

Pressure Washing and Surface Cleaning Guide

Best Management Practices



*Best Management Practices
are used to protect the
environment and comply
with conservation rules.*

PRESSURE WASHING and SURFACE CLEANING GUIDE

Introduction

This guide describes the requirements for the proper disposal of wastewater generated by the use of pressure washing equipment generated within the corporate limits of the City of San Antonio. It also provides methods known as Best Management Practices (BMPs), which shall be used to protect the environment and to comply with regulatory requirements.

These BMPs and requirements apply to anyone operating within the San Antonio Water System (SAWS) jurisdiction, that generates wastewater, which include the following:

- contractors that provide pressure washing as a service 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 for cleaning a wide variety of surfaces and objects. Depending on the application, pressure washing may be conducted with or without heated water or added cleaners.

In recent years, the use of pressure washing equipment has grown substantially. Numerous 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 units or purchase low cost ones.

For example, pressure washing is used to clean the following:

- Trucks
- Automobile fleets
- Parking lots
- Building exteriors
- Sidewalks
- Drive-thrus
- Heavy equipment
- Roofs
- Restaurant equipment and hood filters
- Graffiti
- Stripping paint or for preparing and treating other types of surfaces.

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The Problem

Most pressure washing activities are conducted outdoors, which results in the discharge of wastewater to the Municipal Separate Storm Sewer System (MS4). Steps are needed to collect and properly dispose of it. Discharge of pressure washing wastewater to the MS4 is prohibited; because it contains 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 any tributaries, creeks, lakes, rivers, and streams, which is not treated or cleaned to remove pollutants will bring harm to aquatic life, wildlife and contaminate recreational sites and drinking water supplies.

Regulations

In accordance to Chapter 34, Water and Sewers, Section 34-272 (1), the following must be adhered to:

(1) **Power washers.**

- a. Effective January 1, 2006, a person who uses a power washer in any commercial manner or for compensation shall register with the Director of Conservation (SAWS), and obtain a certificate for such use.
- b. Exempted from this requirement are persons who use power washers for personal use at their own home and homebuilders who are performing a one-time clean up at a newly constructed house.
- c. Holders of NPDES/TPDES permits are deemed certified.

In accordance to Chapter 34, Water and Sewers, Section 34-702, the following are “**Prohibited discharges into the MS4:**”

- (a) It shall be a violation of this division for any person to deposit, throw, drain, discharge, cause or allow to be deposited, thrown, drained or discharged, or otherwise cause to be injected into the MS4, or any storm sewer manhole, catch basin, private drain, ditch, street, gutter, creek, stream, tributary, or any other drainage device which connects with or drains into the MS4, any of the following described materials or substances within the corporate limits of the City of San Antonio:

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- (1) Any acid waste materials;
- (2) Any alkaline waste materials;
- (3) Any water or waste containing free-floating, or insoluble oil;
- (4) Any gasoline, naphtha, fuel oil, mineral oil or other flammable or explosive liquid, solid or gas;
- (5) Any noxious, malodorous, poisonous, or reactive substance which, either singularly or by interaction with other substances, or by its accumulation in the MS4 becomes injurious or potentially injurious to human, plant or animal life, or property; or
- (6) Any domestic wastewater or industrial wastewater as defined in Article V, Division 3 of this chapter.

San Antonio Water System Power Wash Program (PWP)

Pressure washers conducting business within the jurisdiction of the San Antonio Water System are eligible to join the San Antonio Water System PWP (www.saws.org/conservation/ordinance/). The PWP is a media incentive-based program that rewards local pressure washing businesses for promoting clean water awareness and implementing BMPs such as collecting and discharging wastewater into the sanitary sewer system via a pretreatment system (e.g. to remove solids or oils) for proper treatment or proper disposal via manifesting through a certified waste hauler.

Disposal Requirements and Prohibitions

Proper disposal of pressure washing wastewater, in compliance with environmental regulations, depends on the nature of the pollutants in it. 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 in accordance with Chapter 34, Water & Sewers, Division 3. Industrial Waste, Section 34-472, Regulations.

Storm Drains

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

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- Only defense to any such discharge within the limits of City of San Antonio would be by permit issued by the Texas Commission on Environmental Quality (TCEQ) or The United States Environmental Protection Agency (USEPA).

Evaporation

- 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 during a rain event.

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 within the San Antonio Water System (SAWS) jurisdiction shall be properly disposed in accordance with Chapter 34, Water & Sewers, Division 3. Industrial Waste, Section 34-472, Regulations.
- Residential SAWS customers conducting pressure washing activities at their home are not required to obtain a permit. However, homeowners are required to use the BMPs described in this document to comply with SAWS requirements.
- Note: property owner permission is required prior to discharging wastewater into the customer's sanitary sewer clean-out/inlet.

Septic Systems

- Discharges of pressure washing wastewater to a septic system must be approved by

Bexar County Infrastructure Services Department
233 N. Pecos, Suite 420. San Antonio, TX 78207
Phone: (210) 335-6700 Fax: (210) 335-6713.

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- Discharges that contain hazardous waste, have the potential to harm septic systems, or are likely to contaminate groundwater, and are prohibited.

Hazardous Waste

- Beware of pressure washing surfaces that contain lead-based paint, or areas with freestanding liquids (e.g. oil, solvents, antifreeze, etc.). Pressure washing these types of surface 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 an updated list of waste haulers visit the SAWS (www.saws.org) or City of San Antonio (COSA) website for information on Household Hazardous Waste Program disposal information: www.sanantonio.gov/enviro/solidwaste/RecyOptionsHousehold.asp

BEST MANAGEMENT PRACTICES

Planning

- Prior to beginning pressure washing activities, determine what collection method you will be using and how you intend to properly dispose of the wastewater generated from each cleaning activity.
- Obtain all necessary permits and authorizations.
- Identify the specific location where you will be disposing wastewater (e.g. job-site sewer clean-out, county septage station, or the sewer clean-out at your place of business).
- Always obtain the property owner's permission before disposing of wastewater at a job site (i.e. sanitary sewer clean-out).

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 is an activity that may reduce costs and simplify the wastewater disposal process. However, you should 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.

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- Note: it is important to remember, when using dry pre-cleaning methods, be sure to pick up pre-cleaning debris as soon as possible, so the materials do not have a chance to enter the storm drains.
- For more information on locations and dates provided to the public, visit the COSA website for information on disposal information: <http://www.sanantonio.gov/enviro/solidwaste/RecyOptionsHousehold.asp>

Pressure Washing

Minimize the amount of water used during pressure washing activities, thus reducing the volume of wastewater that needs to be properly disposed.

- Avoid using cleaning products that contain hazardous substances (e.g., hydrofluoric acid, muriatic acid, sodium hydroxide, bleach, etc.) and can turn wastewater into a hazardous waste.
- Acidic, caustic, and detergent cleaners may damage paved or coated surfaces.
- Once most of the wastewater has been collected and properly disposed, minimal residual amounts of wastewater that can not 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 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. Drainage swales may sometimes be used to collect water before it enters a storm drain.

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- Common equipment used for containing and collecting wastewater generated during pressure washing activities include: vacuum pumps, booms, dikes, 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 may 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 help 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 remaining in the collection area must be swept up to prevent subsequent 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.

Wastewater Disposal

- All wastewater discharged into the SAWS sanitary sewer must meet the requirements of obtaining pre-approval prior to disposal.
- Discharges within the SAWS service area
- Within the SAWS service area, any pressure washing contractor discharging to the sanitary sewer must have a permit issued by SAWS. Most of the contiguous urban area of San Antonio Water System, including unincorporated areas and all of the incorporated I.C.L/O.C.L served by SAWS.
- The following activities in the SAWS service area require a PWP permit from the Conservation Department for pressure washing contractors during all drought stages, however, they do not require pre-approval prior to each discharge into the sanitary sewer system.
 - Transportation related cleaning - washing fleet vehicle exteriors, mobile auto detailing, and rinsing of automobiles, recreational vehicles (RV), and boats at retail dealerships
 - Surface related cleaning - sidewalks, plazas, driveways, parking garages, service stations, and building exteriors and walls

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- Food service related cleaning - restaurant alleys, grocery dumpster areas, restaurant floor mats, exhaust filters, grease filters, lunch wagons (non-engine), and food carts
- Other types of permitted wastewater discharges may be acceptable for disposal into the sewer system, however pre-approval must be obtained by SAWS prior to each discharge. The following pressure washing activities require SAWS pre-approval.
 - Engine/equipment degreasing - wastewater must be treated with a sand/oil/water separator or an equivalent level of treatment prior to discharge
 - Acid cleaning - unpainted vehicles, equipment, structures, or containers
 - Other activities not listed (Excluding Transportation, Surface, and Food Service related cleaning)

Contact SAWS for pre-approval authorization prior to each sewer discharge. Approvals will be considered on a case-by-case basis.

Sewer Disposal Options

Disposal options for **non-hazardous** pressure washing wastewater include:

- Collecting and transporting wastewater in a holding tank for proper sewer system disposal at an off-site SAWS septage site provided that
 - It is conducted in accordance with City Code Chapter 34 Division 4 – Liquid Waste Transportation and Disposal Regulations.
 - PWP permit is obtained from SAWS 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 SAWS wastewater "local limits" prior to seeking the property owner's permission.

Land Disposal

Wastewater may be collected and discharged or directed onto landscaped and/or dirt areas only when the wastewater does not contain contaminants (i.e. solvents,

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cleaners, oils, metals, etc.) that may constitute a hazardous waste, food products, or create a nuisance condition. In addition, such discharges must soak into the ground and may not flow into the storm drain. Make sure to obtain permission from the property owner prior to discharging or diverting wastewater to landscapes and/or dirt areas.

If you are diverting wastewater to landscaped areas, avoid damage to plants and soil by minimizing or eliminating the use of soaps, detergents, and chemicals. Filter out any solids that would be visible on the ground after discharge. In addition, minimize the use of water to avoid wastewater overflowing from these areas. Note: Repeated discharges to landscaped areas may result in an accumulation of contaminants, thus damaging vegetation and increasing contaminant levels in 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 and how to properly dispose of them. 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 waste products (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.

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Ways to Collect Wastewater:

The following are examples of devices that may be used to contain and collect wastewater during pressure washing activities. The collection devices described below are not endorsed and are only provided as a reference tool. In addition, 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.).

Diversion dikes – Diversion dikes may be used to prevent wastewater from entering a storm drain by placing a protective barrier around the storm drain inlet, thus allowing the wastewater to pool up around the storm drain prior to proper collection and disposal. This type of containment 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, creating a quick seal, thus preventing wastewater from entering the storm drain system. Storm drain covers/mats (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 is another option which may be used by pressure washers to collect wastewater. Containment pools are easy to assemble, provide an immediate work area, and allow the wastewater to be collected in a manner that will prevent pollutants from entering the storm drains. Containment pools vary in size and material, and hold anything from a shopping cart to a truck and trailer.

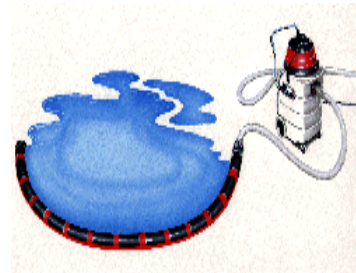


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Vacuums/Pumps – Devices such as wet/dry vacuums, sump pumps, and vacuum pumps may be used to collect wastewater after pressure washing. Vacuum devices typically have an extension (vacuum boom) which allows the wastewater to be collected efficiently. In addition, 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 – Vacuum booms are 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. In addition, 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 from the drain inlet. Unlike the storm drain mats/covers that block storm drain grates, the inflatable pipe plug is inserted into the storm drain pipe and uses the inlet structure beneath the grate to collect the wastewater. Once inserted, 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.



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DEFINITIONS

General customer - Any customer not meeting the definition of a residential or wholesale customer as set forth herein.

- I.C.L. Inside the corporate limits of the city.
- O.C.L. Outside the corporate limits of the city.

Regional agent boundary (RAB) - The geographic region within which the system operates and maintains sanitary sewer facilities.

Service area - The geographic region within which the system operates and maintains water and/or sanitary sewer facilities.

System - All properties, facilities, and plants currently owned, operated, and maintained by the city and/or board for the supply, treatment, and transmission and distribution of treated potable water, chilled water, and steam, for the collection and treatment of wastewater, and for water reuse, together with all future extensions, improvements, purchases, repairs, replacements and additions thereto whether situated within or without the limits of the city, and any other projects and programs of the system, provided, however, that the city expressly retains the right to incorporate (1) a storm water system as provided by the provisions of Section 402.041 through 402.054, as amended, local government Code, or other similar law, and (2) any other related system as provided by the laws of the State of Texas as a part of the system. The system shall not include any special project of any water or water-related properties and facilities owned by the city as part of its electric and gas systems.

Pressure or Power Washing - Use of water to wash any impervious outdoor ground covering, such as a parking lot, driveway, street or sidewalk, is prohibited. The washing of any impervious surfaces for immediate health and safety shall be a defense to prosecution under this paragraph. A variance from SAWS should be obtained for any washing of impervious surfaces. No run-off leading to a storm drain is allowed. Commercial pressure or power washers must be registered to work in the city (section 34-272.1).

Power washer - a machine that uses water or a water-based product applied at high pressure to clean impervious surfaces.

FOR MORE INFORMATION

San Antonio Water System Conservation Department - (210) 233-3659

San Antonio Water System Resource Compliance Division - (210) 233-3557

San Antonio Water System - (210) 704-SAWS (7297)

San Antonio City Code

www.municode.com

**Use the online library, select Texas, select San Antonio,
Select Chapter 34 – Waters & Sewers**

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Quick Reference Guide

Do's

- Use a broom to remove solids from impervious surfaces before washing.
- Spot clean areas of high petroleum product contamination before general cleaning of entire project (e.g. diesel pumps); remove (and pre-treat using filtration or other methods) this wastewater to remove any free-floating oil and solids (City Code 34-472). This will minimize pollutants in the runoff water to the pervious areas (lawns).
- Don't allow water to run off onto roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, creeks, streams, tributaries, manmade channels, or storm drains that provide collection or conveyance of storm water, rainwater, or other surface water and are located on public property. Discharges made in such a manner are considered wastewater and are in violation of Chapter 34, Sections 24 and 704 and Chapter 3, Section 287 and 288 of the City Code.
- When working on impervious surfaces, place a diversion device (such as a dike or berm) to collect wastewater and prevent runoff from going into channels, creek, river, streets, or storm drain inlets. All water should be collected and discharged into the sanitary sewer collection system in such a manner to meet the requirements in City Code Chapter 34 section 472 or discharged onto lawns meeting state regulations for discharge of greywater; or
- Use a wet/dry vacuum to pick up excess water on impervious groundcover; or
- Have a person follow the pressure washing activity with a broom or squeegee in order to push excess water onto pervious areas (lawns), minimizing the discharge.

Don'ts

- Washing vehicles with soap on a parking lot where the wash water is either leaving the property directly or accumulating and drying on the lot. This is illegal due to the fact that, as the contaminated wash water dries on the pavement it leaves the harmful contaminants behind, only to be washed from the property and into the city storm sewer system or streams during the next rain event.
- Allowing the materials (oil, grease, paint chips, etc.) being washed of the vehicle or building to enter the city storm sewer system, even when no soaps or other chemical cleaning agents are used.
- Pressure washing a parking lot without containing and capturing, even when no soaps or detergents are used. This is illegal due to the fact that pollutants generally found on a car lot (oil, grease, heavy metals, etc.) will be liberated during the wash process and transported to the city storm sewer system or streams.
- Washing in any manner that leaves residues and stains or contaminates the soil with oil, grease, or other pollutants.

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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 as part of a scheduled document review program, it may not reflect recent changes in the various laws and regulations.