SERIES #3:
EQUIPMENT and VEHICLES

SERIES #3:
Maintaining Equipment and Vehicles

Hands In for Healthy Streams is a cooperative effort between the City of Buford and the local business community.

HANDS IN FOR HEALTHY STREAMS

NOTE: This handbook is one in a series of handbooks that describe specific practices businesses can use to protect water quality. A complete list of all handbooks and fact sheets available through the *Hands In for Healthy Streams* program is provided on the back cover. To obtain other handbooks in this series, contact Buford City Hall at the address provided below.

City of Buford
2300 Buford Highway
Buford, GA 30518
www.cityofbuford.com

We hope you'll join with the City of Buford and other area businesses by participating in the *Hands In for Healthy Streams* program. Through this Program, you can help protect our local streams. To participate, review the enclosed Fact Sheets No. 3.1 and 3.2, and then fill out the self-assessment at the back of the Handbook. We appreciate your continued cooperation and stewardship in protection of our water quality.

This Program is modeled on the Community Partners for Clean Streams program created through a US EPA Clean Water Act Grant by the Office of Washtenaw County Drain Commissioner Janis A. Bobrin, Washtenaw County, Michigan. Portions of this Handbook are borrowed from the Community Partners for Clean Streams series, with designs and illustrations developed by David Zinn.

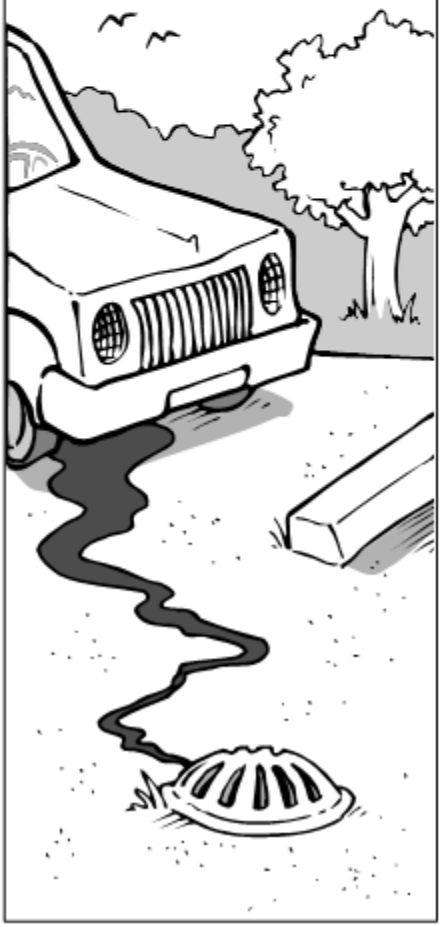
SERIES #3: EQUIPMENT and VEHICLES

Fact Sheet No. 3.1
Storing and Maintaining Equipment and Vehicles

Why be concerned?

Dirty or leaking equipment and vehicles can deposit oil, grit, coolants, and other pollutants onto the ground. These pollutants can filter through soils to the groundwater table or be washed by stormwater into a lake, river or stream.

In addition, spills may occur during fueling and other maintenance activities. Designing outdoor maintenance areas to completely contain leaks and spills is an important part of protecting water quality.



Eight Steps to *Preventing* Water Pollution

1 Regularly maintain equipment and vehicles

- Keep equipment and vehicles clean and regularly inspect them for leaks. Immediately repair and clean up any leaks that are found. Wash equipment and vehicles according to the recommendations in **Series #3, Fact Sheet 3.2**.
- Calibrate equipment frequently to ensure proper operation.
- Drain all the fluids from equipment and vehicles before they are placed in seasonal or long-term storage. Remove fluids only in paved areas that are designed to contain spills. Recycle or otherwise properly dispose of drained fluids.

2 Perform maintenance activities only in designated areas

Maintain equipment and vehicles indoors, if possible. If maintenance activities must take place outdoors, make sure they're performed only in designated areas that are clearly marked and designed to prevent water pollution.

3 Properly design outdoor storage, fueling and other maintenance areas

- Don't locate outdoor storage, fueling, or maintenance areas within a floodplain or within 100 feet of any part of the stormwater management system.
- Pave the area to prevent pollutants from filtering into the ground.
- Construct curbs or berms around the perimeter to contain spills and prevent stormwater from washing through the area.

Connect drains to a holding area. Don't allow storage, fueling, or other maintenance areas to drain to any part of the stormwater management system.

Do not allow fluids to drain to the sanitary sewer system, unless accepted by the City of Buford Sewer Department. Certain materials are prohibited due to health and safety risks.

- Equip drains with shutoff valves in case of a spill and regularly inspect these valves to ensure they work. Alternatively, keep rubber mats or temporary plugs on hand to block drain inlets. If plugs are used, employees must be trained in advance on how to use them.
- Cover storage and maintenance areas to keep rainwater from entering and mixing with pollutants. If rainwater accumulates and becomes contaminated, it must be pumped out and disposed of at an approved facility. For more information about disposing of accumulated rainwater, see **Series #1, Fact Sheet 1.1**.

(continued on other side)

SERIES #3:
EQUIPMENT and VEHICLES

(continued from other side)

4 Keep service areas clean and take steps to prevent spills

Keep drip pans and absorbent materials readily available, appropriate to the types and quantities of potential spills. If possible, buy absorbent materials that can be reused or recycled: avoid the use of cat litter, since it's relatively inabsorbent (which increases waste) and must be landfilled. For more information about preventing and cleaning up spills, see **Series #1, Fact Sheet 1.2**.

When cleaning floors, prevent pollutants from entering the storm sewer system. The following three-step process is recommended:

1. clean up spills with absorbent materials
2. sweep the floor
3. wet mop and recycle wash water or dispose of it via the sanitary sewer.

5 Prevent overfilling gas tanks

Gasoline and other fuels are toxic and can be highly flammable. Unfortunately, spills are common during fueling activities.

- Make sure that dispensing hoses are equipped with automatic shutoff valves and that these valves work.
- Post signs instructing fuel pump operators not to overfill gas tanks or leave them unattended while fueling.
- Locate temporary fuel tanks in a bermed, paved area. Design the area to completely contain at least 110% of the tank's total volume.
- Per state law, protect the area surrounding the fill pipe for underground gas tanks to prevent any spills from reaching the soil or groundwater.

6 Properly store, use and dispose of maintenance products

For information about storing maintenance products, see **Series #1, Fact Sheet 1.1**. For information about using and disposing of them, see **Series #7**.

7 Completely drain and recycle used oil filters

A used oil filter typically contains 1/3 of a quart of oil and sludge, as well as acid and heavy metals. If not properly drained, used filters can leak this contaminated oil into the environment.

Drain used oil filters for at least 24 hours and then recycle both the oil and filters. If you can't recycle them, filters can be put into the trash provided they're *not* terne-coated. (The EPA classifies oil and transmission filters as non-hazardous if they *aren't* terne-coated and they *are* completely drained.)

8 Discharge equipment condensate and "blowdown" to the sanitary sewer

Air compressors and other equipment may produce small quantities of automatic blowdown water, which contains lubricating oil and other pollutants. Prevent blowdown water from soaking into the ground or running into the storm sewer system. Connect blowdown to the sanitary sewer or, if the compressor has a frequent small bleed, use a drip pan or catchment to collect the water.

Alternatives to Engine Cleaning

- Avoid cleaning engines for aesthetic purposes only.
- Instead of cleaning the entire engine to locate oil leaks, try using rags and solvent to clean small portions of the engine.

Minimizing Runoff

Clean field equipment and vehicles using as little water as possible. For example, remove dirt and grit with wire brushes or other dry methods before applying solvent or water. Be sure to collect the dislodged material and dispose of it properly. To determine proper disposal, call the facility where you expect the material to be taken.

GETTING HELP

GA Dept. of Natural Resources
Pollution Prevention
Assistance Division (P2AD) ..... (404) 651-5120
or (800) 685-2443

City of Buford, Georgia

SERIES #3:
EQUIPMENT and VEHICLES

Fact Sheet No. 3.2
Washing Equipment and Vehicles

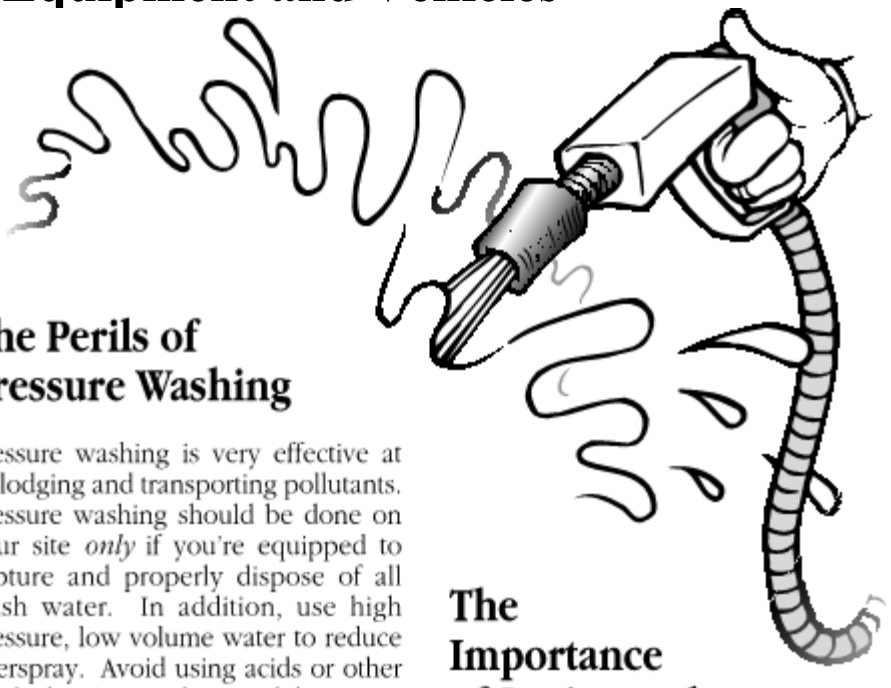
Why be concerned?

Washing equipment and vehicles can generate significant amounts of polluted runoff. In addition to detergent, oil, grease, heavy metals, sediment and other pollutants, wash water can contain grease cutters, acids and other toxic chemicals. Take steps to prevent untreated wash water from soaking into the ground or from entering the stormwater management system.

Managing Wash Water

Discharge wash water only to the sanitary sewer, an enclosed holding tank, or, if it's relatively clean, a grassy area where the water will be *contained*. Don't allow it to drain off-site via a roadside ditch, stormwater management system, or local stream.

- Install an oil/water separator to remove oil and grit from runoff before routing to a holding tank or sanitary sewer.
- Wash water that can't be discharged to the sanitary sewer should be drained the area to an enclosed holding tank. The tank's contents must be removed periodically by a licensed waste hauler. While businesses that use a holding tank incur the cost of regular pumpouts, they avoid the risk of costly environmental cleanups.
- If you're washing relatively clean vehicles *with water only*, wash water can be diverted to a large grassy area. This will allow it to filter into the ground. *Be aware, however, that any dislodged pollutants or cleaning products that are used can also filter down to drinking water supplies.*



The Perils of Pressure Washing

Pressure washing is very effective at dislodging and transporting pollutants. Pressure washing should be done on your site *only* if you're equipped to capture and properly dispose of all wash water. In addition, use high pressure, low volume water to reduce overspray. Avoid using acids or other harsh cleaning products and detergents that contain phosphates.

Washing: It's An Inside Job

In view of state permit requirements and potential threats to the environment, it's best to take vehicles and equipment to a commercial washing facility if you can't wash them indoors.

The Importance of Designated Wash Areas

If you must wash equipment or vehicles on-site, wash them *only* in clearly marked, designated areas that are designed to properly manage waste water. Post signs that prohibit other maintenance activities and washing with solvents.

Never locate wash areas within a floodplain or within 100 feet of a drinking water well, wetland, lake, stream or any other part of the stormwater management system.

This concludes Fact Sheets 3.1 and 3.2 of the Housekeeping Practices series.

To create your own Water Quality Action Plan, please complete the Water Quality Assessment provided on the following page.

SERIES #3 Assessment

The following Assessment and Action Plan asks you to evaluate your current activities and identify any specific actions needed to prevent pollution. For each question, check the appropriate box in the Assessment column. Next, in the corresponding box in the Action Plan column, fill in the proposed *date* by which the activity will be completed. Thank you for your good faith commitment to water quality.

Series #3, Housekeeping Practices: Maintaining Equipment and Vehicles	ASSESSMENT			ACTION PLAN	
	Not Applicable	Needs Improvement	Always	Plan to Improve	Plan to Continue
1. The least hazardous products and procedures are identified and used whenever possible.					
2. Vehicles and equipment are regularly inspected for leaks; any leaks that are found are repaired immediately.					
3. Application equipment (e.g. salt, irrigation and fertilizer) is calibrated to ensure proper coverage patterns and rates.					
4. Washing and other maintenance activites are performed only in designated areas that drain to the sanitary sewer (where approved) or an enclosed holding tank. Tank is pumped and contents disposed of properly.					
5. Fueling, washing, and other maintenance areas are covered by a nonflammable roof, paved and designated to contain water and/or spills.					
6. Fluids are completely drained from equipment and vehicles kept in long-term storage.					
7. Fluids are recycled/disposed of properly.					
8. Vehicle/equipment storage areas are designed to contain leaks and spills. If storage areas aren't covered, any rainwater that accumulates is pumped and disposed of at an appropriate site.					