

Do I need a permit to discharge wastewater from vehicle washing activities at municipally owned vehicle maintenance facilities?

This document identifies wastewater regulatory permit programs related to wastewater that is generated by the cleaning of the exterior of vehicles at municipally owned non-public vehicle maintenance facilities.

Various regulatory agencies implement permit programs to decrease the potential for environmental harm from wastewaters, including vehicle washing wastewater, based upon wastewater destination. In general, the state of Michigan, Department of Natural Resources and Environment (DNRE) regulates wastewater that goes directly to surface and groundwaters of the state, and locally-operated wastewater treatment authorities regulate wastewater that is sent to them.

VEHICLE WASH BAYS AND LOCAL REQUIREMENTS

Most municipally owned vehicle maintenance facilities have wash bays that direct wastewater through a sanitary sewer collection system to their publically owned 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 capabilities of the plant to accept and treat certain wastes. Contact your local sewer authority for a copy of their local sewer use and pretreatment ordinances to determine if your waste can be accepted by their facility. Also review with your local sewer authority any requirements for discharge such as monitoring, record keeping, sampling and whether industrial pretreatment regulations apply.

Wastewater and pit sludge from vehicle washing usually contain oil, antifreeze, heavy metals, degreasers and other contaminants. It is often required that the vehicle washing wastewater undergo a minimal amount of pretreatment before disposal to a WWTP. A common method is to have it pass through a grit chamber and an oil/water separator.

You should have an inspection and maintenance program for the chamber/separator that includes:

- Conducting inspections at regular intervals to make sure it 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.



Some communities might also have unique local requirements regarding the operations of vehicle washing operations. For example, although the DNRE recommends that low or no phosphate detergents be used in all areas of the state, some communities require them to be used. Check with your local sewer authority to see what the requirements are for your area.

INTERMITTENTLY DISCHARGING TO A COMBINED SEWER OR SEPARATE SANITARY SEWER

There are other alternatives that can allow vehicle washing to occur outside in a parking lot. One is for parking lots which drain to combined sewer systems and one is for collection of the wash water for disposal in a sanitary sewer system.

There are two types of sewer systems in Michigan; namely, separate sewer systems (See Picture 1) and combined sewer systems (See Picture 2). Separate sewer systems have distinct pipes to keep storm water and sanitary wastewater separate. In this system, storm sewers go to the nearest river, lake, or stream, while the sanitary sewers direct wastewater (such as from toilets and sinks) to the wastewater treatment plant. Combined sewer systems take both storm water and sanitary wastewater together to the wastewater treatment plant. In order to get the wastewater to the wastewater treatment plant, select a location that drains to either a separate sanitary sewer or to 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 goes (whether it is combined or separate), call your local public works department and ask about the sewer destination.

If the storm sewers in the parking lot are connected to a combined sewer system, then the municipal facility may be able to obtain permission from the WWTP to wash vehicles and direct the wastewater to the combined sewer system. Permission may also be sought to collect the vehicle wash wastewater and direct it to a sanitary sewer system.

Between the two types of sewers that go to a wastewater treatment plant (a combined system and a sanitary sewer system), only combined sewers may be found outside in a parking lot. Sanitary sewer access is found inside buildings. Dependent upon the site, it may be possible to direct the wastewater to a sanitary sewer by collecting the wastewater in a low area of the parking lot by placing a spill mat over the storm sewer inlet and then pumping the wastewater to a floor drain or utility sink inside the building. Site conditions should be evaluated to assure that a complete seal can be made over the storm sewer. If there is any doubt, then an evaluation should be conducted to determine whether additional steps are necessary to prevent wastewater from entering and traveling through the storm sewer. If the option of sending wastewater to a sanitary sewer is possible at the site, then you will need to confirm with the WWTP the proper way to access the sanitary sewer system; many cities have strict ordinances against accessing the sanitary sewer by lifting manhole covers. Also be sure to obtain permission from the wastewater treatment plant, preferably in writing, before discharging to their collection system.

DO NOT DISCHARGE TO STORM SEWERS

Discharge of vehicle wash water to a separate storm sewer system is considered an illicit discharge. It is prohibited.

In most areas, storm sewer pipes do not discharge to a wastewater treatment plant but rather to a nearby lake or stream. The dirt that settles out in the lake or stream will cover habitat needed by fish and aquatic insects. In addition, soaps (or detergents) entering the lake or stream may make the water look foamy and may harm aquatic life. Even soaps or detergents labeled biodegradable can be harmful in surface waters because they contain surfactants — substances which may be lethal to sensitive organisms in low concentrations. So, it is important to decide how to manage your vehicle wash wastewater.

DO NOT MIX VEHICLE WASH WATER WITH SANITARY WASTEWATER TO SEPTIC SYSTEMS

Unfortunately, it is not always possible to send wastewater to a wastewater treatment plant. For example, some areas are not served by a wastewater treatment plant. Further, some facilities have floor drains that are connected to an onsite sewage disposal system; these systems must have a permit from the DNRE

Groundwater Discharge Permit Program. Large quantities of wastewater can easily damage onsite septic systems, and vehicle wash wastewater should not be mixed with sanitary wastewater in a septic tank and tile field system. However, if a separate septic tank and tile field system are installed and dedicated only to the wash water, then a groundwater discharge permit will provide required criteria for this to be an acceptable means of disposal.

DISCHARGES TO THE GROUND/GRASS

Some discharges of non-sanitary wastewater to the ground are allowed but only if authorized by the DNRE by permit. Below are two types of discharges common to vehicle maintenance facilities that are not connected to a municipal sewer system.

1. Power washing vehicles parked on an unpaved surface or a grassy area to knock off mud and dirt that does not involve detergent or additives does not require a groundwater permit from the DNRE. If detergents or additives are used according to manufacturer's specifications, then a permit is required.
2. Typical wash bays with underdrains require a state groundwater discharge permit. For discharges less than 2,000 gallons per day, the discharge can be covered by a general permit. The general permit requires that washing only be to vehicle exteriors, which does not include engines or undercarriages. The area where washing occurs must also be separated from any areas where vehicle maintenance takes place. Any additives used in the washing process must be used according to manufacturer's recommendations. The portion of the vehicle being washed also must not have come in contact with solid, hazardous or liquid industrial waste.

If the discharge is greater than 2,000 gallons per day, a site-specific permit may be tailored for the shop. To be permitted, the shop must meet strict environmental standards prior to discharge to the ground or groundwater. This could include expensive treatment systems that include air stripping and/or carbon adsorption. In addition, a shop may have to include the following for pretreatment:

- An oil/water separator and a grit chamber (often used to prevent clogging of the infiltration system or equipment).
- A wastewater recycling system (to reduce the amount of wastewater generated).

To obtain authorization for a discharge of wastewater from power washing, vehicle washing, or other wastewater to the ground, contact your DNRE district office or the appropriate Groundwater program staff. For additional information, go to www.michigan.gov/dnrewater and select "Groundwater Discharge."

WASH WATER RECYCLING SYSTEM

Another option for vehicle wash management is to install a wash water recycling system. This type of system continually cleans and reuses wash water. This reduces the need for disposing large amounts of wastewater.

WORK WITH A COMMERCIAL CAR WASHING OPERATION

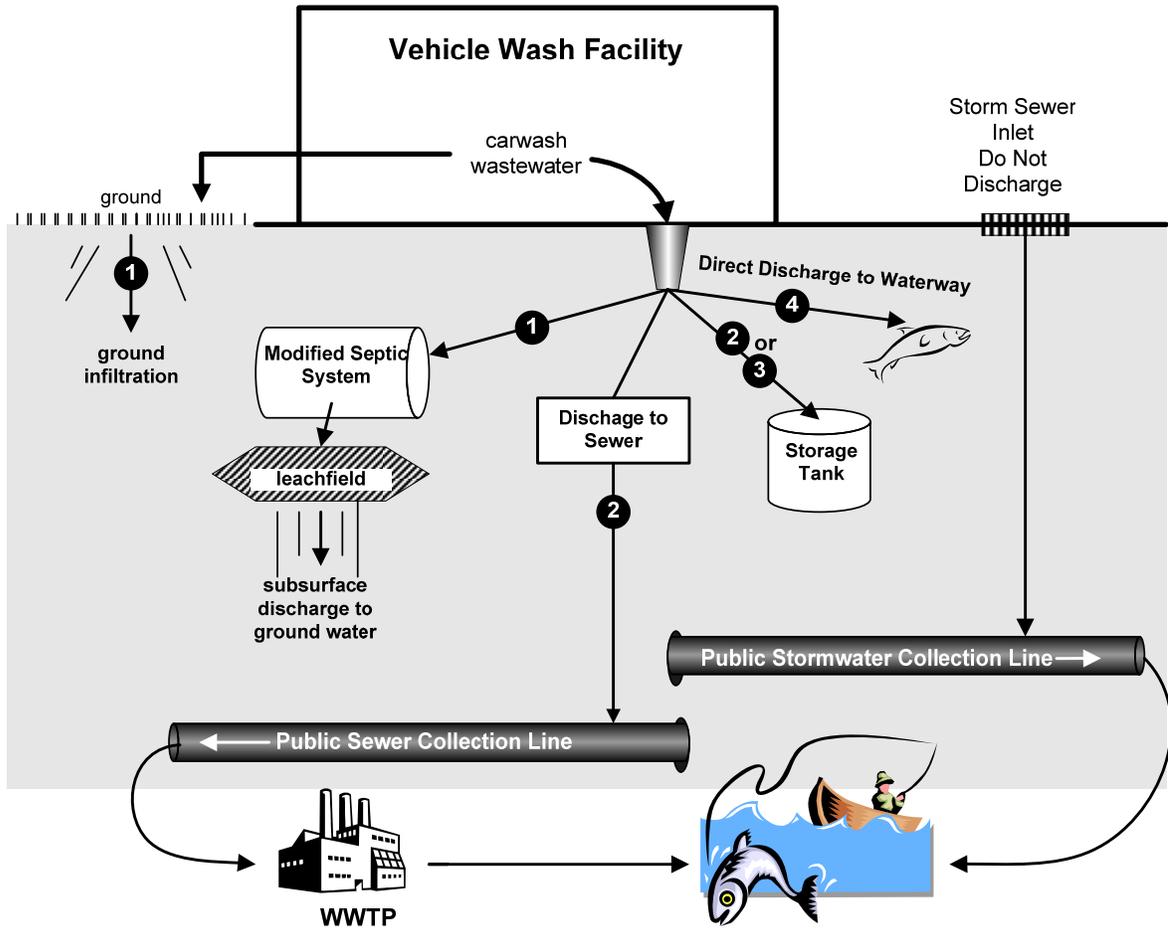
Some maintenance facilities do not have their own wash bays connected to a sanitary sewer collection system. Another option for them to prevent wastewater from entering our rivers, lakes and streams is to work with a commercial car washing operation. Since these operations manage this type of wastewater each day, collaborating with a local car wash operator can practically assure environmental protection. So discuss this possibility with your local car wash operator.

CONSERVE WATER

Possibly the best and easiest way to reduce your environmental impact is to minimize the amount of wastewater that will be generated. Encourage municipal employees to wash from a bucket instead of leaving the hose running. In 60 seconds, a 5/8 inch diameter hose left on can use 14 gallons of water. For a 10-minute car wash, that's 140 gallons for one car. If using a bucket is not practical, attach a spray nozzle onto the hose to restrict the flow of water when it's not needed.

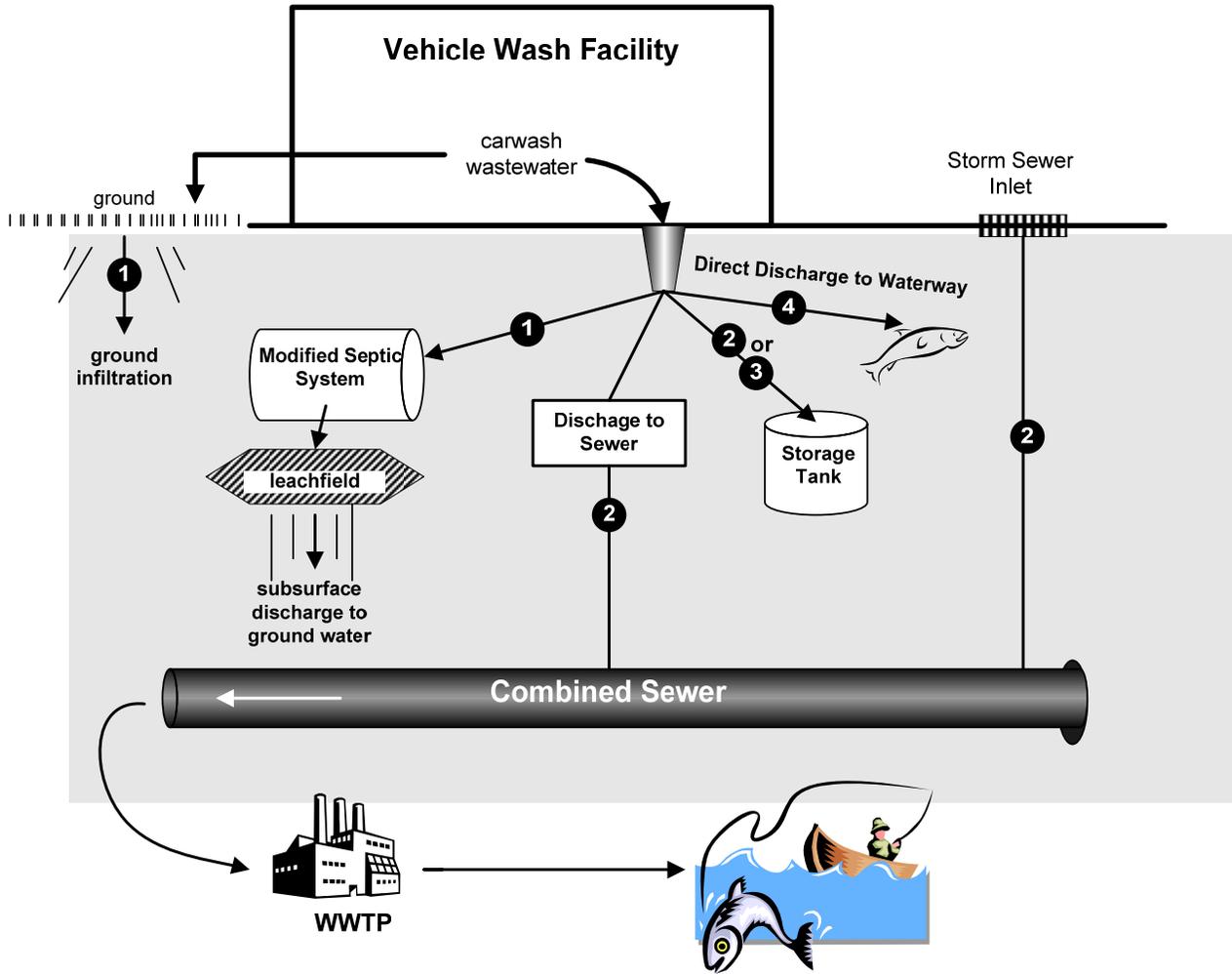
Questions related to the above guidance can be directed to the Environmental Assistance Center at 800 662-9278 or Email at dnre-assist@michigan.gov.

Picture 1: Separate Sewer System



- ① Subject to State Groundwater Permit program
- ② Subject to Industrial User Permit program
- ③ Other waste disposal facility (i.e., hazardous or liquid industrial waste)
- ④ Subject to National Pollution Discharge Elimination System (NPDES) Permit Program

Picture 2: Combined Sewer System:



- ① Subject to State Groundwater Permit program
- ② Subject to Industrial User Permit program
- ③ Other waste disposal facility (i.e., hazardous or liquid industrial waste)
- ④ Subject to National Pollution Discharge Elimination System (NPDES) Permit Program