

## What environmental protection practices should be considered related to community car washes (fund raising events for nonprofit organizations where numerous vehicles are washed at one location over a short period of time)?

During June and July, many nonprofit groups conduct community car washes outside on parking lots and other hard surface areas. Wash water from this activity carries away the dirt, oil, grease, salt, and any soap or other cleaner used. In most instances, this dirty, soapy water works its way to either a grate near the curb (where it enters a sewer), or it collects somewhere off the parking lot (and infiltrates into the ground – see Picture 1).

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, before you consider doing a community car wash, it is important to decide how to manage the wastewater.

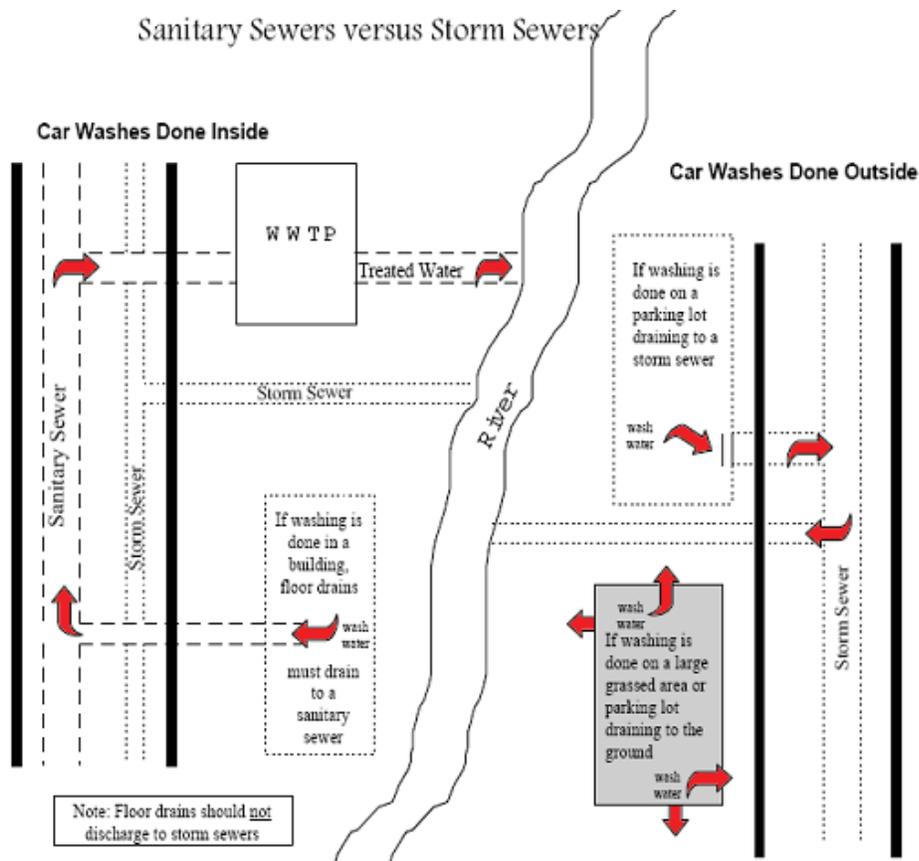
Various regulatory agencies can provide guidance, and management practices can be used to decrease the potential for environmental harm from car washing. The state of Michigan regulates wastewater that goes directly to surface and groundwaters of the state, and wastewater treatment plants regulate wastewater that is sent to them.

### ***DISCHARGE TO A COMBINED OR SEPARATE SANITARY SEWER***

Since wastewater treatment plants are designed to treat wastewater, the best option is to get their permission and send them the wastewater via the sewer system. To do this, you may have to learn a bit about the sewer system at the site.

There are two types of sewer systems in Michigan; namely, separate sewer systems and combined sewer systems (See Picture 1). *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. This 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.

PICTURE 1



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. If this option is available at the site, then you will need to confirm with the wastewater treatment plant 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 operator, preferably in writing, before beginning your community car wash.

#### ***WORK WITH A COMMERCIAL CAR WASHING OPERATION***

Another way 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. In some cases, the commercial operator will give community organizations some of the profit in exchange for the organization's campaigning efforts. So discuss possible community collaboration projects with your local car wash operator.

#### ***DO NOT DISCHARGE 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. Large quantities of wastewater can easily damage onsite septic systems, so it is not advisable to dispose of the wastewater in this manner.

**CONSERVE WATER**

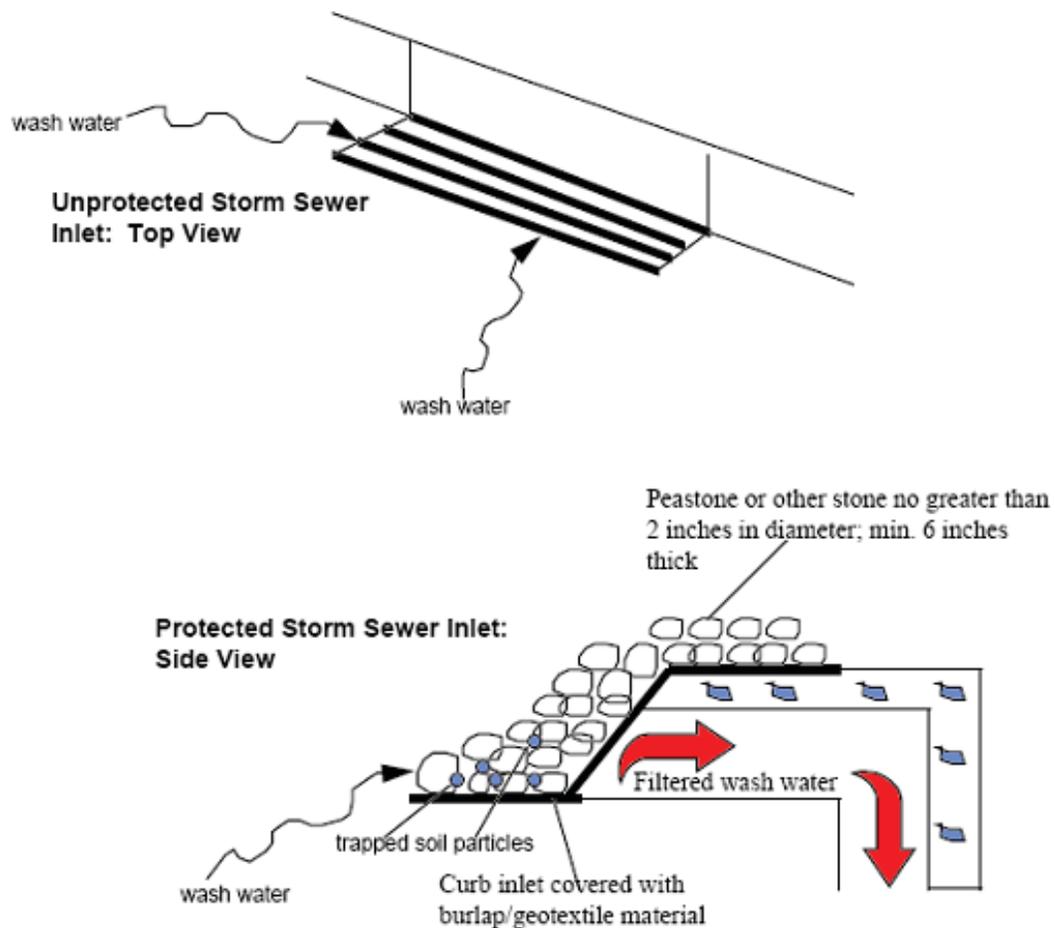
Possibly the best and easiest way to reduce your environmental impact is to minimize the amount of wastewater that will be generated. Encourage volunteers to wash from a bucket instead of leaving the hose running. In 60 seconds, a 5/8 inch diameter hose left on can use 14 gallons of water. For a 10-minute 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.

**MANAGEMENT PRACTICES FOR DISCHARGES TO STORM SEWERS**

If your wastewater will drain to a storm sewer, it is recommended that you install a filter over the storm sewer grate. The purpose of the filter is to trap the dirt and pollutants in the stone and filter fabric before it can enter the storm sewer. To make a stone filter for the protection of storm sewer inlets, take hardware cloth, geotextile filter fabric, burlap, or wire mesh with mesh size no larger than 1/2 inch and wrap it around the storm sewer inlet. Allow extra cloth/wire to extend beyond the perimeter of the inlet. Lay six inches of pea stone or small gravel (no larger than 2 inches in diameter) on top of the fabric/wire mesh (See Picture 2). Upon completion of the car wash, shovel-off the pea stone and the pollutants (dirt, oil/ grease, etc.) that it captured; and then remove the filter fabric. The filter fabric, pea stone, and pollutants attached to the pea stone should be disposed of in the trash.

In addition, consider washing vehicles using water alone (without soap). Not using soap will leave only the dirt and attached pollutants in the wastewater, which can be trapped before entering the sewer.

PICTURE 2



Modified from Virginia Sediment Control Manual

***MANAGEMENT PRACTICES FOR DISCHARGES TO THE GROUND/GRASS***

When community car washes are done in areas where the wash water cannot be directed to a wastewater treatment plant (through a combined or sanitary sewer) and are done on large, grassed areas, it is important that the grass is thick. Avoid washing cars on bare soil; and conduct the car wash away from wells and wellheads, especially if soap or detergent is being used. If using detergent, use biodegradable. If you don't know where the wells and wellheads are, contact the local health department.

When holding a car wash on a grassy area or gravel lot, the following guidelines should be followed:

1. Use water conservation practices as explained earlier.
2. Use soaps according to the manufacturers' directions. Soaps should not include volatile organic compounds such as degreasers.
3. The car wash site should be a level area of ground so that the washwater can seep into the ground and not cause runoff onto adjacent properties.
4. Select a car wash location that is large enough to wash vehicles at different locations on the site in order to prevent ponding (and runoff).
5. Use the same car wash location no more than two days in a row in a two-week period.

Questions related to the above guidance can be directed to the Department of Environmental Quality's Environmental Assistance Center at 800-662-9278 or Email at [deq-ead-env-assist@michigan.gov](mailto:deq-ead-env-assist@michigan.gov).