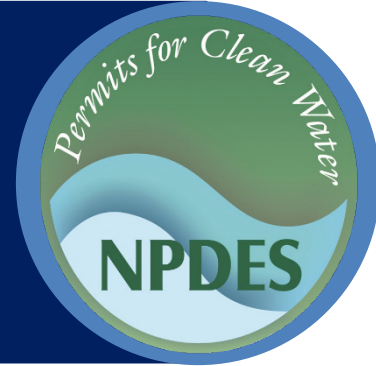




Stormwater Best Management Practice

Municipal Facilities Management



Minimum Measure: Pollution Prevention/Good Housekeeping for Municipal Operations
Subcategory: Municipal Facilities

Description

Municipalities own and operate many facilities, including maintenance yards, parks, office buildings and schools. Some regular activities at these facilities can release pollution that enters storm drain systems or receiving waters. Among these activities are automobile maintenance, residential car washing, hazardous materials storage, materials management, sign painting, pest control, parking lot and street sweeping, and waste storage and disposal.

To effectively manage stormwater and thus 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. It should describe these activities and control measures in a stormwater pollution prevention plan (SWPPP) or a similar document. It should also provide training on stormwater best management practices (BMPs), which include stormwater control measures and good housekeeping practices, to all municipal facilities maintenance staff, giving them clear guidance on how to use appropriate stormwater practices during typical maintenance operations and facility management activities.

Applicability

The Phase II rule establishes that permits should require the development and implementation of operation and maintenance programs that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. The program should include employee training to prevent or reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. These programs should address, as applicable, areas such as municipal parking lots, maintenance and storage yards, fleet maintenance shops, deicing material storage locations, snow disposal areas, and waste transfer stations. The



Municipal facilities, such as an outdoor vehicle storage area, can be a source of stormwater pollution when not cleaned and maintained regularly.

Photo Credit: Anthony D'Angelo, taken for U.S. EPA

rule also requires that permits include storm water system maintenance. Programs often include 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). Municipal staff should also evaluate facilities that store chemicals, those with outdoor trash storage areas, and areas that store or dispose of potentially hazardous materials (e.g., animal shelters, hospitals, clinics) for pollution potential and need/opportunity for control practices.

Some municipalities should also have industrial stormwater permits covering the municipal facilities and activities 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) that discharge stormwater, the operator may need coverage under a National Pollutant Discharge Elimination System (NPDES) industrial stormwater permit. For areas where EPA is the permitting authority (in some states, on Indian Country lands, and at some federal facilities), the Multi-Sector General Permit provides facility-specific

requirements for many types of industrial facilities in one permit. However, EPA has delegated and authorized most states to implement the NPDES stormwater program ([click here for a list of authorized states](#)) that have their own industrial stormwater permits.

Implementation

Municipal facilities each will have different activities and pollutants of concern. Facility managers should consider the good housekeeping practices and pollution prevention controls outlined in EPA's [menu of BMPs](#) and develop a pollution prevention program, such as a SWPPP, that outlines how they will implement the BMPs. If an industrial stormwater permit covers the facility, the development and implementation of a SWPPP is one of the permit requirements.

SWPPP development and implementation consists of five general phases to minimize or prevent pollutants from entering a storm drain system or receiving waters. SWPPPs are designed to include facility-specific BMPs which may include scheduling activities to reduce the potential for off-site 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 stormwater pollutants. The five major phases of developing a pollution prevention plan include (U.S. EPA, 2009):

1. **Planning and organization.** Staff should designate a person or team who will be responsible for developing and implementing the SWPPP and other existing environmental facility plans, such as plans governing pesticide use or hazardous materials storage, to ensure consistency across departments. 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 that is reflective of facility-specific conditions.
2. **Assessment.** Municipal staff should inspect facilities that might contribute pollutants to the storm drain system to identify possible pollution sources and BMP opportunities. It is helpful to create a map of the facility 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 take an inventory of potentially polluting materials, evaluate past spills and leaks, identify and eliminate sources of non-stormwater discharges and illicit connections, collect and evaluate any existing stormwater quality data, and summarize the findings of the assessment.

3. **BMP and stormwater control selection and plan design.** In choosing stormwater controls and BMPs, the municipality should give special consideration to material handling or storage areas, outdoor processing areas, loading and unloading areas, and on-site waste management and disposal areas. Municipal staff should consider both structural and non-structural control measures as well as the site-specific pollutants to be reduced to select the proper controls. Structural control measures may include practices such as [inlet controls](#), [vegetated swales](#), [rain gardens](#) and [wet detention systems](#). Examples of non-structural control measures include good housekeeping practices that focus on pollution prevention.

EPA has adapted a table from California's *Stormwater Best Management Practice Handbook* that provides a helpful table listing of [potential pollutants likely to be associated with specific municipal facilities](#).

4. **Implementation.** The municipality should implement the selected stormwater BMPs according to a schedule that reflects their priority level and funding/labor constraints. Also, all municipal employees should receive training to understand and carry out the goals of the SWPPP. [Employee training and education](#) is itself a control measure and is critical in informing employees about potential sources of stormwater contamination and ways to minimize water quality impacts.
5. **Evaluation and site inspection.** Facility staff should conduct regular site evaluations to demonstrate adherence to the SWPPP and gauge the SWPPP's effectiveness. Evaluations should document BMP implementation, illicit discharge or spill incidents, employee training, inspections, and monitoring (if applicable). Keeping records of site evaluations and their findings is important for

supporting corrective actions, demonstrating compliance with facility permits (if applicable) and

adapting to changes in facility activities. The municipality should revise the SWPPP if elements prove ineffective or if activities or conditions at the facility change.

issues as soon as possible. Without the proper training, municipal employees can be unable or unwilling to conduct regular inspections and maintain the BMPs included in the SWPPP.

Limitations

Developing and implementing an effective SWPPP requires time and commitment, not only from managers but also from staff and laborers. Lack of funding or staff time is therefore often a limitation. After development of the SWPPP, the facility should conduct regular inspections to detect leaks, spills or other pollution

Cost Considerations

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

Additional Information

Additional information on related practices and the Phase II MS4 program can be found at EPA's National Menu of Best Management Practices (BMPs) for Stormwater website

References

U.S. Environmental Protection Agency (U.S. EPA). (2009). *Developing your stormwater pollution prevention plan: A guide for industrial operators*. EPA 833-B-09-002.