

**Best Management Practice (BMP)
Water Quality Protection Guideline
Car Wash Bay Design Guidelines****Section 1. Introduction**

According to the EPA, the majority of water pollution in our streams today is directly caused by pollutants that have been dumped or spilled onto the ground and that are then washed from these surfaces into our creeks and streams by rainwater. This pollution is caused by many different sources and activities, each of which may seem insignificant when considered in isolation. However, storm water runoff, acting as nature's bath, has the effect of collecting and combining each of these small pollutant sources which drain into a local stream and cause significant levels of water pollution.



Many businesses wash cars as their main activity or as a complement to their main business. Washing of any vehicle or material where rinse water flows onto the ground has the potential to contribute pollutants such as soaps, detergents, oils, greases and other hazardous chemicals into our waterways. This makes wash bays vastly important in decreasing the amount of washwater that flows into stormwater drains.

Pollution from these activities can be minimized or eliminated through the implementation of the simple water quality Best Management Practices (BMPs) contained within this guideline.

With respect to wash bay design standards, this guideline is intended to provide minimum requirements for compliance with Gwinnett County's Illicit Discharge and Illegal Connection (IDIC) Ordinance (Chapter 100, Gwinnett County Code of Ordinances). It is expected that individuals and companies involved in washing activities will fully implement these guidelines and take any additional necessary and reasonable actions, as needed on a case-by-case basis, to prevent storm water pollution.

1.1 Definitions

For the purposes of this Water Quality Protection Guideline the following terms will be defined as follows:

"Oil/Water Separator" as used in this guideline refers to "in-line" devices used to remove oils and greases (and sometimes solids) from industrial waste streams and storm water discharges. They operate by employing various physical or chemical separation methods, including gravity separation, filters, coagulation/flocculation, and flotation. However, the use of any separation process depends on the properties of the oil in the oil/water mixture.

"Sand Interceptor" as used in this guideline refers to a device designed and installed so as to separate and retain deleterious, hazardous, or undesirable matter from normal wastes while permitting normal sewage or liquid wastes to discharge into the drainage system by gravity.

“Test Manhole” as used in this guideline refers to a monitoring structure to allow inspection, sampling and flow measurement of washwater flowing into the sanitary sewer system from the pretreatment device.

“Wash Bay” as used in this guideline refers to a structure in which vehicles and equipment are to be cleaned.

Section 2. Purpose

The purpose of this Water Quality Protection Guideline is to:

- (1) provide details of water quality BMPs that may be implemented to assist in controlling pollutants associated with several different washing activities;
- (2) provide, in detail, specifications for car wash bays to wash cars, trucks, and equipment;
- (3) serve as a reference for regulators, inspectors and others who assess the water quality impacts of these activities; and
- (4) provide guidance that, if implemented, will assist in securing compliance with Gwinnett County’s Illicit Discharge and Illegal Connection (IDIC) Ordinance.

Section 3. Best Management Practices

3.1 Goals

Wash bays shall be designed and constructed to meet three basic goals:

- (1) collect and contain waste water for appropriate disposal;
- (2) prevent stormwater from entering the wash bay; and
- (3) prevent the intermingling of stormwater with wastewater.

3.2 Design Considerations (See Figures 1 & 2)

- (1) Wash bay floors shall be sloped to adequately collect wastewater and shall be of an appropriate size to hold the largest vehicle or piece of equipment expected to be washed with 4 feet of clearance on all sides to prevent over-spray and chemicals from escaping the bay and mixing with stormwater. For example, a commercial bay is typically 16 feet wide, 30 feet long and 12 feet tall.
- (2) Ground surrounding the wash bay shall be graded or provided with a berm to effectively prevent the ingress of storm water runoff onto the wash bay floor. Berms should be poured at the same time as the original bay, or when added, a new foundation should be poured including the berm, in order to prevent cracking.
- (3) Wash bay floors shall be paved with a low permeability material and be provided with permanent and adequate cover so as to prevent the ingress of rainwater into the wash bay drain. They shall also be graded 1:80 to keep all washwater inside the bay at all times.
- (4) Channels should also include removable screening, which will allow washwater to be drained through an oil/water separator and a sand interceptor and finally into the sanitary sewer system through a test manhole. The removable screening will also allow for cleaning of the channels when sediment accumulates. The oil/water separators should be inspected 4 times per year.

- (5) If the property does not have a test manhole, one must be installed, requiring a Utility Construction Permit and the submittal of As-builts to Gwinnett County Planning and Development. Under certain conditions a Plumbing Permit may also be required.
- (6) In order to prevent the ingress of rain, cover to wash bays should extend beyond the outer perimeter of the wash bay floor a distance equal to 30% of the height of the cover from ground level. For example, where the cover is situated 10 feet above the wash bay floor, the cover should extend 3 feet in all directions beyond the perimeter of the wash bay. See Figure 1.
- (7) Installing berms, or speed bumps, at the entries and exits will also prevent the ingress of rain.
- (8) Cover to wash bays shall be built from solid and impervious roofing material such as aluminum, steel, shingles etc. Pervious materials such as shade cloth are not appropriate.

3.3 Submitting Design Plans and Obtaining Permits

- (1) Design plans must be submitted to Gwinnett County Planning and Development for review and approval. Fees will apply.
- (2) Plans must be signed and sealed by either a Georgia licensed engineer or surveyor.
- (3) Submit plans to:

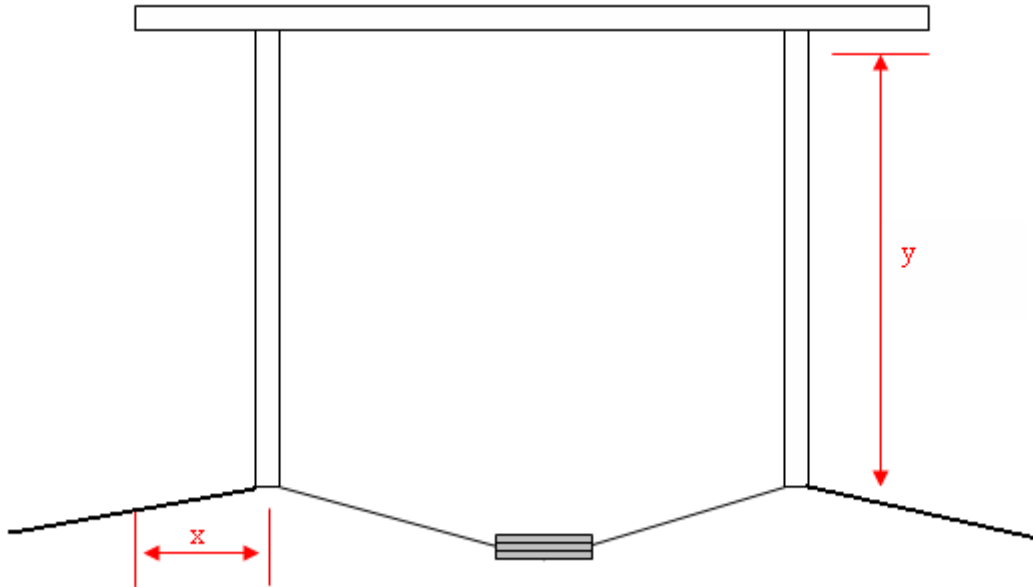
One Justice Square
446 West Crogan Street
Suite 150
Lawrenceville, GA 30046
- (4) A Utility Construction Permit must be obtained from the Water and Sewer Review Section of Gwinnett County Planning and Development. Fees will apply.
- (5) If a Plumbing Permit is required, it must be obtained from the Building Permit Section of Gwinnett County Planning and Development. Fees will apply.
- (6) After project completion, As-built drawings must be submitted to Gwinnett County Planning and Development for review and approval.
- (7) As-built drawings must be signed and sealed by either a Georgia licensed engineer or surveyor.
- (8) For questions regarding these requirements, please call the Water/Sewer Review staff at
(678) 518-6000
- (9) NOTE: These requirements may vary if your project discharges to a septic system. For information regarding septic requirements call the Gwinnett Environmental Health Office at (770) 963-5132.
- (10) If your project discharges into the sanitary sewer system owned and operated by one of the following cities: Norcross, Buford, Rest Haven, Braselton, or Loganville, please contact that city for their requirements.

Section 4. General

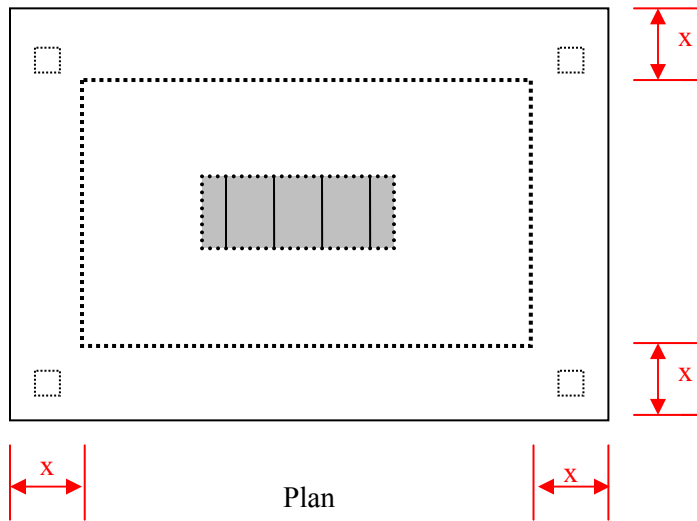
- (1) In accordance with the Gwinnett County Illicit Discharge and Illegal Connection (IDIC) Ordinance it is illegal to dispose of any waste or pollutants into the storm sewer system. Penalties for non-compliance with this ordinance may include fines of up to \$1,000 and/or 60 days in county jail.

- (2) To report a spill or discharge into the storm sewer system contact Gwinnett County's Stormwater Management Division's 24-hour call center at 678-376-7000.
- (3) Additional information regarding water quality, stormwater programs and stormwater best management practice implementation can be obtained by contacting Gwinnett County's Stormwater Management Division at 678-376-7193 or visiting www.gwinnettstormwater.com.

Figure 1
Wash Bay Design Detail



Side Elevation



Plan

Minimum Roof Overhang: $x \geq 0.3y$

Where x = overhang; and
Where y = distance between roof and top of secondary containment

Example: If $y=10\text{ft}$; then $0.3 \times 10 = 3\text{ft}$.
So, the overhang needs to be at least 3 feet.

Figure 2
Oil/Water Separator

