

Pollution Prevention Measures for Pressure Washing

This document describes the requirements for the disposal of waste and wastewater generated when using pressure washing equipment within the City of Denton. It also provides information on practical methods, known as Best Management Practices (BMPs), which can be used to protect the environment and to comply with regulatory requirements.

These requirements and BMPs apply to anyone within the City of Denton, who generates wastewater from pressure washing, including:

- contractors providing pressure washing services to others
- businesses that use pressure washing equipment as part of their operations or maintenance (such as cleaning heavy equipment)
- homeowners

What is Pressure Washing?

Pressure washing uses mechanical equipment to create a high pressure stream of water, typically ejected from a hand-held wand or nozzle. This jet of water is used to clean a wide variety of surfaces and objects. Depending on the application, pressure washing can be done with or without heated water or added cleaners.

In recent years, the use of pressure washing equipment has grown substantially. Contractors provide pressure washing as a service to others, businesses purchase their own units to use in their own operations and maintenance, and many homeowners rent or purchase equipment.

Pressure washing is used to clean many things, including:

- Vehicles
- Parking lots
- Building exteriors
- Sidewalks
- Drive-thru lanes
- Heavy equipment
- Roofs
- Restaurant equipment and hood filters
- Graffiti
- Stripping paint and surface preparation
- Parking garages
- Dumpsters and trash cans
- Fences

The Problem

Most pressure washing is done outside. This often results in the discharge of wastewater to the storm drainage system, unless the equipment operator takes steps to collect and dispose of it legally. Discharge of pressure washing wastewater to the storm drainage system is prohibited because it contains both pollutants from the cleaning compounds used and/or from the objects or surfaces being cleaned. Even cleaners labeled “biodegradable” and “non-toxic” may be harmful to aquatic life, especially after cleaning various surfaces (e.g. dumpster areas, parking lots, equipment and more) that contain oils, greases, chemicals, and other substances.

Any substance, including pressure washing wastewater that enters storm drains, flows directly into lakes, rivers, and streams. This water is not treated or cleaned to remove pollutants. Pollutants discharged to the storm drainage system harm fish and wildlife, and contaminate recreational sites and drinking water supplies.

Regulations

To improve the quality of water we fish and swim in, not to mention drink, Federal and State regulations prohibit discharges of pollutants to water bodies without a permit. Because of these regulations, the City of Denton is subject to a Municipal Separate Storm Sewer System (MS4) Permit issued to them by the State of Texas. The MS4 Permit requires the City of Denton to implement programs to reduce pollutants in stormwater runoff (directly caused by rainfall) and to effectively prohibit non-storm water discharges.

As required by the MS4 Permit, the City of Denton has adopted code that prohibits non-storm water discharges. The discharge of wastewater from pressure washing to the storm drainage system or surface waters is prohibited by this ordinance.

However, preventing discharge to the storm drainage system is only part of the story. Improper discharges to the sanitary sewer, septic tanks, or land can also cause environmental harm, damage equipment and facilities, and violate regulations.

Pressure Washing as Part of the Solution

Pressure washing is an activity that can help improve the quality of our waters when done properly. By cleaning surfaces, collecting the wastes, and properly disposing of the wastes, there is less chance of pollutants ending up in our waterways. It is through education, proper collection and disposal that pressure washing can have a positive impact on the environment!

DISPOSAL REQUIREMENTS AND PROHIBITIONS

Proper disposal of pressure washing wastewater, in compliance with environmental regulations, depends on the nature of the pollutants in the wastewater. It is the responsibility of the generator to determine the proper collection and disposal method for wastewater created by pressure washing. To

avoid unanticipated costs, delays, and violations, this determination should always be made prior to starting any job.

All disposal methods are subject to requirements, restrictions, and prohibitions, and are outlined below.

Storm Drains

Discharging pressure washing wastewater into any natural body of water or any storm drainage system, which includes storm drains, roadside ditches, gutters, and drainage channels, within the City of Denton, is prohibited by Federal, State, and local laws.

Evaporation

Some vendors have stated that the water from washing does not leave the site and evaporates over time. Pressure washing wastewater that contains visible debris or residue, soap, detergent or other cleaning agents, or excessive amounts of any pollutant, may not be left on paved surfaces to evaporate, because the residue will eventually be discharged to the storm drain.

Land Disposal

Wastewater disposal to land must not create a nuisance condition, flow into the storm drain, or contaminate soil with hazardous waste.

Wastewater containing garbage, food wastes, or visible trash may not be discharged to land.

Any wastewater disposal to land must have the approval of the property owner.

Sanitary Sewer

Disposal of pressure washing wastewater to the sanitary sewer collection system within the city limits of Denton, TX must meet the requirements of the City of Denton Code of Ordinances, 26-187.

Using the BMPs described in this document will help residential users comply with the City of Denton requirements.

Septic Systems

Discharges of pressure washing wastewater to a septic system anywhere within City of Denton must be approved by the Pollution Control Supervisor (940) 349-8619. Discharges that contain hazardous waste, have the potential to harm septic systems, or are likely to contaminate groundwater, will not be approved.

Hazardous Waste

Beware of pressure washing surfaces that contain lead-based paint (paint layers from prior to 1978), or areas with freestanding liquids (e.g. oil, solvents, antifreeze, etc.). Pressure washing these types of surfaces may generate hazardous waste (e.g. lead-based paint chips, oil/grease, hydrofluoric acid, muriatic acid, etc.). Generating hazardous waste may dramatically increase your operating costs and limit your disposal options. For more information on hazardous waste determination call the City of Denton, Watershed Protection Division (940) 349-7123.

BEST MANAGEMENT PRACTICES

PLANNING

Before beginning pressure washing, determine what collection method you will use and how to properly dispose of the wastewater generated from each cleaning activity.

Based on the pollutants in what you are pressure washing there may be specific requirements for how the material will need to be handled and disposed (for example: some older homes may have lead paint that has specific disposal criteria). Please contact City staff if you have any questions about your project.

Identify the specific location where you will dispose of wastewater (e.g. job-site sanitary drain or grassed area).

Always obtain the property owner's permission before disposing of wastewater at a job site (i.e. land surface or sanitary sewer drain).

SURFACE PRE-CLEANING

Consider using dry methods for surface pre-cleaning, such as using absorbents on small oil spots and sweeping up trash/debris/dirt before wet washing. Pre-cleaning may reduce costs and simplify the wastewater disposal process. Also be aware of the costs and requirements associated with disposing of pre-cleaning wastes which may be identified as hazardous waste and require special management.

Note: when using dry pre-cleaning methods, pick up pre-cleaning debris as soon as possible so it does not have a chance to enter the storm drains.

PRESSURE WASHING

To reduce the volume of wastewater requiring proper disposal minimize the amount of water used during pressure washing.

Avoid using cleaning products that contain hazardous substances (e.g., hydrofluoric acid, muriatic acid, sodium hydroxide, bleach, etc.) that can turn wastewater into hazardous waste.

Acidic, caustic, and detergent cleaners may damage paved or coated surfaces.

WASTEWATER COLLECTION

Identify where all area storm drains are situated.

Locate property high and low-spots and determine the area where wastewater can be pooled for collection. If a storm drain is located in the collection area, ensure that the path to the drain is blocked or that a cover is tightly sealed over the drain before allowing wastewater to collect in this area.

Common equipment used for containing and collecting wastewater generated during pressure washing activities include: vacuum pumps, booms/berms, portable containment areas, weighted storm drain covers, inflatable plumber's plugs, oil/water separators, holding tanks, portable sump pumps, hoses, absorbents, and more.

Avoid mixing non-hazardous wastewater with wastewater known to contain hazardous levels of pollutants. This can increase the volume of waste and require complicated treatment and/or disposal as a hazardous waste, thus increasing disposal costs.

Place an oil-absorbent mat/pad on top of collected wastewater to reduce the amount of oil re-deposited on the surface of the collection area.

Once wastewater has been collected and/or discharged to the sanitary sewer system, visible solids in the collection area must be swept up to prevent discharge to the storm drain. Alternatively, the collection area may be rinsed, provided that any nearby drains are still covered or blocked, and the rinse water is properly discharged to the sanitary sewer.

Minimal residual amounts of wastewater that cannot be collected and that will not reach storm drains may be left on paved surfaces and allowed to evaporate. Note: It may be necessary to sweep, or rinse and collect the wastewater from the area, to avoid leaving behind visible residue that will be washed into the storm drain at a later time.

Wastewater with high pollutant concentrations, including wastewater that contains cleaning compounds, must be completely collected and may not be left to evaporate.

WASTEWATER DISPOSAL

All wastewater discharged into the sanitary sewer must meet the requirements of the City of Denton Code. For specific questions contact the wastewater collections department. For any concerns about industrial waste discharges to the sanitary sewer system contact the industrial pretreatment program at (940) 349-8610.

Sewer Disposal Options

Disposal options for non-hazardous pressure washing wastewater include:

- Collecting and discharging wastewater into the sanitary sewer via the sanitary sewer clean-out or sanitary sewer drain at the point of generation (job site). This activity must be conducted in accordance with the City of Denton Code of Ordinances, Chapter 26, Division 3, Sections 186-189, including Pretreatment Regulations as some discharges may require some form of pretreatment, depending on the nature of the wastewater. In addition, this disposal method must be approved by the property owner(s) prior to discharge.
- Collecting and discharging wastewater into the sanitary sewer at the pressure washer's place of business using the sewer clean out.
- Obtain permission from the property owner for any type of discharge to the sanitary sewer and make sure wastewater meets City of Denton Code requirements and/or is approved by an authorizing agency prior to seeking the property owner's permission.

Land Disposal

- Wastewater may be collected and discharged or directed onto vegetated or graveled areas only when it does not create a nuisance condition or does not contain food waste or contaminants (i.e. solvents, cleaners, oils, metals, etc.) that can constitute a hazardous waste. Discharges

must soak into the ground and may not flow into the storm drain. Obtain permission from the property owner prior to discharging or diverting wastewater to vegetated or graveled areas.

- If you divert wastewater to landscaped areas, minimize or eliminate the use of soaps, detergents, and chemicals to avoid damage to plants. Filter out solids that would be visible on the ground after discharge, and minimize the use of water to avoid wastewater overflowing from these areas. Note: Repeated discharges to landscaped areas can result in an accumulation of contaminants that damage vegetation and contaminate the soil.

WASTEWATER TREATMENT

- If you operate or are considering using a wastewater recycling or pretreatment unit (e.g. oil/water separator), make sure you understand the waste streams that are generated. Identify proper disposal methods for these wastes, and consider disposal costs before starting a job. Some units, especially those that separate oil from water, may generate hazardous waste (e.g. waste oil) and require special storage and handling practices.
- Consider contracting with a company that can provide appropriate treatment and disposal of your wastes. This may save you time and money associated with purchasing, permitting, and using your own wastewater treatment equipment. In some cases, you may be able to reduce the liability that comes with the generation and disposal of hazardous waste.

WAYS TO COLLECT WASTEWATER:

The following are examples of devices that can be used to contain and collect wastewater during pressure washing activities. These devices are not endorsed and are only provided as a reference tool. There may be other containment devices available, which are not listed.

Note: When working with electrical equipment in wet environments, it is important to understand and comply with applicable health/safety and electrical codes, as well as utilize appropriate safety equipment (e.g. Ground Fault Interrupters, etc.).

- *Berms*
Berms can be used to prevent wastewater from entering a storm drain by placing a protective barrier around the storm drain inlet. This allows the wastewater to pool up around the storm drain prior to proper collection and disposal. Berms may be less effective or ineffective when the storm drain is located at the bottom of a slope and/or a large amount of wastewater is generated.
- *Storm Drain Covers/Mats*
These devices are placed on top of the storm drain cover grate, create a quick seal and prevent wastewater from entering the storm drain system. Storm drain covers/mats (e.g. magnetic vinyl mats, PVC drain covers, polyurethane mats, and others) allow wastewater to accumulate on top of it until the pressure washing activity is complete and the wastewater can be collected for proper disposal. Storm drain covers/mats are frequently used along with a vacuum device (e.g. sump pump, wet/dry vacuum, and vacuum pump) that diverts wastewater into the sanitary sewer system.

- *Containment Pools*
A portable or temporary containment pool can be used by pressure washers to collect wastewater. Easy to assemble, they provide an immediate work area and collect wastewater to prevent pollutants from entering storm drains. Containment pools vary in size and material, and hold anything from a shopping cart to a truck and trailer.
- *Vacuums/Pumps*
Wet/dry vacuums, sump pumps, and vacuum pumps can be used to collect wastewater after pressure washing. Vacuum devices typically have an extension (vacuum boom) which allows efficient wastewater collection. Many vacuum devices are designed with a second hose (e.g. garden hose) that can run from the pump to the sanitary sewer or a truck/trailer mounted holding tank, depending on disposal method.
- *Vacuum Boom*
A vacuum boom is an attachment for the vacuum device. The boom typically rests flush on the ground and draws wastewater through small holes on the bottom of the boom. Different variations of vacuum booms are available for areas with steep slopes or rough terrain.
- *Inflatable Pipe Plug*
Inflatable pipe plugs prevent wastewater from entering a storm drain system by blocking the pipe leading out of the drain inlet. Unlike the storm drain mats/covers that block storm drain inlet grates, the inflatable pipe plug is inserted into the storm drain pipe and uses the inlet structure beneath the grate to collect the wastewater. After insertion the plug is inflated to make a snug fit. Once the wastewater has been contained, it can be collected and properly disposed by using a portable pump device (e.g. sump pump, vacuum pump, etc.). Note: inflatable pipe plugs should only be used in storm drains on private property. They are not authorized to be used in public storm drain inlets or pipes.

FOR MORE INFORMATION

- <http://www.cityofdenton.com/watershed>
- City of Denton – Watershed Protection
 - (940) 349-7123
- City of Denton – Industrial Pretreatment Program
 - 940-349-8610
- Texas Commission on Environmental Quality
- Small Business and Local Government Assistance – TexasEnviroHelp
 - 1-800-447-2827
- Cleaning Equipment Trade Association (CETA)
 - (800) 441-0111
 - www.ceta.org
- Power Washers of North America (PWNA)
 - www.pwna.org

Disclaimer:

The information presented in this document is intended for guidance purposes only and is not all-inclusive. The information provided may be of value as an educational or reference tool.

However, we do not endorse any content or product that may be noted in this booklet. Please note that laws and regulations are subject to change. It is recommended that the applicable codes and statutes be reviewed to verify which requirements pertain to your business. Although the material contained in this booklet will be routinely updated, it may not reflect recent changes in the various laws and regulations.