U.S. ENVIRONMENTAL PROTECTION AGENCY

# National Pollutant Discharge Elimination System (NPDES)







## Municipal Facilities Management

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**Minimum Measure:** Pollution Prevention/Good Housekeeping for Municipal Operations

**Subcategory:** Municipal Facilities

### Description

Municipalities own and operate numerous facilities, including maintenance yards, parks, office buildings, schools, and other city-owned properties. The objective of managing stormwater at municipal facilities is to prevent pollutants released during city activities from entering storm drain systems or receiving waters. Activities associated with municipal facilities that are a potential threat to water quality include, but are not limited to, Automobile Maintenance, Residential Car Washing, Hazardous Materials Storage, Materials Management, sign painting, Pest Control, Parking Lot and Street Cleaning, and waste storage and disposal. To effectively prevent or reduce stormwater pollution, a municipality should inventory its facilities and associated activities to assess potential impacts on stormwater quality and revise activities or implement new measures as needed. These activities and control measures should be described in a stormwater pollution prevention plan (SWPPP) or a similar document that describes management actions that will be taken to reduce pollution from the site or activity. Training on stormwater best management practices (BMPs) and principles should be provided to all municipal facilities maintenance staff, and they should have clear guidance on how to use appropriate stormwater practices during typical maintenance operations and facility management activities.

### Applicability

The Phase II rule specifies that municipalities develop a program to prevent and reduce pollutant runoff from municipal operations, using training and controls for reducing or eliminating the discharge of pollutants from municipal parking lots, maintenance and storage yards, fleet maintenance shops, salt/sand storage locations, snow disposal areas, and waste transfer stations. The rule also includes development of procedures for properly disposing of waste removed from the separate storm sewers and areas listed above (such as dredge spoil, accumulated sediments, floatables, and other debris). Other municipal facilities that should be evaluated for pollution potential and BMP implementation include those where chemicals are stored, those with outdoor trash storage areas, and areas where potentially hazardous materials are stored or disposed of (e.g., animal shelters, hospitals, clinics).

Some municipalities are required to have coverage under an industrial stormwater permit for municipal facilities they own and manage. If a municipal facility, such as a landfill or

transportation facility, has activities included in one of the 11 categories of industrial activity described in 40 CFR 122.26(b)(14)(i)-(xi), the operator must obtain coverage under an NPDES industrial stormwater permit, unless they are conditionally excluded. For those areas where EPA is the permitting authority (in some states, on Indian Country lands, and at some federal facilities), the Multi-Sector General Permit (MSGP) provides facility-specific requirements for many types of industrial facilities in one permit. Most states, however, are authorized to implement the NPDES stormwater program (click here for a list of authorized states) and have their own industrial stormwater permits.

**Implementation**

Each facility will have different activities and pollutants of concern. Facility managers should consider the housekeeping and pollution prevention BMPs outlined in the Menu of BMPs and develop a SWPPP that outlines how the BMPs will be implemented. If the facility is covered by an industrial stormwater permit, the development and implementation of a SWPPP is one of the permit requirements.

SWPPP development includes a step-by-step process to ensure that pollutants do not enter the storm drain system or receiving waters. BMPs include scheduling activities to reduce the potential for offsite migration of pollutants, such as not scheduling activities immediately before or during rainstorms; prohibiting certain practices, such as the outside storage and use of chemicals; requiring specific maintenance procedures; and other management practices to prevent or reduce pollution. A set of worksheets and a model plan are available in EPA's (1992) Stormwater Management for Industrial Facilities: Development Pollution Prevention Plans and Best Management Practices Summary Document [PDF - 2.59 MB - 52 pp] to assist municipal operators. This document describes the five major phases of developing a pollution prevention plan: (1) planning and organization, (2) assessment, (3) BMP selection and plan design, (4) implementation, and (5) evaluation and site inspection.

*Planning and Organization*: An individual should be designated who will be responsible for developing and implementing the municipal facility SWPPP and other existing environmental facility plans, such as plans governing pesticide use or hazardous materials storage, to ensure consistency and overlap. The municipality should build on relevant portions of other environmental plans as appropriate, although it is important that the SWPPP be a comprehensive, stand-alone document.

*Assessment*: Municipal facilities that have been identified as having potential to contribute pollutants to the storm drain system should be inspected to identify possible pollution sources and BMP implementation opportunities. It is helpful to create a map of the facility site that identifies pollutant sources, storm drains, drainage ditches, BMPs requiring periodic maintenance, and areas suitable for new BMP implementation or retrofit. The municipality should also conduct an inventory of potentially polluting materials, evaluate past spills and leaks, identify and eliminate sources of nonstormwater discharges and illicit connections, collect and evaluate any existing stormwater quality data, and summarize the findings of the assessment.

*Identify BMPs*: BMPs should be selected with special consideration given to areas where materials are handled or stored, outdoor processing areas, loading and unloading areas, and onsite waste management and disposal areas. At a minimum, the plan should address appropriate good housekeeping, preventive maintenance [PDF - 49.5 KB - 3 pp], spill prevention and response [PDF - 55 KB - 5 pp], erosion and sediment control, and structural stormwater management controls. Employee training, visual inspections [PDF - 55 KB - 6 pp], recordkeeping [PDF - 53 KB - 4 pp], and reporting should be addressed and included in the SWPPP as well. Additional activity- or site-specific BMPs might also be appropriate.

*Implementation*: The selected stormwater BMPs should be implemented according to a schedule that reflects the priority level and funding/labor constraints. Also, all municipal employees should receive training [link to the Municipal Employee Training and Education fact sheet] to understand and carry out the goals of the SWPPP.

*Evaluation*: Periodic site evaluations should be conducted and records should be kept of BMP implementation, illicit discharge or spill incidents, employee training, inspections, and monitoring, if any is being conducted. The plan should be revised if parts are shown to be ineffective or if activities or conditions at the facility change.

**Limitations**

Developing and implementing an effective SWPPP at a municipal facility requires time and commitment, not only from managers, but also from staff and laborers. After development of the SWPPP, facilities should be self-inspected annually, with regular inspections conducted more often to detect leaks, spills, or other pollution issues as soon as possible. Also, without the proper training, municipal employees can be unable or unwilling to implement and maintain the BMPs included in the SWPPP.

**Case Studies**

The following are examples of municipalities that have successfully implemented municipal facility BMPs. Links are provided for more information.

- The City of Gresham, Oregon, conducted an internal audit of a local maintenance yard where materials such as paint, gasoline, oil, grease, pesticides, and herbicides are stored to identify problems and recommend changes that would improve stormwater quality (see Municipal Stormwater Toolbox for Maintenance Practices EXIT Disclaimer). Municipal staff studied stormwater drainage on the site, inventoried equipment and materials, determined the potential for polluting stormwater, inspected the outfalls to a local creek, and interviewed facility operators to learn about existing practices. By participating in the audit, all the facility operators were educated about stormwater drainage and quality and are now actively involved in implementing solutions (Oregon Association of Clean Water Agencies, 1998).

- The City of Santa Monica, California, has implemented numerous practices to control dry and wet weather discharges from municipal areas and activities and has conducted urban runoff training for city employees (USEPA, 2004).

**Cost Considerations**

The costs of formalizing stormwater management at municipal facilities will vary by facility and by municipality. The majority of the costs are associated with the staff time necessary to develop a SWPPP, train staff, and inspect the facilities to ensure that selected BMPs are applicable and effective.

**References**

Oregon Association of Clean Water Agencies. 1998. *Oregon Municipal Stormwater Toolbox for Maintenance Practices*. [http://www.oracwa.org/Pages/toolbox.htm EXIT Disclaimer]. Last updated June 1998. Accessed July 6, 2005.

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U.S. Environmental Protection Agency. 2004. Stormwater Case Studies Search Results, Case Study Location: California: Santa Monica. [http://cfpub.epa.gov/npdes/stormwater/casestudies_specific.cfm?case_id=2&CFID=2785611&CFTOKEN=65295474]. Last updated November 12, 2004. Accessed July 6, 2005.

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URL:http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm