

OBJECTIVES

- Proper handling and disposal of waste materials
 - Storage and transport
 - Reuse and recycling
 - Implement and conduct activities aimed at pollution prevention
 - Training
 - Waste Management Program
 - Reduce the potential for specific pollutants discharging to waterways
 - General Trash
 - Metals
 - Oil and Grease
- Documentation
 - Solid and Liquid Waste
 - Inspections
 - Spill Response and Prevention
 - Bacteria
 - Sediment
 - Organic/inorganic chemicals

DESCRIPTION

Improper storage and handling of waste materials can allow a number of pollutants including oils and greases, toxic and chemical compounds (including nutrients), bacteria, metals, and other wastes to enter waterways through stormwater run-off and non-stormwater discharges. Proper handling, along with recycling and waste reduction will reduce the potential for polluting waterways, groundwater, and recharge points.

CONSIDERATIONS

Hazardous waste cannot be reused or recycled. It must be disposed of by a licensed hazardous waste hauler. Refer to BMP Fact Sheet GH-8 Hazardous Materials for more specific information regarding hazardous materials.

Consider disposal with organizations such as the Lancaster County Solid Waste Management Authority with an established and certified Environmental Management System (EMS) designed to manage impacts on the environment.

Reuse and recycling will reduce the potential for waste storage areas (and waste transport and disposal) from polluting waterways and ground water.

RECOMMENDATIONS AND PROTOCOLS

A properly designed waste storage area is crucial for managing the potential for waste products to pollute waterways.

For the objectives listed, the following represent further recommendations and protocols for waste handling and disposal:

Proper handling and disposal of waste materials

- Store waste in trash storage areas that are secure, yet accessible for transport
- Document disposal operations if transported to a waste facility. See section

BMP Fact Sheet: GH-7 Waste Handling and Disposal

regarding DOCUMENTATION below

- Separate out materials of different types (i.e. general trash, used oil, and so on), specifically isolate materials to be recycled or reused
- Provide cover over storage areas if feasible
- Do not mix liquid wastes with solid waste
- Obtain documentation from waste haulers and waste facilities establishing they are an approved hauler or disposal facility
- Dispose of rinse or wash water into sanitary sewers if approved by sewer authority

Training

- Train employees on proper storage and handling practices of waste materials
- Train employees on clean-up procedures specific to waste materials
- See BMP Fact Sheet GH-1, Employee Training and Education for more information
- If a Waste Management Program is established, make employees knowledgeable of the program through training activities

Spill Response and Prevention

- See BMP Fact Sheet GH-10, Spill Prevention and Control for more information
- Provide additional training measures/notes for waste materials for employees

Inspections

- See "Inspections and Measurements" section within this fact sheet

Waste Management Program

- Establish a Waste Management Plan/Program that addresses production planning and sequencing, storage and disposal, close loop recycling, loss prevention and housekeeping, waste segregation, and reuse procedures
- Establish a material tracking system
- Program should outline storage and disposal procedures for segregated materials (i.e. used oil, batteries, general waste, liquids, and so on)

General Pollution Prevention Protocols

- Recycle materials wherever possible
- Keep storage areas clean. If paved area, do not clean with water via hose if storm drains are nearby
- Storage containers should be structurally sound and free of defects. Transfer any waste from damaged containers to new or sound containers

Reduce the potential of specific pollutants

- Post "No Littering" signs; consider enforcement of violations
- Provide sufficient number of trash receptacles; clean out receptacles regularly
- Prevent stormwater from entering waste storage areas
- Prevent waste materials from directly contacting rain water
- Provide covers on dumpsters or other storage devices to reduce the potential for specific pollutants discharging with stormwater
- Do not dispose of sediment with general trash. Store as appropriate in separate areas (see BMP Fact Sheet GH-21 Outdoor Storage of Materials)

DOCUMENTATION

Proper documentation practices are essential for any municipal SWMP to show compliance with the Clean Water Act, NPDES, and generally the requirements of the permit issued to allow discharges through the defined MS4. As with all sections of an MS4 permit, all documentation should be centralized.

For waste handling and disposal, templates are provided within the BMP manual to assist the municipality with documentation compliance. The templates can be used for compliance; however, the following documents are recommended as a minimum for compliance:

- **Training Record:** This document is used to provide record of a training event or session relative to waste handling and disposal.
- **Training and Education Log:** Enter a completed training record for waste handling and disposal into the log.
- **Waste Management Plan:** Establish a centralized plan that outlines waste storage areas, disposal facilities, waste haulers, recycling and reuse procedures, waste reduction, disposal frequencies, and waste segregation techniques and procedures.
- **Event Record:** If a discharge is observed, an event record should be executed that also outlines response and remediation procedures.
- **Inspection Record:** Complete an inspection based on the recommendations in the section titled "INSPECTIONS AND MEASUREMENTS" or as outlined in your SWMP for waste handling and disposal
- **Activity Record:** Complete an activity record when remediation occurs or waste is transported to a facility. Attach "truck tickets" establishing waste transport and destination.
- **Inspection, Event, and Activity Log:** Enter an inspection, activity, or event record for waste handling and disposal into the log.
- **Municipal Yard Map:** Organize and complete a municipal yard map (including locations of interior building features). Identify the hazardous waste material storage area(s) on the map. Place a copy of the map within your SWMP documentation.

INSPECTIONS AND MEASUREMENTS

Frequency of inspections is recommended as follows:

- *Rain Event Inspection:* Conduct an inspection of the waste storage area after a defined rain event (if storage area is located outside). A defined rain event is determined in the SWMP.
- *Regular Inspection:* If a rain event does not dictate an inspection, inspect the waste storage area on a monthly basis (outdoor storage areas follow a different timeline. See BMP Fact Sheet GH-20 Outdoor Container Storage and BMP Fact Sheet GH-21 Outdoor Storage of Materials for more information).

Items that should be inspected and maintained in waste material storage areas (and recommended maintenance actions):

Integrity of storage containers : replace/repair leaking or cracked containers
Evidence of leaks: isolate and clean-up leaks; replace leaking containers

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Cleanliness: Sweep and remove debris or trash; do not hose down

Tarps or plastic sheets (if applicable): repair or replace torn or damaged tarps or plastic sheets

Storage area layout: assure area is accessible for haulers and "isolated" from run-on or run-off

Solid Waste Trash Containers: assure liquid materials are not leaking; assure containers are structurally sound

Miscellaneous: observe and correct any signs of corrosion, pest damage, or other observed item that may result in leaking containers, spills, and so on

Spill Prevention and Control Materials: Replace used or defunct spill clean-up materials

MEASUREMENT OF EFFECTIVENESS

Effectiveness can be measured by establishing and maintaining a written waste disposal plan and documenting waste transport disposal destinations and inspections.

SOURCES

Lancaster County Solid Waste Management Authority Environmental Stewardship Overview at http://www.lcswma.org/lcswma_stewardship_overview.html

California Stormwater Quality Association, Municipal Stormwater Best Management Practice Handbook (2004 edition) at <http://www.cabmphandbooks.com/Municipal.asp>

Harvard University. 2002. Solid Waste Container Best Management Practices - Fact Sheet On-line Resources - Environmental Health and Safety.

Weber County Engineering Department at <http://www.co.weber.ut.us/mediawiki/index.php/Engineering>

Pennsylvania Department of Environmental Protection; final version of PAG-13 at <http://files.dep.state.pa.us/Water/Watershed%20Management/WatershedPortalFiles/StormwaterManagement/PAG-13/FinalPAG-13.pdf>