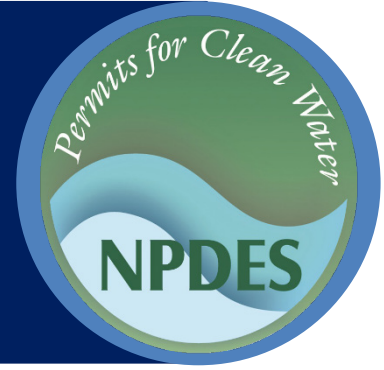




Stormwater Best Management Practice

Municipal Employee Training and Education



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

Description

Employee training and education is critical to the proper implementation of **pollution prevention and good housekeeping measures**, which limit stormwater pollution associated with regular municipal activities. A municipality should design its employee training programs to teach staff about potential sources of stormwater contamination and ways to minimize the water quality impact of municipal activities, such as park and open space maintenance, fleet and building maintenance, construction and land disturbances, and storm drain system maintenance. Employee training and education also serves to create awareness of **Phase II minimum control measures**, including public education and outreach, public participation/involvement, illicit discharge detection and elimination, and runoff controls for construction and post-construction sites. A key factor in the success of training and education programs is training all employees and associated contractor personnel to incorporate pollution prevention/good housekeeping practices into their everyday activities.

Applicability

Municipal employees who are directly involved in potentially polluting activities should receive both general stormwater and practice-specific training tailored to their responsibilities. These employees may include municipal staff, contractors, and even temporary or seasonal staff. Proper training helps protect storm drain systems and the receiving waters they discharge to from accidental spills, illicit discharges, and improperly managed stormwater discharges from poorly planned construction and development activities and incomplete or improper housekeeping practices.

Implementation

Municipal training and education can take many forms and cover a wide range of content. It is important for municipal staff to design a training and education program around the specific needs of their municipality.



Routine stormwater training for all municipal employees and contractors is a crucial component of operating a successful stormwater program.

General stormwater awareness training is a good way to convey the importance of pollution prevention/good housekeeping practices, as demonstrated by this training from the New Castle County Department of Public Works.

Training and Education Content

Training and education program content should begin with general material, including a general stormwater awareness message, an overview of applicable stormwater regulations, and an overview of **NPDES Phase II minimum control measures**. It is important that this content draw direct links between municipal employees' daily activities and the potential for impacts to a community's local water resources.

As well, a municipality should design program content around specific operations. For example, the Center for Water Protection's (CWP's) *Municipal Pollution Prevention/Good Housekeeping Practices* manual lists major municipal operations that may affect water quality, including:

- Hotspot facility management
- Construction project management
- Street repair and maintenance
- Street sweeping
- Storm drain maintenance
- Stormwater hotline response
- Park and landscape maintenance
- Residential stewardship
- Stormwater management practice maintenance

The CWP manual also provides a helpful, step-by-step guide for identifying, evaluating, and prioritizing municipal operations for incorporation into a custom training program.

Training and Education Methods

Training on stormwater issues can take several forms, including in-house training programs, on-the-job training, videos or online content, general awareness and educational materials, and workshops or conferences. For all content types, it is important to keep records to document participation and progress.

Typically, in-house training formats include annual, formal classroom style programs as well as more frequent, informal “tailgate” meetings. Tailgate meetings—usually held frequently such as on a weekly basis—update staff on current issues and tasks but often incorporate short training sessions as well. Municipalities usually conduct more comprehensive training when hiring or promoting employees. Any of these training formats can include basic information and details about pollution prevention and stormwater treatment practices. Whenever possible, a municipality should provide additional in-field (i.e., hands-on) training to demonstrate proper implementation of operation and maintenance and good housekeeping measures.

Videos and online trainings are also useful tools. EPA and many other state and local agencies have developed their own online resources. Examples include:

- EPA’s posters, fact sheets, guidebooks and other tools
- The North Central Texas Council of Governments’ video “Preventing Stormwater Pollution: What We Can Do,” with an accompanying series of training modules on stormwater pollution prevention

- The Minnesota Pollution Control Agency’s “Parks Maintenance and Stormwater Protection Employee Training” video
- The New Jersey Department of Environmental Protection’s series of [NJPDES Municipal Stormwater Regulation Program employee training videos](#)

Some municipalities provide general stormwater awareness information in new employee training. Paycheck inserts or email notices with information about household practices to reduce stormwater impacts or ways to recognize an illicit discharge can increase overall awareness. Stormwater posters or displays in common areas of municipal buildings educate both employees and members of the community.

Many federal agencies, state agencies, and professional and nonprofit organizations offer workshops and conferences about pollution prevention and stormwater controls and stormwater management best management practices (BMPs). For example, EPA sponsors workshops and conferences on a variety of [stormwater topics](#), and many states provide local stormwater trainings. Employees can learn how to comply with the latest stormwater management regulations, how to develop required stormwater pollution prevention plans, which controls or BMPs to use at a particular facility or site, and methods for collecting and handling samples. By attending these outside events, municipal staff can keep up to date on current stormwater controls and stormwater management approaches while networking with other municipal employees and representatives from industry and regulatory agencies.

Training and Education Follow-Up

After initial training, it is helpful for managers to periodically check employees' work practices. Periodic, unscheduled inspections of facilities and maintenance activities will allow managers to gauge what employees have learned and where they could improve. Posting reminders—such as markers above drains prohibiting discharges of vehicle fluids and wastes, or signs above faucets to not use water to clean up spills—will remind employees of proper procedures. Municipalities can place stickers that list important information and contact numbers for reporting illicit discharges, dumping or spills on all their vehicles. Stenciling or marking all storm drains at municipal facilities will prompt employees to be conscientious of discharges. Facility stormwater pollution prevention plans and stormwater BMP guidance documents should be available to all employees as a reference to use after trainings.

Limitations

Limited staff time, employee turnover, funding constraints or lack of commitment from management can hamper comprehensive stormwater training. Often exacerbating these limitations is a lack of refresher trainings, as well as a lack of training course content

updates to account for changes in regulations and best practices. To combat these problems, municipalities can incorporate stormwater training into their existing training programs. In doing so, they can draw on the many training materials and stormwater BMP guidance documents available online and free of charge.

Cost Considerations

Costs for in-house employee training programs are related to labor and associated overhead costs. Trainers can reduce direct costs by using free educational materials or training tools that are already developed. CWP estimates a municipality would need 200 to 400 staff hours to improve employee training and education by following the step-by-step guidance in its *Municipal Pollution Prevention/Good Housekeeping Practices* manual (CWP, 2008).

Many private companies and groups offer training for a fee. Online searches can bring up an extensive range of training options: webinars, in-person courses and guidebooks for on-site stormwater practices, as well as information on developing stormwater management plans and examples of training that already exists.

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

Disclaimer

This fact sheet is intended to be used for informational purposes only. These examples and references are not intended to be comprehensive and do not preclude the use of other technically sound practices. State or local requirements may apply.