Pollution Prevention Tips for Maintenance Garages - Improving Maintenance Activities to Prevent Storm Water Pollution, Part 1

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Is your maintenance garage conducting regular pollution prevention/good housekeeping practices? Do you know if you are helping or hurting our local waterways with maintenance garage activities? Here are some pollution prevention tips from the Michigan Department of Transportation's (MDOT) Maintenance Division and Storm Water Management Team towards keeping pollution out of our local waterways, and protecting our fish and aquatic habitat.

Why Care About Preventing Pollution?

In addition to pollution prevention being good for the environment, municipalities and local agencies with separated storm sewer systems (including MDOT) are regulated under the National Pollutant Discharge Elimination System (NDPES) Phase II permit to develop and implement a program with the goal of preventing or reducing polluted runoff from municipal operations into the storm drainage system. MDOT, as well as many other agencies, is committed to conducting activities and training staff on activities and procedures to minimize storm water pollution.

Know Your Potential

Whether maintenance activities entail cleaning paved surfaces, fueling and washing maintenance vehicles, or loading/unloading waste materials and dumpsters, all can result in the discharge of polluting materials to the storm water drainage system and local waterways.

Overflowing garbage dumpster where trash can easily be picked up by storm water runoff

Below is a table that includes municipal operations and pollutants that may be generated from those operations. Every facility and activity has the potential to pollute when storm water picks up the pollutants and carries them to nearby rivers, lakes and wetlands.

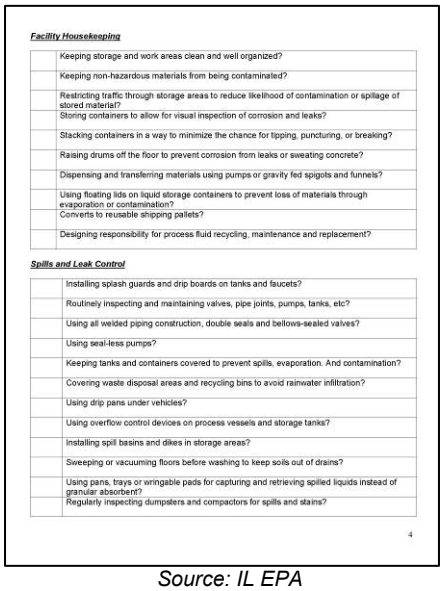
Learn the Solution to Pollution

A key component of pollution prevention is you! Does the facility maintenance staff know what to do if a hazardous material spills near the storm drain? Does facility staff know how everyday activities can contribute pollutants to nearby storm drains and waterways? The following information includes suggested maintenance facility activities to reduce storm water pollution and maintain a clean, spill free work zone.

Have a Plan

Every facility and maintenance garage will have different activities and generate different potential pollutants as would be described in a Pollution Incident Prevention Plan (PIPP). In order to successfully reduce storm water pollution, each facility should inventory activities to assess potential impacts and revise activities to reduce impact or implement new measures and methods of conducting activities. Proper maintenance activities should be communicated to staff to provide clear guidance on how to carry out storm water practices during routine maintenance and facility management activities. The following are some suggested maintenance activities to prevent contaminated runoff and to keep work areas clean, including paved surfaces, dumpsters and loading docks. (*Part 2 of this article will include maintenance activity tips for vehicle and equipment fueling, washing and maintenance.*)

Facility Housekeeping Checklist



Facility Housekeeping

	Keeping storage and work areas clean and well organized?
	Keeping non-hazardous materials from being contaminated?
	Restricting traffic through storage areas to reduce likelihood of contamination or spillage of stored material?
	Storing containers to allow for visual inspection of corrosion and leaks?
	Stacking containers in a way to minimize the chance for tipping, puncturing, or breaking?
	Raising drums off the floor to prevent corrosion from leaks or sweating concrete?
	Dispensing and transferring materials using pumps or gravity fed spigots and funnels?
	Using floating lids on liquid storage containers to prevent loss of materials through evaporation or contamination?
	Converts to reusable shipping pallets?
	Designing responsibility for process fluid recycling, maintenance and replacement?

Spills and Leak Control

	Installing splash guards and drip boards on tanks and faucets?
	Routinely inspecting and maintaining valves, pipe joints, pumps, tanks, etc?
	Using all welded piping construction, double seals and bellows-sealed valves?
	Using seal-less pumps?
	Keeping tanks and containers covered to prevent spills, evaporation. And contamination?
	Covering waste disposal areas and recycling bins to avoid rainwater infiltration?
	Using drip pans under vehicles?
	Using overflow control devices on process vessels and storage tanks?
	Installing spill basins and dikes in storage areas?
	Sweeping or vacuuming floors before washing to keep soils out of drains?
	Using pans, trays or wringable pads for capturing and retrieving spilled liquids instead of granular absorbent?
	Regularly inspecting dumpsters and compactors for spills and stains?

4

Source: IL EPA

Potential Pollutants Likely Associated with Specific Municipal Facilities

Municipal Facility Activity	Potential Pollutants						
	Sediment	Nutrients	Trash/Debris	Heavy Metals	Bacteria	Oil & Grease	Pesticides
Waste Handling and Disposal	X	X	X	X	X	X	X
Vehicle and Equipment Fueling				X		X	
Vehicle and Equipment Maintenance and Repair			X	X		X	
Vehicle and Equipment Washing	X	X	X	X	X	X	X
Loading and Unloading of Materials	X	X	X	X		X	X
Outdoor Materials Storage Areas	X	X	X	X	X	X	X
Landscape Maintenance	X	X	X			X	X

Contaminated Runoff Prevention and Spill Cleanup

Have a plan in place to address contaminated runoff prevention and spill cleanup procedures that identifies potential spill areas and materials. Make sure you have identified specific trained/certified personnel to handle spill response activities.

Cleaning Work Areas and Paved Surfaces
Routine Maintenance and Pollution Prevention Activities:

- Use non-toxic and recyclable chemicals/cleaning agents for maintenance when possible.
- Sweep paved areas (instead of hosing them down) regularly. If you use a mop, make sure to dump the wash water down the sanitary sewer.
- Clean out oil/water separators regularly, and after a heavy storm at a minimum.
- Do all the indoor drains go to the sanitary sewer? All inside floor drains and shop sinks should discharge to the sanitary sewer not the storm drains.
- Use drip pans or absorbent materials below all potential drip and spill areas.
- Recycle or properly dispose of absorbent materials or waste collected liquids.

Dumpsters, Loading Docks and Storage Areas
Routine Maintenance and Pollution Prevention Activities:

- Limit exposure of materials to rainwater whenever possible.
- Prevent storm water runoff by covering loading docks, dumpsters and storage areas under a covered structure.
- Check loading and unloading equipment regularly for leaks.
- Keep litter from accumulating around loading areas. Regularly broom or dry-sweep the loading area.
- Keep dumpster lids closed and cover trash bins.
- Make sure dumpsters are located on a flat concrete surface away from storm drainage structures.
- Do not hose out the interior of dumpsters. Apply absorbent clean-up materials on any spills or liquids in the dumpster.
- Store chemicals and waste materials, such as cleaning solutions and waste oil, respectively, in approved secondary containment to minimize the chance of a spill entering the storm drains.

Evaluate

Conduct periodic site evaluations to identify areas of improvement as well as new areas with a potential to contribute pollutants to the storm drainage system and local waterways. Post signs to remind maintenance staff of important everyday pollution prevention activities and key storage areas with a high potential for runoff pollution.

As always, when it comes to pollution, an ounce of prevention is worth a pound of cure! For more pollution prevention information, visit us on-line at www.michigan.gov/stormwatermgt.