



Water Resources Division Equipment Maintenance and Storage

Definition

This practice deals with the confinement of the maintenance, repair, cleaning, and storage of construction machinery, vehicles, and equipment, to areas specifically designed and designated for those purposes. It is applicable to both temporary and permanent sites and facilities, whether open or covered. It emphasizes the importance of controlling runoff from these areas.

Pollutants Controlled

Equipment maintenance and storage areas which properly control runoff will prevent oil, grease, solvents, hydraulic fluids, sediment, wash water, and other pollutants from being carried off the areas and into surface waters. This practice also prevents pollutants from filtering into the ground.

Location

Where possible, locate maintenance and storage areas on flat ground, to prevent surface runoff from entering or leaving the areas.

Implement this practice at all existing or planned equipment maintenance and storage areas, including construction sites at which equipment will be stored, serviced, maintained, or repaired. Prior to construction, identify appropriate locations for equipment maintenance and storage.

Companion and Alternate Practices

Where possible, identify appropriate locations for maintenance and storage areas prior to any construction being done on a site. Consider using diversion to keep runoff from entering maintenance and storage areas. Handle, store, and dispose of pesticides according to specifications in the [Pesticide Management](#) best management practice (BMP). Dispose of smaller quantities (i.e., one (1) gallon or less) of hazardous waste following the specifications in the [Household Hazardous Waste Disposal](#) BMP. For disposing of larger quantities of hazardous waste, consult the MDEQ's Office of Waste Management and Radiological Protection at 517-284-6857.

General Characteristics

Planning Considerations for New Areas

Determine site selection based on the following considerations.

If equipment is to be maintained and stored outdoors temporarily:

- Do not locate sites within the drip line of trees.
- Do not locate sites within 100 feet of watercourses or wetlands. Divert runoff away from watercourses and wetlands.

If equipment is to be maintained and stored indoors:

- Do not locate buildings within 100 feet of watercourses.
- Do not construct buildings on or within 100 feet of wetlands.
- Do not under any circumstances locate buildings or equipment in floodplains, stream beds, or the channels of any watercourses.

General Considerations for All Equipment Maintenance and Storage Areas

- Direct runoff from equipment maintenance and storage areas to stabilized outlets designed to adequately convey the volume discharged to them. See the [Stabilized Outlets](#) BMP.
- Keep heavy equipment well maintained to prevent leaks.
- Do not wash vehicles or other equipment at locations where the runoff will flow directly into a watercourse or separate storm sewer. Refer to the [Charity Car Wash](#) BMP for additional information on vehicle washing.
- Store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff of pollutants and contamination of groundwater, following the design guidance below.
- Develop a waste management plan. Empty canisters, cans, or other chemical containers (e.g., hydraulic fluids, etc.), scrap wood, scrap metal, and all other waste materials are to be disposed of daily or kept in sealed waste containers until they can be properly disposed of off-site, such as in a landfill. Do not bury waste materials on-site.
- Designate and maintain specific areas for employee parking.

Indoor Equipment Maintenance and Storage Areas

- Plug and seal all floor drains which discharge to storm sewers. Design all new floor drains to discharge to the sanitary sewer.
- Construct all floors of cement or other impervious materials, to prevent contaminants from leaching into the soils or groundwater.
- Discharge runoff from equipment wash areas to the sanitary sewer. Depending on the amount of oil, grease, or other pollutants, pre-treatment of runoff may be necessary before it enters the sanitary sewer.

- If washing muddy trucks or equipment indoors, send any wash water to the sanitary sewer. Do not under any circumstances send any wash water to separate storm sewers.

Outdoor Equipment Maintenance and Storage Areas

- Ideally, conduct all maintenance on impervious areas surrounded with impervious berms. Where this is not possible, use pads designed to contain the pollutants, which could otherwise leak or spill during maintenance operations. Impervious pads are particularly important on sandy and other coarse soils where spilled materials can easily leach into the groundwater.
- Construct wash areas out of two- to three-inch stone or other approved material, with a minimum six-inch base. Underlay the stone with geotextile materials, and protect using berms or [Diversions](#) to prevent the runoff water from leaving the site. Do not allow any wash water to enter rivers, lakes, or wetlands. If planning to discharge wash water directly to the ground, be aware of the [groundwater permit rules](#), when considering any outside vehicle washing, or [power washing](#) in general.
- Never store equipment within the drip lines of trees.
- Store topsoil following specifications in the [Spoil Piles](#) BMP.

Proper Chemical Storage, Use, and Disposal

- Follow all federal, state and local laws regarding hazardous material storage. In general:
 - Store all hazardous chemicals in sealed containers. Incorporate secondary containment into the designs of maintenance and storage facilities, to contain spills from all hazardous materials.
 - Store pesticides according to the guidelines in the [Pesticide Management](#) BMP.
 - Keep labels on all products so that they are readable. Do not use unlabeled products.
 - Maintain records of the use and application of all products stored on site.
 - Maintain proper ventilation. Post "no smoking" and other signs to warn of potential dangers. Keep storage areas locked.
- Develop a spill response plan, to include the steps that will be taken to contain and clean up any spills. Familiarize everybody working with chemicals with the spill response plan. For hazardous material spills which cannot be contained on-site, or when there is a known or potential impact to surface or ground water or soils, immediately contact the MDEQ through the Pollution Emergency Alerting System (PEAS) hotline at 1-800-292-4706.
- Keep on site absorbent materials, such as hay bales, cat litter, or absorbent pads, to prevent the migration of pollutants which are spilled on imperious areas.

- Dispose of small quantities of material (i.e. less than one (1) gallon) based on the type of pollutant absorbed:
 - Dispose of pesticides following specifications in the [Pesticide Management](#) BMP; or follow specifications in the [Household Hazardous Waste Disposal](#) BMP for small quantities of hazardous wastes (one (1) gallon or less).
 - For other hazardous wastes, or wastes in excess of one (1) gallon, contact the MDEQ's Office of Waste Management and Radiological Protection at 517- 284-6857 for additional information.
 - Contact the MDEQ's Remediation and Redevelopment Division at 517-284-5087 for information on the Right-to-Know Law and for information on underground storage tanks.

Additional Considerations

The Part 21 Rules of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, require construction permittees to provide facilities for containing any accidental losses of oil or other polluting substances, and Part 5 Rules require compliance with reporting procedures for spills from these facilities.

Maintenance

Inspect outside equipment maintenance and storage areas daily to ensure equipment isn't being stored within the drip line of trees, and that vehicles and equipment aren't leaking. Also make sure waste materials are being properly disposed of. Conduct periodic checks of equipment wash areas to ensure they're operating properly. Additional stone may be needed to maintain wash areas.

Periodically inspect equipment maintenance and storage area structures, checking for cracks in the floor, or other structural flaws. Inspect floor drains to ensure they're not discharging to separate storm sewers.

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For information or assistance on this publication, please contact the (name of division/office, program), through the MDEQ Environmental Assistance Center at 800-662-9278. This publication is available in alternative formats upon request.