



February 1, 2012 Surface Water Management Manual Handouts:  
Volume 4, Chapter 4 of the Tacoma Stormwater Manual

## 4.2 Cleaning/Washing Best Management Practices

**Applicability:** These BMPs encompass washing practices related to various commercial washing activities. Typically, all washwater must be discharged to the sanitary sewer system, collected for off-site disposal, or recycled. Some washing practices may discharge their washwater into nearby landscaped areas or into the stormwater system with proper pretreatment. Table 4 - 1 shows the allowable discharge location for various washing activities. Following the table are required and recommended BMPs for specific washing activities. Below are the required and recommended BMPs that apply to all washing practices.

BMPs for homeowners can be found in Chapter 3.

### Required BMPs for all washing activities:

- Follow Table 4 - 1, "Discharge Options for Businesses" to determine the required discharge location based upon washing activity.
- Illicit connections to the storm drainage system must be eliminated. See BMP S101 for detailed information.
- Employees must be educated to control washing operations to prevent stormwater contamination.
- Follow the Environmental Services Source Control Oil Water Separator Policy for Discharges to Sanitary Sewer as appropriate. The policy is available at [www.cityoftacoma.org/stormwater](http://www.cityoftacoma.org/stormwater).
- For facilities with a dedicated wash pad, at a minimum the pad must be equipped with a catch basin/sediment trap that discharges through a tee outlet to the sanitary sewer. Discharges to the sanitary sewer system must meet the discharge limits of TMC 12.08 before discharge is allowed. Sampling, testing, and pretreatment of the wastewater may be required to meet limits.
- If any washing of vehicle or equipment that contains oils is to be conducted on the wash pad an oil/water separator will be required. See the Environmental Services Oil Water Separator Policy for Discharges to the Sanitary Sewer at [www.cityoftacoma.org/stormwater](http://www.cityoftacoma.org/stormwater) for additional guidance.
- Contact City of Tacoma Source Control at 253-591-5588 for assistance.

### Recommended BMPs for all washing activities:

- Limit the amount of water used in washing activities.
- Recycle washwater when possible for subsequent washings.
- If soaps and detergents are used, use the least toxic cleaner capable of doing the job. Select non-phosphate detergents when possible.
- Cover and/or contain the cleaning activity inside a building to separate uncontaminated stormwater from the pollutant sources.

## Discharge Options for Businesses<sup>a</sup>

Item to be Washed	Sanitary Sewer <sup>b</sup>	Collect/Closed-Loop Recycle/Haul	Landscape/Soil <sup>c</sup> No Soaps or Chemicals	Storm Drain No Soaps or Chemicals
<b>Tools, Rental &amp; Construction Equipment, &amp; Machinery</b>	OK	OK	Not Allowed	Not Allowed
Backhoes	OK	OK	Note 2	Not Allowed
Lawn mowers	OK	OK	Note 2	Not Allowed
Cooling towers	OK	OK	Not Allowed	Not Allowed
<b>Cooking Equipment</b>				
Mats	OK	OK	Not Allowed	Not Allowed
Floors				
Exhaust fans & hoods				
<b>Buildings &amp; Structures</b>				
Exteriors/roofs				
Windows	OK	OK	Notes 2 & 3	Notes 2 & 3
HVAC systems				
Sidewalks				
Parking	OK	OK	Not Allowed	Not Allowed
<b>Interiors</b>				
Floor stripping	OK	OK	Not Allowed	Not Allowed
Carpets				
Windows				
<b>Vehicles<sup>d</sup></b>				
New/Used car lots	OK	OK	Notes 1 & 2	Note 2
Golf carts	OK	OK	Notes 1 & 2	Not Allowed
Import/Export equipment	OK	OK	Not Allowed	Not Allowed
Charity car washes	OK	OK	Notes 1 & 2	Not Allowed
RV, truck, auto detailing & engine washing	OK	OK	Not Allowed	Not Allowed
Mobile truck-fleet washers	OK	OK	Not Allowed	Not Allowed
Boats	OK	OK	Not Allowed	Not Allowed

- a. These are guidelines only and not meant to be all-inclusive. The City of Tacoma reserves the right to diverge from this, depending upon site-specific conditions.
- b. Discharge may require pretreatment per TMC Chapter 12.08. Collect/Closed- Loop Recycle/ Haul Landscape/Soilc No Soaps or Chemicals
- c. Discharges to the ground may require permission from the Tacoma/Pierce County Health Department if the site is located within the South Tacoma Groundwater Protection District. Storm Drain No Soaps or Chemicals
- d. Specific Guidelines are available for automatic wand and mobile fleet washers. Contact City of Tacoma Source Control at 253-591-5588.

**Note 1:** Meet requirements of WDOE publication WQR 95-56 *Vehicle and Equipment Washwater Discharges*. Solids must be collected and no visible sheen is allowed.

**Note 2:** Cold water only. No detergents or other cleaners may be used.

**Note 3:** No pollutants after pretreatment. Work area must be pre-scraped and/or pre-swept. Please refer to Volume 2, Chapter 3, Standards and Specifications for Best Management Practices (BMPs) for pretreatment BMPs.

## Cleaning or Washing of Tools, Equipment, and Machinery

**Applicability:** This activity applies to businesses and public agencies that clean manufacturing equipment such as saws, grinders, screens, and other processing devices outside of buildings, and to businesses engaged in pressure washing of engines, equipment, and portable objects.

Pollutant sources include toxic hydrocarbons, organic compounds, oils and greases, nutrients, heavy metals, pH, suspended solids, biochemical oxygen demand (BOD), and chemical oxygen demand (COD).

### Required BMPs for cleaning or washing of tools, machinery, equipment, and portable objects:

- All washwater shall either:
  - Be discharged to the sanitary sewer,
  - Be temporarily stored before proper disposal, or
  - Be recycled.

See 4.8.16 BMP S103: Discharge Process Wastewater to a Sanitary Sewer, Holding Tank, or Water Treatment System for additional information.

- Pressure washing must be conducted in a designated area (such as a permanent or temporary wash pad) provided with some means of capturing the washwater, and stormwater run-on prevention. Permanent wash pads must drain to the sanitary sewer system through an approved pretreatment device. See BMP S106 and S107 for information on sumps (or holding tanks) and run-on prevention.

## Cleaning or Washing of Cooking Equipment

**Applicability:** This activity applies to businesses that clean cooking equipment such as grills, vent filters, exhaust hoods, grease traps, floors and floor mats. Washing the outside of buildings, sidewalks, and paved areas is covered in the Building Structures and Related Equipment section below.

Pollutants of concern consist of pH, oil and grease, nutrients, suspended solids, and biochemical oxygen demand (BOD).

### Required BMPs for cleaning or washing of cooking equipment:

- Cleaning and washing of cooking equipment shall take place indoors with drainage to the sanitary sewer system, holding tank, or process treatment system or captured using a tub or similar device to contain all the washwater. The washwater shall be recycled or disposed into the sanitary sewer system, holding tank, or process treatment system. Provisions must be in place to neutralize the washwater rinsate prior to discharge to the sanitary sewer system.
- If washing cannot be accomplished indoors, the washing must take place on a pad or be isolated in a way that all washwater drains to the sanitary sewer, holding tank, or process treatment system.
- Washwater shall not be discharged to the storm drainage system.
- Washwater from cleaning roof-top equipment, such as exhaust fans, shall be captured and disposed to the sanitary sewer. Use of wet/dry vacuums, temporary berms or containers, such as plastic pools, are possible ways to capture this water.
- Paved washing areas must be swept daily to collect loose solid materials for proper disposal.
- Greasy buildup on cooking equipment must be removed and properly disposed prior to washing to reduce the amount of material that can potentially contaminate the washwater. Washing must either take place on a wash pad connected to the sanitary sewer, or the wastewater must be collected and disposed in the sanitary sewer.

- See BMP S103 for detailed drainage requirements and BMP S107 for methods of run-on prevention. If connecting a wash area to the sanitary sewer, permits must be obtained from the City of Tacoma by calling the Permit Counter at 253-591-5030.
- If a holding tank is used for storage of washwater, the contents must be pumped out before it is full and disposed properly in an approved manner.

**Recommended BMPs for cleaning or washing of cooking equipment:**

- Discharge greasy washwater to the building's grease interceptor if one is available.
- Install grease protection if none is available.
- If washing must take place outdoors, provide a cover over the designated wash area to keep rain from falling on dirty equipment and producing contaminated runoff.

**Building Structures and Related Equipment**

**Applicability:** This activity applies to the washing of buildings, roofs, cooling towers, structures, sidewalks, and parking lots with low or high pressure water. This also includes removing graffiti.

Pollutants generated include heavy metals, pH, suspended solids, grit, paint chips, and biochemical oxygen demand (BOD).

**Required BMPs for washing building structures and related equipment:**

**General:**

- Pressure washing of building facades, rooftops, pavement, and other large objects must be conducted in such a way that all of the runoff is collected for proper disposal.
- Washwater shall be discharged to the sanitary sewer system with appropriate pretreatment to remove solids. Sediment removal BMPs include those as described in Volume 2 and include measures such as check dams, sorbent booms, and catch basin inserts. Temporary curbs, dikes, or berms may be needed to direct the washwater to a single collection point. Wet/dry vacuums, run-dry sump pumps, or educators may be used to collect the water for proper disposal to the sanitary sewer system. Discharges to the sanitary sewer system may require obtaining a Special Approved Discharge (SAD) Permit. Contact City of Tacoma Source Control at 253-591-5588 for additional information on SAD permits.
- If runoff does not contain pollutants, following appropriate pretreatment, such as filtration or sedimentation, washwater may be allowed to be discharged to landscaping or the storm drainage system. This may require obtaining a Special Approved Discharge Permit. Contact the City of Tacoma Source Unit at 253-591-5588 for review and approval before commencing washing activities.

**Buildings:**

- Washwater from building washing shall be discharged to the sanitary sewer system with appropriate pretreatment to remove solids. Some ways of capturing the water can be by using tarps with berms, made by wrapping the tarp over pieces of lumber.
- If only cold water is used to remove dirt from a concrete or brick-sided building, this water may be allowed to fall onto a planted area or diverted to landscaping.



### ***Rooftop Equipment:***

- Washwater from cleaning rooftop equipment, such as exhaust fans and HVAC systems, shall be captured and disposed to the sanitary sewer. Wet/dry vacuums, temporary berms or containers may be used to capture this water.

### ***Parking Lots:***

- Wastewater generated from washing parking lots shall discharge to the sanitary sewer system. This water must have 50 mg/L or less of total petroleum hydrocarbons before it can be discharged to the sanitary sewer. This may require pretreatment.
- Alternatively, the water can be captured and hauled to a treatment, storage, and disposal facility for proper treatment and disposal.



### **Sidewalks:**

- Sweep, shovel, or scrape up large debris and trash before washing.
- If soaps or other cleaning agents are used, the wastewater shall be captured and routed to the sanitary sewer if it meets the discharge requirements of Tacoma Municipal Code Chapter 12.08.
- If using only cold water, the water may be directed to landscaping or to the stormwater system with proper pretreatment. A sediment removal device shall be placed in the gutter line and the receiving catch basin before discharge. See Volume 2 for sediment removal BMPs.



### **Graffiti:**

- Wastewater generated from graffiti removal shall be captured and discharged to the sanitary sewer system. Tarps and berms or wet/dry vacuums can be used to capture the washwater. This water must meet City of Tacoma limits per TMC 12.08 before discharge to the sanitary sewer.
- If removing graffiti with a cleaner only, apply sufficient cleaner to do the job. Small areas shall be wiped clean instead of using water for removal.

## **Interior Washing Operations**

**Applicability:** This activity applies to businesses that wash floors, carpets, and other interior items on a mobile site-to-site basis. The washing process includes removing wax from floors and may use machines that spray a wash solution onto the carpet or upholstery and suck the dirty solution up into a portable tank with limited capacity.

Pollutants of concern consist of pH, nutrients, suspended solids, organic compounds (such as pesticides and chemicals used for flea and odor control), and biochemical oxygen demand (BOD).

### **Required BMPs for doing mobile interior wash activities:**

- Wastewater shall be discharged to a sanitary sewer system at the site of collection. If sanitary sewer disposal is not available or not allowed where the wastewater was generated, the collected wastewater must be returned to the business site for proper treatment and disposal. Contact the local sewer authority for disposal regulations if the place of business is not located within the City of Tacoma.

- Absolutely no wastewater from mobile interior wash activities shall be disposed outdoors, or to a drain connected to the storm drainage system. This point must be made clear to all employees.
- Wastewater from mobile washing operations may be permitted for sanitary sewer disposal if it does not contain high concentrations of toxic materials. Some of the chemicals used for flea and odor control are listed by EPA as toxics. Contact City of Tacoma Source Control at 253-591-5588 if you intend to use and discharge these types of chemicals in your wastewater.
- Carpet cleaning washwater must be disposed to the sanitary sewer, preferably into a toilet or sink at the place where it was generated. Screen the wastewater to protect the customer's drain from plugging. Do not discharge this wastewater to a septic system.

### **Recommended BMPs for doing mobile interior wash activities:**

- Limit the amount of water used in interior washing operations. This will save time, money, and effort for proper disposal.

## **Washing, Pressure Washing and Steam Cleaning of Vehicles**

**Applicability:** This activity includes the washing of vehicles, aircraft, vessels/boats and grocery carts, by low or high pressure water or steam and includes hand washing, scrubbing, sanding, etc. This also includes "charity" car washes at gas stations, religious organizations, and commercial parking lots.

Pollutants of concern from cleaning activities include oil and grease, suspended solids, heavy metals, pH, soluble organics, soaps, and detergents.

### **Required BMPs for washing, pressure washing and steam cleaning vehicles:**

#### **General:**

- Washwater shall be discharged to the sanitary sewer unless otherwise noted below.
- If heavy accumulations of solids are to be removed during washing, then appropriate pretreatment to capture those solids must be provided. Volume 2 contains temporary sediment removal BMPs that can be utilized to capture solids before discharging wastewater to the sanitary sewer system.
- Two-step (acid – alkaline) washing may be allowed at all facilities discharging to the sanitary sewer. Provisions must be in place to neutralize the washwater rinsate prior to discharge to the sanitary sewer system.
- See the City of Tacoma Source Control Policy on Discharges from Vehicle and other Washing Activities for additional information.
- Contact City of Tacoma Source Control at 253-591-5588 for more information.

#### ***New and Used Car Dealer Lots:***

- If washing previously cleaned vehicles is accomplished using only cold water (no soaps or detergents used) and consists of washing only the outside of the motor vehicles, discharge to the stormwater system will be allowed and discharge to the sanitary system is prohibited.
- If soaps or detergents are to be used, washing must occur on a dedicated wash pad. Only washing of the outside of the vehicles is permitted unless additional pretreatment is provided

#### ***Other Washing Events:***

- Identify types of washing events and their locations (such as the Tacoma Dome RV show, etc.) and evaluate options on a case-by-case basis according to the discharge criteria stated above.

- Charity car washes shall wash only the exterior of vehicles. If soap is used, the washwater must be captured and directed to the sanitary sewer. For information concerning the use of charity car wash kits, contact the City of Tacoma Community Relations EnviroChallenger staff at 253- 502-2220.

**Automatic and Manual Car Wash:**

- See the City of Tacoma Source Control Policy on Discharges from Vehicle and Other Washing Activities and Policy for Discharges to Sanitary Sewer for additional information.

**RV, Truck, Auto Detailing, and Engine Washing Facilities:**

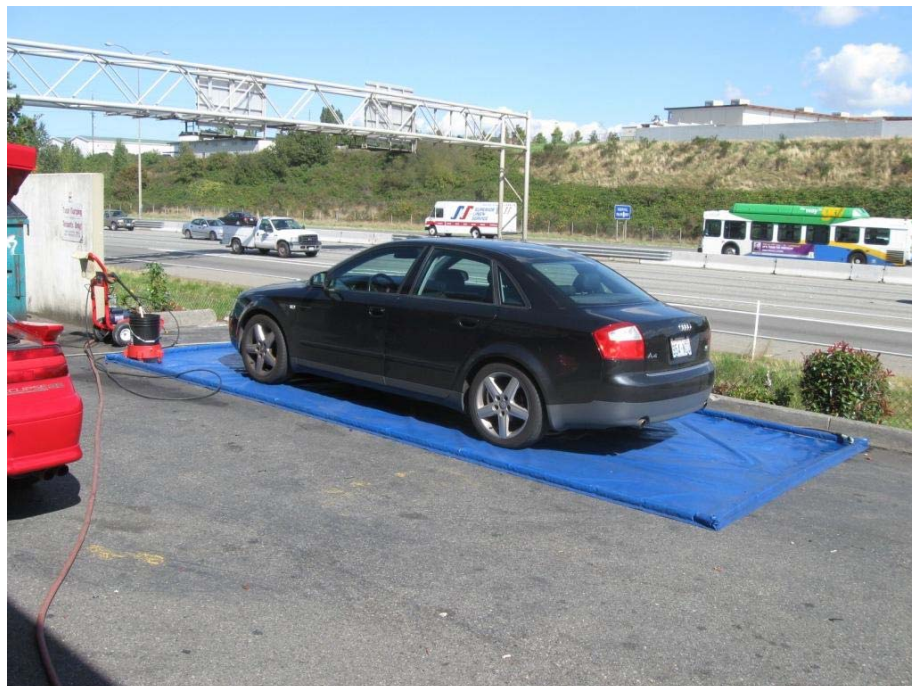
- Wash on a dedicated pad. See the City of Tacoma Source Control Policy on Discharges from Vehicle and Other Washing Activities and Policy for Discharges to Sanitary Sewer for additional information.

**Boat Washing Facilities:**

- Wash on a dedicated pad. See the City of Tacoma Source Control Policy on Discharges from Vehicle and Other Washing Activities and Policy for Discharges to Sanitary Sewer for additional information.
- For cleaning activities while boats are in the water refer to the Washington State Department of Ecology publication 98-11, Resource Manual for Pollution Prevention in Marinas, available at: <http://www.ecy.wa.gov/biblio/9811.html>

**Mobile Vehicle Washers:** This section applies to mobile vehicle and grocery cart washers doing work in the City of Tacoma. Detailed requirements and procedures may be found in The City of Tacoma Source Control Interim Policy for Mobile Vehicle Washers.

- Mobile vehicle washers shall capture all the washwater generated and discharge it to the sanitary sewer system through an on-site cleanout if available. The use of temporary wash pads, catch basin inserts, and vacuum systems are some possible means to capture the washwater. Other requirements may apply depending upon the items to be washed. Only wastewater generated within the City of Tacoma may be discharged into its municipal sewer system.



- Cover and/or contain the cleaning activity, or conduct the activity inside a building to separate uncontaminated stormwater from the pollutant source.