



Power Washing

Office of Program Support

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What is Power Washing?

Power washing is the use of steam or pressurized water (with or without added abrasives and with or without added chemicals, e.g., detergents) to remove paint or other coatings, oils or grease, corrosion or debris from a surface or to prepare a surface for a coating. This fact sheet was developed to assist companies in the identification of the requirements for managing wastewater from mobile power washers in Indiana.

Who is engaged in this activity?

Independent mobile power washers, janitorial services, municipalities, airports, fleet maintenance, parking lot maintenance, shopping malls, roofing contractors, grocery stores, restaurants, military, property management companies, and painting contractors are among the many affected stakeholders engaged in this activity.

Power washing may be used on the following surfaces, including but not limited to: vehicles; equipment; residential, industrial, municipal and commercial buildings; and parking areas.

Environmental impacts

Power washing is a type of industrial activity that is typically mobile, short-term and generates a relatively small volume of wastewater and debris. Wastewater generated from power washing can contain contaminants like detergents, oils, inert solids, metals, paint, solvents or other chemicals.

If the wastewater that is generated from power washing isn't properly managed, the discharge can be conveyed by streets, curbs, gutters, inlets, ditches, open channels, etc. to Waters of the State, in violation of state law and rules. These various types of conveyances may be connected to storm sewers or storm drains that can lead directly to Waters of the State. Discharging to these conveyances may violate state water quality standards by causing floating debris, oil or scum, color, odor or other nuisance conditions.

"Waters of the State" is defined by Indiana Code 13-11-2-265, and includes all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, storm sewers, etc. within the state of Indiana. Further, Waters of the State includes underground sources of water.

Some communities have local ordinances that establish certain requirements to protect these conveyance systems from wastewater discharges. Additionally, local ordinances may require permission and establish operating conditions prior to any discharge to either a combined sewer or a sanitary sewer. A combined sewer conveys both sanitary and storm water discharges directly to a local wastewater treatment plant, also known as a Publicly Owned Treatment Works (POTW).

If you plan on discharging your power washing wastewater to a POTW, you must first obtain permission from the POTW. Written approval is recommended. Each wastewater treatment plant is unique and many are not designed to handle industrial wastes containing chemicals, metals, oils, etc. It is important to let the POTW know what, when and how much you plan to discharge.

The regulation of wastewater from power washing activity will depend on the discharge destination, with the three primary entities with regulatory oversight being the POTW, the Indiana Department of Environmental Management (IDEM), and the United States Environmental Protection Agency (U.S. EPA). The POTW and IDEM regulate wastewater that is directed to the POTW and IDEM regulates wastewater that is discharged to surface waters of the state. U.S. EPA regulates wastewater that is discharged through what are called Class V injection wells, e.g., septic system leach fields.

Improper discharges & management of contaminated debris

- Discharging contaminated wastewater directly into Waters of the State without proper authorization. This includes discharges to storm sewers or other conveyances that reach Waters of the State.
- Improper debris management and disposal.
- Improper management of hazardous waste, especially at sites with contamination or when paints are involved.

Chemical additives

Additional precautions may be needed when using chemical additives and disposing of the wastewater. The local POTW or disposal facility may require additional information prior to their use. Ideally, power washing should be conducted without the use of an abrasive or chemical additive to prevent possible water pollution.

The following list does not constitute approval. Common additives used in power washing include:

- Potassium & Sodium Hydroxide (strong bases)
- Citric and Oxalic Acid
- Sodium Dodecylbenzenesulfonate, also called Sodium Dodecylbenzene Sulfonate (anionic detergent)
- Octylphenol Ethoxylate (non-ionic detergent)

Regulatory oversight

Indiana's narrative minimum water quality standards (327 IAC 2-1-6) prohibits the following: substances, materials, floating debris, oil, scum, or other pollutants which will settle to form objectionable deposits; are in amounts sufficient to be unsightly or deleterious; produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance; are in amounts sufficient to be acutely or chronically toxic; or are in concentrations or combinations that will cause or contribute to the growth of aquatic plants or algae to such a degree as to create a nuisance, be unsightly, or otherwise impair the designated uses.

Any discharge of pollutants into Waters of the State as a point source discharge, except for exclusions made in 327 IAC 5-2-1.8, is prohibited unless in conformity with a valid National Pollutant Discharge Elimination System (NPDES) permit obtained prior to the discharge.

Disposal options

1. Discharge directly into the sanitary sewer with approval from the POTW.
2. Spent wash water is collected and transported directly to a POTW.
3. Spent wash water, without chemical additives, is discharged allowing for infiltration into soil completely. The discharge should cease when the soil becomes saturated or runoff is being caused.

Do not assume you are authorized to discharge your power washing wastewater into the storm sewer system or directly to Waters of the State without appropriate approval and/or permits from IDEM and local communities.

Collection & capture

Any method of collection can be used prior to wastewater being discharged to a sanitary sewer or being transported to a POTW as long as it can be collected in its entirety. Some of the following collection methods may be employed by power washer operators:

- Pump systems range from a wet-dry vacuum to a sump pump. You can create a natural catch basin for pumping water by setting up your containment system in an area that is slightly sloped. You need to ensure, however, that water does not wash over the berms (or under portable berms). Besides the following, there may be other methods you can use to manage wastewater at the site.
- Portable containment areas or wash pits can be made from waterproof tarps, heavy duty plastic or vinyl equipped with berms to prevent wastewater from running into storm drains or off-site. Materials that have been used for berms include: sand bags or tubes, capped fire hoses, water filled tubing and PVC piping. Regardless of the containment material is used, it must seal tightly to the ground so that none of the wastewater can pass under it.
- Stationary and more permanent containment areas can be constructed of cement coated with an epoxy or other surface coating that is compatible with the additives and contaminants being washed off the items. Berms and pump systems may be used to contain wastewater and divert it to a holding tank or sanitary sewer.
- Containment devices when power washing smaller pieces of equipment include portable vinyl swimming pools, plastic 55-gallon drums on casters, and flat metal or plastic containment pads.
- Commercial wastewater collection systems are available for power washing. These systems can range from portable wash pits to self-contained water recycling systems. Contact your local vendor for more information.

Other considerations when power washing:

U.S. EPA/IDEM hazardous waste regulations (329 IAC 3.1) apply to wastes generated at sites other than households. For example, if old paint is being power washed off of a building, paint chips need to be collected, evaluated and disposed of properly.

Paint chips removed from buildings and other surfaces may contain metals, such as Lead, Chromium, Cadmium and Mercury which can contaminate surface and ground water. These contaminants may need to be managed as a hazardous waste. If less than 220 pounds is generated at any given location during a calendar month the waste for that month could be conditionally exempt. The waste must still be contained and managed at an approved disposal facility. A permitted municipal solid waste landfill is an approved facility for disposal of conditionally exempt hazardous waste.

Aqueous/liquid waste with a very low pH (less than or equal to 2) or a very high pH (greater than or equal to 12.5) may also need to be managed as a corrosive hazardous waste.

There are other hazardous waste characteristics for ignitability, reactivity, toxicity and listings that are less likely to apply to power washing waste but must still be evaluated as part of a proper waste determination.

Additional Information

The States' Definition of 'Waters of the state,' Environmental Council of the States Green Report, February 2009: https://www.aswm.org/pdf/lib/ecos_feb_2009_definitions_of_waters_of_the_state.pdf

EPA YouTube presentations – Mobile Power Wash Cosmetic Cleaning:
<https://www.youtube.com/watch?v=kluBWlwR3o4>

Pressure Washing Industry Resource Center – best management practices: <http://www.power-pressure-washers.com/best-management-practices.htm>

NPDES Training: <https://www.epa.gov/npdes/npdes-training>