



# Storm Water Management Fact Sheet Employee Training

## DESCRIPTION

In-house employee training programs are established to teach employees about storm water management, potential sources of contaminants, and Best Management Practices (BMPs). Employee training programs should instill all personnel with a thorough understanding of their Storm Water Pollution Prevention Plan (SWPPP), including BMPs, processes and materials they are working with, safety hazards, practices for preventing discharges, and procedures for responding quickly and properly to toxic and hazardous material incidents.

## APPLICABILITY

Typically, most industrial facilities have employee training programs. Usually these address such areas as health and safety training and fire protection. Training on storm water management and BMPs can be incorporated into these programs.

Employees can be taught through 1) posters, employee meetings, courses, and bulletin boards about storm water management, potential contaminant sources, and prevention of contamination in surface water runoff, and 2) field training programs that show areas of potential storm water contamination and associated pollutants, followed by a discussion of site-specific BMPs by trained personnel.

## ADVANTAGES AND DISADVANTAGES

Advantages of an employee training program are that the program can be a low-cost and easily implementable storm water management BMP.

The program can be standardized and repeated as necessary, both to train new employees and to keep its objectives fresh in the minds of more senior employees. A training program is also flexible and can be adapted as a facility's storm water management needs change over time.

Obstacles to an employee training program include:

- Lack of commitment from senior management.
- Lack of employee motivation.
- Lack of incentive to become involved in BMP implementation.

## KEY PROGRAM COMPONENTS

Specific design criteria for implementing an employee training program include:

- Ensuring strong commitment and periodic input from senior management.
- Communicating frequently to ensure adequate understanding of SWPPP goals and objectives.
- Utilizing experience from past spills to prevent future spills.
- Making employees aware of BMP monitoring and spill reporting procedures.
- Developing operating manuals and standard procedures.

- Implementing spill drills.

## IMPLEMENTATION

An employee training program should be an on-going, yearly process. Meetings about SWPPPs should be held at least annually, possibly in conjunction with other training programs. Figure 1 illustrates a sample employee training worksheet. Worksheets such as these can be used to plan and track employee training programs. Program performance depends on employees' participation and on senior management's commitment to reducing point and nonpoint sources of pollution; therefore, performance will vary among facilities. To be effective these programs need senior management's support

## COSTS

Costs for implementing an employee training program are highly variable. Most storm water training program costs will be directly related to labor and associated overhead costs. Trainers can reduce costs by using free educational materials available on the subject of storm water quality.

Figure 2 can be used to estimate the annual costs for an in-house training program. Table 1 provides an example of how this worksheet can be used to estimate annual costs.

## REFERENCES

1. U.S. EPA, 1979. *NPDES BMP Guidance Document*.
2. U.S. EPA, Pre-print, 1992. *Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices*. EPA 832-R-92-006.

## ADDITIONAL INFORMATION

Center for Watershed Protection  
Tom Schueler  
8391 Main Street  
Ellicott City, MD 21043

City of Coral Gables, Florida

Tim Clark  
285 Aragon Avenue  
Coral Gables, FL 33134

Hillsborough County, Florida  
Jose Rodriguez  
Hillsborough County Public Works  
601 East Kennedy Boulevard  
Tampa, FL 33601

King County, Washington  
Dave Hancock  
Department of Natural Resources, Water and Land  
Resources Division, Drainage Services Section  
700 5<sup>th</sup> Avenue, Suite 2200  
Seattle, WA 98104

Mitchell Training, Inc.  
Barbara Mitchell  
5414 SW 177<sup>th</sup> Street  
Archer, FL 32618

Southeastern Wisconsin Regional Planning  
Commission  
Bob Biebel  
916 N. East Avenue, P.O. Box 1607  
Waukesha, WI 53187

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<b>EMPLOYEE TRAINING</b>			Worksheet Completed by: _____ Title: _____ Date: _____
Instructions: Describe the employee training program for your facility below. The program should, at a minimum, address spill prevention and response, good housekeeping, and material management practices. Provide a schedule for the training program and list the employees who attend the training sessions.			
<b>Training Topics</b>	<b>Brief Description of Training Program/Materials (e.g., film, newsletter, course)</b>	<b>Schedule for Training (list dates)</b>	<b>Participants</b>
Spill Prevention and Response			
Good Housekeeping			
Material Management Practices			
Other Topics			

Source: U. S. EPA, 1992.

**FIGURE 1 SAMPLE WORKSHEET FOR TRACKING EMPLOYEE TRAINING**

**TABLE 1 EXAMPLE OF ANNUAL EMPLOYEE TRAINING COSTS**

Title	Number	Average Hourly Rate (\$)		Overhead* Multiplier		Estimated Yearly Hours on SW Training		Estimated Annual Cost (\$)	
Stormwater Engineer	1	x	15	x	2.0	x	20	=	600
Plant Management	5	x	20	x	2.0	x	10	=	2,000
Plant Employees	100	x	10	x	2.0	x	5	=	<u>10,000</u>
<b>Total Estimated Annual Cost \$12,600</b>									

\*Note: Defined as a multiplier (typically ranging between 1 and 3) that takes into account those costs associated with costs other than salary of employing a person, expenses, etc

Title	Number	Average Hourly Rate (\$)	Overhead Multiplier	Estimated Yearly Hours on SW Training	Estimated Annual Cost (\$)		
_____	_____	X _____	X _____	X _____	= _____	(A)	
_____	_____	X _____	X _____	X _____	= _____	(B)	
_____	_____	X _____	X _____	X _____	= _____	(C)	
_____	_____	X _____	X _____	X _____	= _____	(D)	
Total Estimated Annual Cost (Sum of A+B+C+D)						_____	

Source: U.S. EPA, 1992.

**FIGURE 2 SAMPLE ANNUAL TRAINING COST WORKSHEET**

For more information contact:

Municipal Technology Branch  
U.S. EPA  
Mail Code 4204  
401 M St., S.W.  
Washington, D.C., 20460

