

Municipal Separate Storm Sewer System (MS4) Program

VEHICLE AND EQUIPMENT WASHING

Introduction

A common activity throughout municipalities and school districts is the washing of vehicles and equipment. The purpose of washing vehicles is to remove dirt and other pollutants; however, these same pollutants, along with any detergents used as part of vehicle washing, can impact water quality. The discharge of wastewater from vehicle and equipment washing to surface waters or a storm sewer must be authorized by a National Pollutant Discharge Elimination System (NPDES) permit. For municipalities with an NPDES Municipal Separate Storm Sewer System (MS4) permit, the discharge of wash water into a storm sewer from the municipality or any other entity without an NPDES permit is considered an illicit discharge and is a violation of the permittee's MS4 permit. This compliance assistance document will focus on managing discharges to groundwaters or a wastewater treatment plant, which are preferable to a surface water discharge.

Best Management Practices

The proper implementation of a vehicle and equipment washing program can prevent pollutants such as sediment, oil, grease, and detergents from entering surface waters, either directly or through a storm sewer. Municipalities should implement best management practices (BMPs) to properly implement a vehicle washing program. [Table 1](#) includes examples of BMP's that the municipality may incorporate in their Storm Water Management Program (SWMP).

There is no exemption made for biodegradable products. Although "biodegradable" sounds good, it does not mean that a product is not harmful. Biodegradable products are those that can be broken down by bacteria, other organisms, or natural processes. The degradation of "biodegradable" products in water uses dissolved oxygen, and therefore these products can lower dissolved oxygen levels, which is harmful to aquatic organisms.

There is also no exemption for only *rinsing* equipment and vehicles. While not using soap/detergents is a step in the right direction, in terms of preventing pollutants from entering surface waters, consider first the types of vehicles and equipment you are rinsing and the reason why you are rinsing. Rinsing of vehicles and equipment may result in a discharge of sediment, oil, grease, and other pollutants into surface waters.

Steps to a Successful Vehicle and Equipment Washing Program

STEP ONE

The first step to a successful washing program is identifying all potential vehicles/equipment that may need to be washed. This may include but is not limited to fleet vehicles, street sweepers, vactor trucks, salt trucks and equipment, plow trucks, lawn mowers, golf carts, Zamboni, school busses and emergency vehicles such as fire trucks and police cars.

STEP TWO

The second step is to identify a designated area where vehicle/equipment washing may occur. Depending on the size and needs of the municipality this may be one central location or multiple locations. Many municipalities have a designated wash bay. The designated area should be indoors where floor drains have been verified to discharge to the local wastewater treatment plant (WWTP). These discharges are regulated by the local sewer authority.

There are variations in the design and operation of WWTPs that determine the ability to accept and treat certain wastes. Contact your local sewer authority for a copy of their local sewer use ordinances to aid in determining if the vehicle wash water can be accepted by the WWTP. Also review with the local sewer authority any requirements for discharge such as flow rate/limitations, monitoring, record keeping, sampling and whether industrial pretreatment program regulations apply. It is often required that the vehicle wash water undergo a minimal amount of pretreatment before disposal to a WWTP. A common method is to install a grit chamber and an oil/water separator. The WWTP will have final authority to determine if the vehicle wash water may be discharged to the facility. If granted approval it is a good practice to document this in writing.

If a grit chamber or oil/water separator is installed, an inspection and maintenance program should be developed and implemented that includes:

- Conducting inspections at regular intervals (e.g., annually) to make sure the equipment is functioning properly – frequency depends on the equipment, as well as the volume and type of wastewater that passes through it.
- Removing and recycling the separated oil/
- Sampling the sludge to determine if it is a hazardous waste, removing it and properly disposing of it.

STEP THREE

The third step is disposing of the vehicle/equipment wash water appropriately. The following includes options for vehicle/equipment wastewater disposal. Municipalities will have to determine which options works best for their fleet maintenance. These options are summarized below. Additional information can be found in EGLE's [Mobile Power Washing Guidance Document](#).

Option 1 - Obtain permission to discharge wastewater to a WWTP through a sanitary or combined sewer system.

There are two types of sewer systems in Michigan: separate sewer systems and combined sewer systems. Separate sewer systems have distinct pipes to keep storm water and sanitary wastewater separate. In this system, storm sewers discharge to the nearest river, lake, or stream, while the sanitary sewers direct wastewater (such as from toilets and sinks) to the WWTP. Combined sewer systems collect both storm water and sanitary wastewater together in the same pipe before treatment at a WWTP. To convey wastewater to the WWTP, select a location that drains to either a separate sanitary sewer or a combined sewer. Finding a combined sewer may not be an option because separate storm sewers are the most common type of sewer found in parking lots. If you are unsure where the storm sewer at the proposed site discharges (whether it is combined or separate), call your local public works department and ask about the sewer flow.

Some municipalities may have a designated outdoor wash area that is plumbed to the WWTP. It is important to ensure the outdoor wash area is appropriately curbed or sloped to prevent a discharge to the storm sewer system. Signage or other markers should be placed informing staff of the designated wash area.

If the storm sewers in the parking lot are connected to a combined sewer system, the municipality may be able to obtain permission from the WWTP to wash vehicles and direct the wastewater to the combined sewer system.

Option 2 - Obtain permit to discharge to the ground.

The municipality/permittee may be able to apply for a permit or exemption to discharge wash water to the ground. A discharge of wash water to the ground may be exempt from permitting if the following conditions are met:

- The discharge does not contain additives such as soaps or detergents.
- Only non-polluting substances are removed from the vehicles or surfaces.
- A formal exemption can be applied for in MiEnviro Portal.

If an additive is used, a groundwater discharge permit will be required. In order to receive approval, the following conditions must be met.

- The source of the water supply must meet specific water quality standards.
- If any additive is used other than a household soap or detergent, the additive must be used for its intended purpose and according to manufacturer's recommendations and label directions.
- Washing is limited to the removal of dirt and grime from the exterior of a vehicle, equipment, or stationary source. It does not include a substance that was contained

or transported in the vehicle as product or waste material. A vehicle's exterior does not include its undercarriage.

- The discharge does not cause runoff of wastewater or the deposition of waste materials onto adjacent properties.
- The discharge does not cause the groundwater to exceed specified standards.
- The discharge is limited to 1,000 gallons of wastewater per month per acre of area in which the discharge occurs.
- The permittee is required to maintain a log detailing the amount of water discharged each day and any additives that were used.

For more information regarding this option please contact EGLE's [Groundwater Program Staff](#).

If you have any questions regarding vehicle and equipment washing, or other aspects of the MS4 application, please contact your [MS4 Compliance Staff Person](#).

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Table 1: Best Management Practices for Vehicle and Equipment Washing

Vehicle/ Equipment	Washing BMP	Waste Disposal
General fleet vehicles	Wash indoors at [list facility] _____ Wash at commercial car wash Other _____	<input type="checkbox"/> Confirmed discharge to a WWTP and discharge has been approved. <input type="checkbox"/> Discharge to the ground is authorized by EGLE. <input type="checkbox"/> Other _____
Fire Truck	Wash indoors at [list facility] _____ Wash at commercial car wash Other _____	<input type="checkbox"/> Confirmed discharge to a WWTP and discharge has been approved. <input type="checkbox"/> Discharge to the ground is authorized by EGLE. <input type="checkbox"/> Other _____
School Buses	Wash indoors at [list facility] _____ Wash at commercial car wash Other _____	<input type="checkbox"/> Confirmed discharge to a WWTP and discharge has been approved. <input type="checkbox"/> Discharge to the ground is authorized by EGLE. <input type="checkbox"/> Other _____
Golf Carts	Wash indoors at [list facility] _____ Wash at commercial car wash Other _____	<input type="checkbox"/> Confirmed discharge to a WWTP and discharge has been approved. <input type="checkbox"/> Discharge to the ground is authorized by EGLE. <input type="checkbox"/> Other _____
Police Cars	Wash indoors at [list facility] _____ Wash at commercial car wash Other _____	<input type="checkbox"/> Confirmed discharge to a WWTP and discharge has been approved. <input type="checkbox"/> Discharge to the ground is authorized by EGLE. <input type="checkbox"/> Other _____
Specialized Fleet Vehicles (Salt Trucks, Vactor Truck, Street Sweepers etc.)	Wash indoors at [list facility] _____ Wash at commercial car wash Other _____	<input type="checkbox"/> Confirmed discharge to a WWTP and discharge has been approved. <input type="checkbox"/> Discharge to the ground is authorized by EGLE. <input type="checkbox"/> Other _____