



# Storm Water Management Fact Sheet Materials Inventory

## DESCRIPTION

A materials inventory system involves the identification of all sources and quantities of "significant" materials that may be exposed to direct precipitation or storm water runoff at a particular site. "Significant" materials are substances related to industrial activities such as process chemicals, raw materials, fuels, pesticides, and fertilizers. When these substances are exposed to direct precipitation or storm water runoff, they may be carried to a receiving water body. Therefore, identification of these materials helps to determine sources of potential contamination and is the first step in pollution control.

## APPLICABILITY

A materials inventory system is appropriate at most industrial facilities. Inventory of exposed materials should be part of a baseline administrative program and is directly related to both record keeping and visual inspection Best Management Practices.

## ADVANTAGES AND DISADVANTAGES

Since the program is intended to prevent pollution before it occurs, it is not possible to quantify water quality benefits to receiving waters of a materials inventory program. However, it is anticipated that an effective materials inventory program will improve the quality of storm water discharges.

Limitations of a materials inventory system include:

- It is an on-going process that continually needs updating.

- Qualified personnel are required to perform the materials inventory from a storm water perspective.

## KEY PROGRAM COMPONENTS

Most facilities already have in place a materials inventory system, but this system is not generally followed from a storm water contamination viewpoint. Adding storm water considerations into an existing inventory should require only minimal effort. When discussing a material inventory it is very important to be aware of Material Safety Data Sheets (MSDS). Currently the United States Government has created a Hazard Communication standard, which requires all firms manufacturing and/or distributing chemicals within the United States to prepare MSDSs for those chemicals and distribute them to their customers.

Keeping an up-to-date inventory of all materials (hazardous and non-hazardous) on the site will help to track how materials are stored and handled on site, and identify which materials and activities pose the greatest risk to the environment. The following instructions explain the basic steps in completing a materials inventory:

- Identify all chemical substances present in the work place. Walk through the facility and review the purchase orders for the previous year. List all chemical substances used in the work place and then obtain the material safety data sheet (MSDS) for each.
- Label all containers to show the name and type of substance, stock number, expiration date, health hazards, suggestions for

handling, and first aid information. This information is found on the MSDS. Unlabeled chemicals and chemicals with deteriorated labels are often disposed of improperly or unnecessarily.

- Clearly mark on the inventory those hazardous materials that require specific handling, storage, use, and disposal considerations.

An example Materials Inventory Worksheet is provided in Figure 1. Based on your materials inventory, describe the significant materials that were exposed to storm water during the past three years or are currently exposed.

Other BMPs should then be evaluated and implemented to prevent exposure of these materials to storm water or them before discharge. Figure 2 illustrates a sample worksheet for evaluating exposed materials.

## IMPLEMENTATION

The key to a proper materials inventory system is continual updating of records. Maintaining an up-to-date materials inventory is an efficient way to identify what materials are handled on-site and whether they contribute to storm water contamination problems.

## COSTS

Typically, the major cost of implementing a materials inventory system is the time required to adapt an existing program to emphasize storm water quality. The incremental cost is usually small.

Costs of the program are often offset by cost savings in other areas. Improved material tracking and inventory practices, such as instituting a shelf life program, can reduce the waste resulting from the overstocking and disposal of outdated materials. Careful tracking of all materials ordered may also result in more efficient materials use.

MATERIAL INVENTORY					Worksheet Completed by: _____			
					Title: _____			
					Date: _____			
Instructions: List all materials used, stored, or produced on site. Assess and evaluate these materials for their potential to contribute pollutants to storm water runoff. Also complete Worksheet 3A if the material has been exposed during the last three years.								
Material	Purpose / Location	Quantity (units)			Quantity exposed during last 3 years	Likelihood of contact with storm water. If yes, describe reason	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No

Source: U. S. EPA, 1992.

**FIGURE 1 SAMPLE MATERIAL INVENTORY**

<b>DESCRIPTION OF EXPOSED SIGNIFICANT MATERIAL</b>					Worksheet Completed by: _____ Title: _____ Date: _____
Instructions: Based on your material inventory, describe the significant materials that were exposed to storm water during the past three years or are currently exposed. For the definition of "significant materials" see Appendix B of the manual.					
Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of Storage or Disposal (e.g., pile, drum, tank)	Description of Material Management Practice (e.g., pile covered, drum sealed)

Source: U. S. EPA, 1992.

**FIGURE 2 EXPOSED MATERIAL WORKSHEET**

**REFERENCES**

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| <p>1. U.S. EPA, 1992. <i>NPDES Best Management Practices Guidance Document.</i></p> <p>2. U.S. EPA, 1992. <i>Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices.</i> EPA 832-R-92-006.</p> | <p>Oklahoma Department of Environmental Quality<br/>Don Mooney<br/>Water Quality Division, Storm Water Unit<br/>P.O. Box 1677<br/>Oklahoma City, OK 73101-1677</p> <p>Southeastern Wis. Regional Planning Commission<br/>Bob Biebel<br/>916 N. East Avenue, P.O. Box 1607<br/>Waukesha, WI 53187</p> |
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