(14)(i)-(xi) require the operator to obtain an NPDES industrial stormwater permit. Such activities include, but are not limited to steam electric generating plants, salvage yards, certain transportation

facilities, and certain hazardous material storage facilities.

- Conditional exclusions are sometimes provided for certain "industrial" operations, and coverage is provided under the MS4 Permit.
- Wastewater treatment facilities generally require a separate NPDES permit

Special Maintenance Considerations

Green Roof

- Inspect and maintain the roof membrane as recommended by the installer and material manufacturer
- Intensive systems require weeding on a regular basis
- Limit fertilization to reduce potential of polluted discharges if run-off occurs

Swimming Pools

- Do not discharge chlorinated swimming pool water. Stop adding chemicals, wait approximately one week (or as recommended by your chemical supplier), test for chemical levels and pH prior to emptying the pool

Rain barrels

- Inspect for sediment or debris build-up
- Ensure structurally sound and no leaks. Seals and spigots should be operational
- Do not collect rainwater from "hotspots" for direct use to pervious areas or washing

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 facility 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 general facility maintenance.
- **Training and Education Log:** Enter a completed training record into the log. Include contractor training records as applicable.
- **Event Record:** If a discharge is observed during a facility maintenance activity, an event record should be executed that also outlines response and remediation procedures.
- **Activity Record:** Complete when remediation is conducted or improvements are made to facilities, such as adding rain barrels or removing debris from clean-outs.
- **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, activity, or event record for facility maintenance into the log as outlined within this BMP.

- **Facility Maintenance Schedule:** Include an annual schedule of regular (cleaning gutters, painting, etc.) maintenance events and special (re-roofing, sidewalk replacement/addition, etc.) maintenance events for facilities and buildings.

INSPECTIONS AND MEASUREMENTS

Frequency of inspections for storage areas is recommended as follows:

- *Regular Inspection:* Conduct a regular inspection of facilities based on an applicable frequency. An applicable frequency should be determined based on the function of the facility or building. For example: municipal offices can be inspected once a year; whereas clean-outs should be inspected bi-annually at a minimum.

Items that should be inspected and maintained (and recommended maintenance actions):

Cleanliness: Sweep and remove debris or trash

Structure: Ensure components (roof, sidewalks, façade, etc.) are sound and secure and paint is not chipping off (i.e. play structure or railings)

Clean-outs: Ensure structurally sound, remove debris and sediment (if applicable) build-up. Replace cracked or leaking clean-outs

Staging areas (if applicable): Materials should be secure and water-tight as applicable in defect-free containers

Special Components: Inspect special components such as rain barrels, downspouts, and drainage channels. Ensure structurally sound and operating as intended. Repair/replace damaged components.

Temporary-type BMPs: Silt fences, straw "wattles, concrete washouts, and so on should properly installed and functioning. Remove built-up debris or sediment as necessary. Replace defunct or damaged materials.

Spill Prevention and Control Materials: Replace used or defunct spill clean-up materials

SOURCES

U.S. Environmental Protection Agency Municipal Facilities Management at <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=130&minmeasure=6>

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

North Carolina Department of Transportation Stormwater Permit overview at http://ncdot.org/programs/environment/stormwater/npdes_permit/

Minnesota Pollution Control Agency Pollution Prevention Guide at <http://www.pca.state.mn.us/index.php/view-document.html?gid=11849>