Municipal Fleet Maintenance

Employee Training Series
Green Country Stormwater Alliance
August 26, 2015

PREPARED IN COOPERATION WITH THE Texas Commission on Environmental Quality, NCTCOG, INCOG and the U.S. ENVIRONMENTAL PROTECTION AGENCY.
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Fleet Maintenance

This presentation provides suggestions and ideas on controlling runoff pollution for the following activities:

- General Guidelines
- Leaks and Spills
- Disposal Methods
- Parts Cleaning
- Shop and Pavement Cleaning
- Fueling
- Washing

6. Pollution Prevention/Good Housekeeping For MS4 Operations

A. Permit Requirements

- "You must develop new elements, as necessary, and continue to implement and enforce the operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from MS4 operations."
- (1) "Your program must include employee training to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance;"

(2015 Draft Permit)

6. Pollution Prevention/Good Housekeeping For MS4 Operations

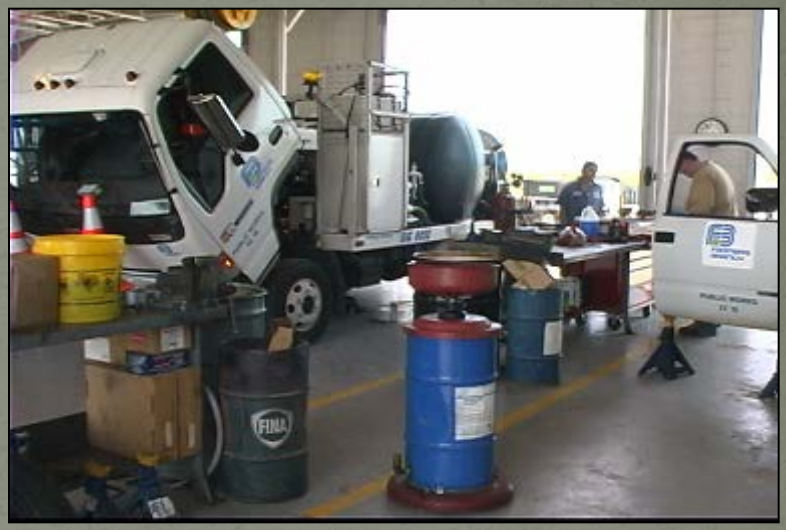
A. Permit Requirements

- (4) "Implement procedures for controlling, reducing or eliminating the discharge of pollutants from streets, roads, highways, parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations and snow disposal areas you operate;"

(2015 Draft Permit)

General Guidelines

- Thoroughly train employees in storm water regulations and the safe handling and disposal of hazardous waste.
- Conduct all vehicle and equipment maintenance at designated locations, preferably inside the shop or outdoors on a paved, covered surface.



General Guidelines

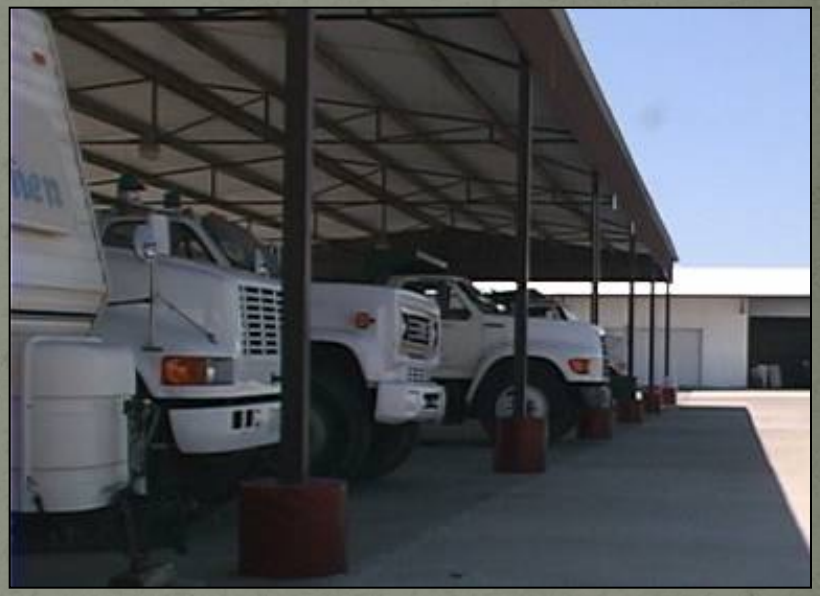
- A draft MS4 Audit Checklist asks:

  "BMP technical guidance document available to maintenance staff?"

- Little spills and leaks are much easier to cleanup when they occur on impervious surfaces. Also, these designated locations have spill kits and recycling receptacles handy.

General Guidelines

- Park damaged, leaking, or dirty vehicles under cover, if possible, to prevent exposure to rainfall.
- Contain leaking fluids and use an absorbent if necessary to transfer them to the appropriate waste container.

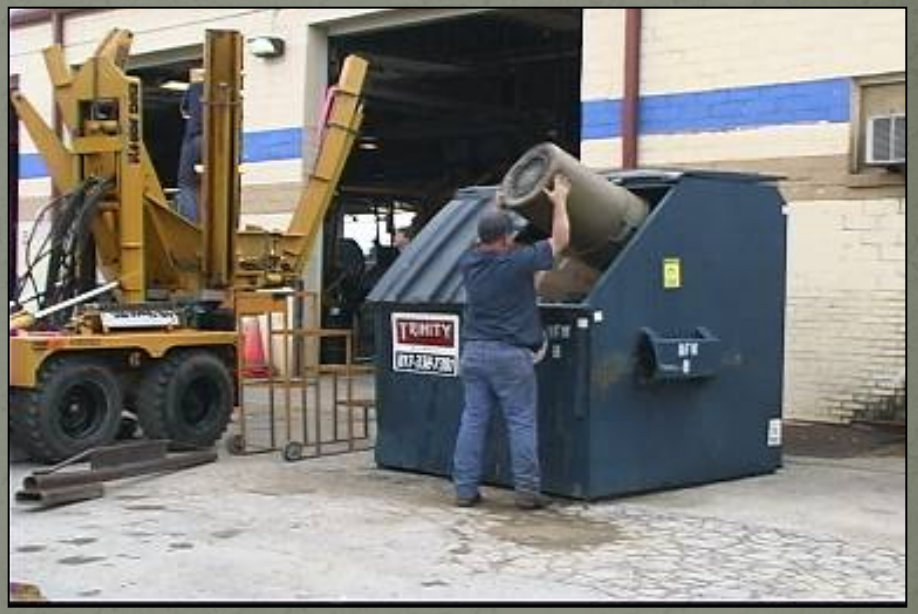


General Guidelines

- Maintain a paper trail showing that proper handling and disposal practices are being followed.

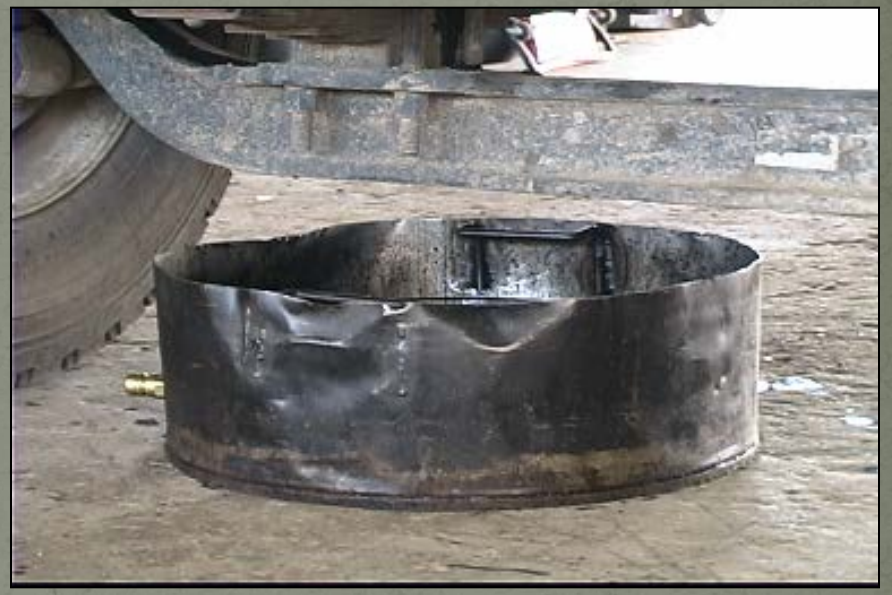
This includes:

- Purchasing documents
- Disposal records
- Testing data
- Licensing information
- Shipping records



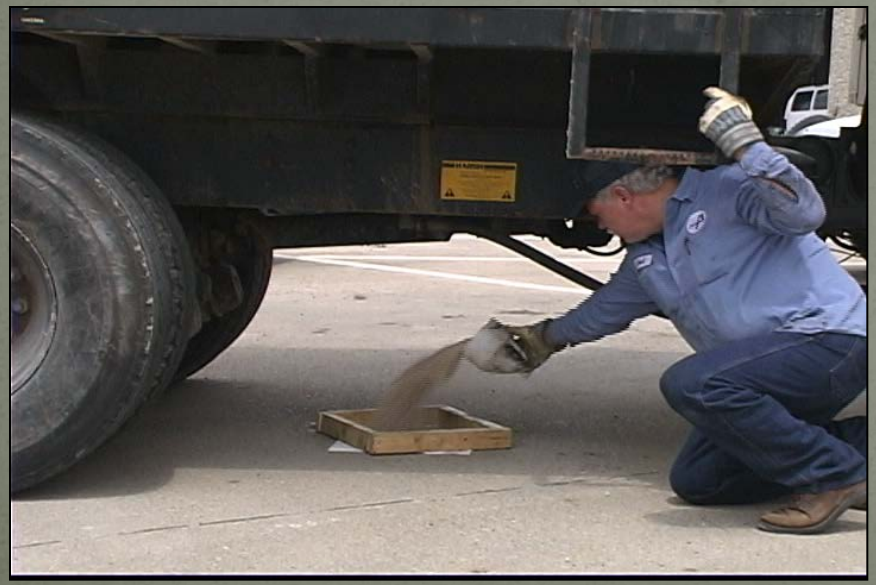
General Guidelines

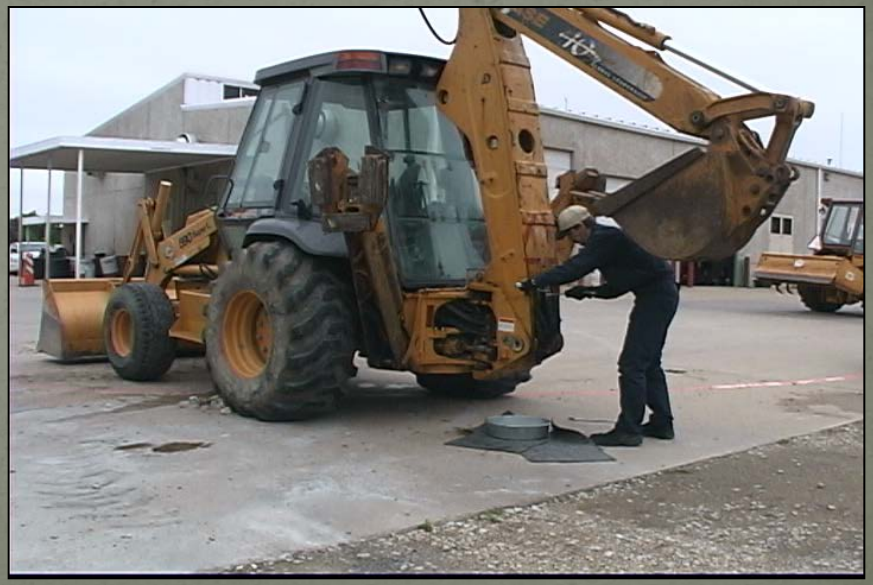
- Keep maintenance areas clean by promptly disposing of trash, debris, old parts and absorbents used on spills.
- Promptly dispose of fluids that have been collected in drip pans or other open containers.



Leaks and Spills

- Regularly inspect for leaks or stains around vehicles and equipment. Use a drip pan or absorbent material to collect dripping fluids.
- Locate the source of the leakage and stop further spillage by fixing the leak or draining the fluid.





Leaks and Spills

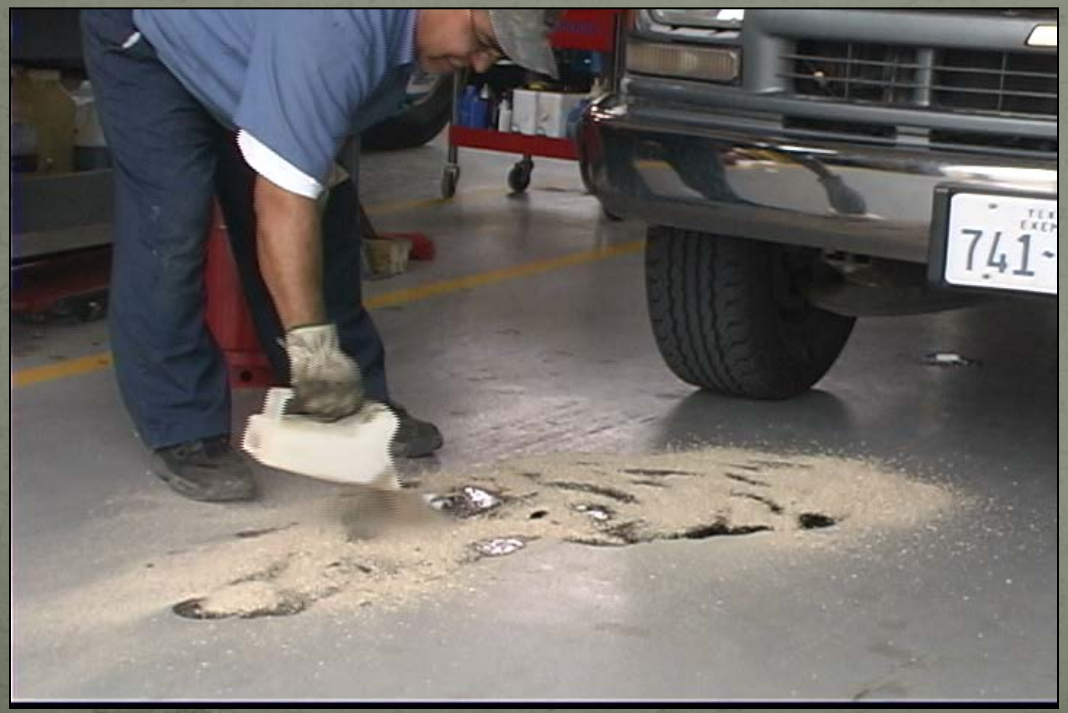
A draft MS4 Audit Checklist asks:

- ✓ Public facilities inspected?
- ✓ Checklist used for inspections?
- ✓ Frequency?

Numerous fresh oil spills or even old spills are an indication good housekeeping practices are not being followed. Develop a checklist for inspections, then check the items off as you go through and make notes as you go along.

Leaks and Spills

- Clean up spills immediately to minimize safety hazards and deter spreading.
- Store cracked batteries in a leak proof container.



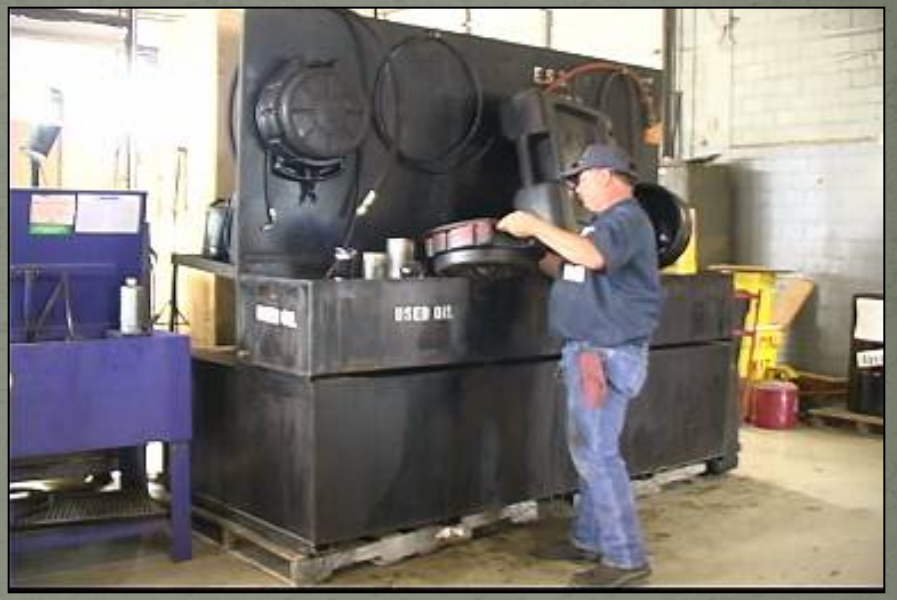
Slippery floors can also be a safety hazard and these materials will be tracked out of the facility. Battery acid is very corrosive.

Disposal Methods

- Collect all used motor oil, anti-freeze, transmission fluid and hydraulic fluid and store them in separate containers by type.
- Make sure storage containers are properly labeled.
- Segregating materials prevents cross-contamination and enhances recycling.
- Mixing chlorinated and non-chlorinated solvents, or different materials can make them difficult to recycle and greatly increase your disposal costs.

Disposal Methods

- Some fleet maintenance products are considered hazardous under RCRA regulations, so placards on vehicles, buildings and special handling measures may be necessary.



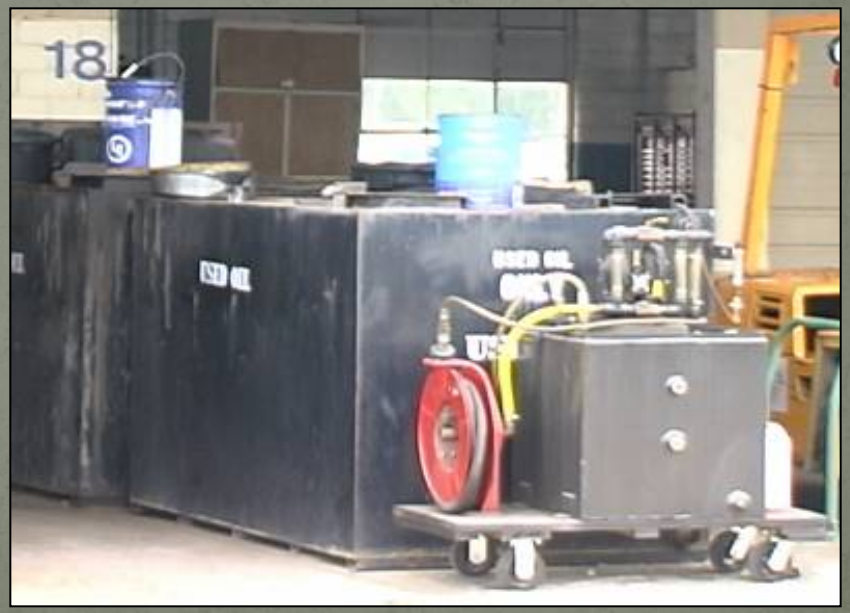
- Disposal of hazardous waste typically requires special shipping papers (manifests), the use of a licensed transporter and a permitted disposal site.

Disposal Methods

- Remember, if you generate it, the waste is yours, "cradle to grave." If one of your barrels shows up in the river or an unpermitted landfill, you may get a bill for the clean-up or a portion of it.
- Make sure the transport vehicle has the proper placards.
- Placards on building entrances can alert fire and emergency responders to potential hazards in the building in the event of an emergency.

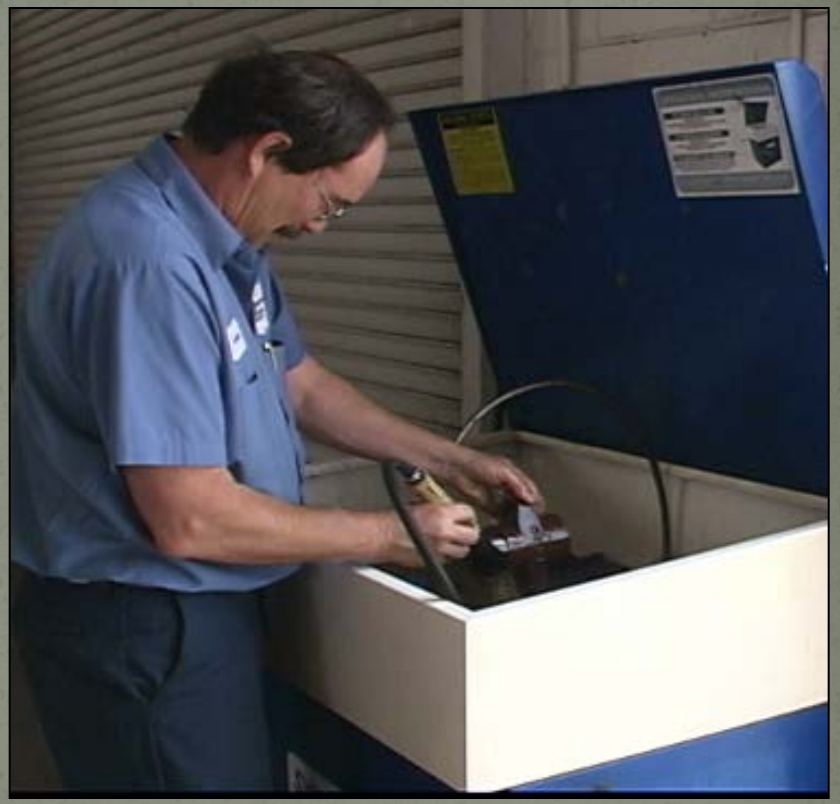
Disposal Methods

- Track inventory to avoid the accumulation of expired or unusable materials. (First in, first out rotation.)
- If possible, recycle used fluids, oil, and batteries.
- Some used filters and batteries could be considered hazardous waste.
- Never dispose of used fluids in the trash. Landfill liquids can become leachate that may later contaminate a groundwater.



Parts Cleaning

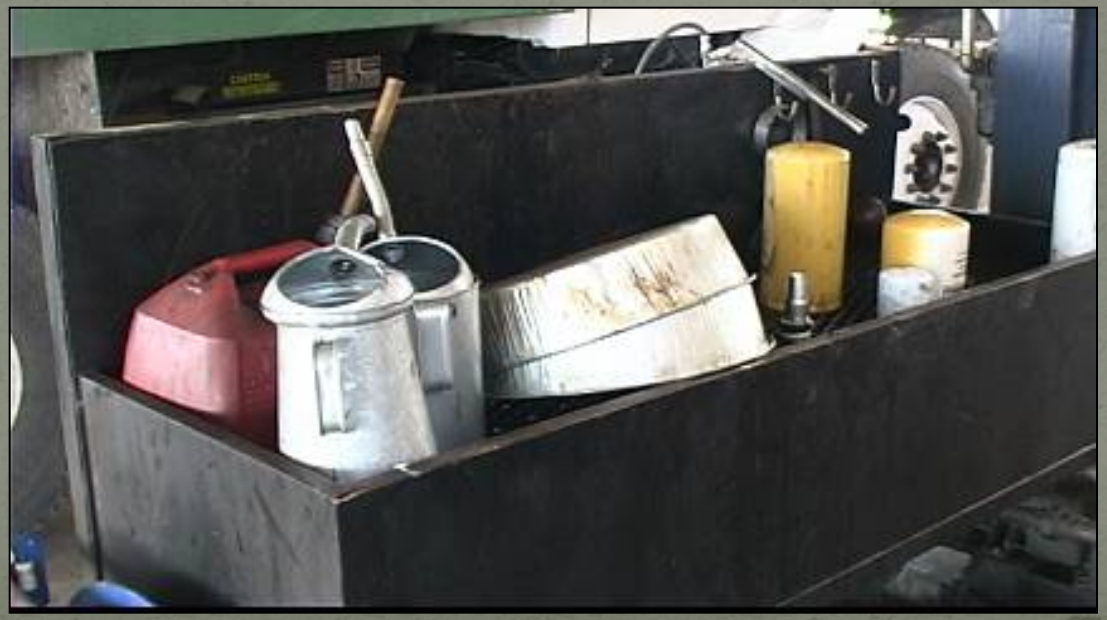
- Clean parts indoors and properly dispose of fluids, grease, dirt and other debris cleaned from these parts.
- Allow parts to fully drain before removing from the cleaning sink to reduce dripping of cleaning fluid.



- Keep lids closed on parts cleaning sinks when not in use.

Parts Cleaning

- Don't use a solvent if dry cleaning will work.
- Mechanically clean parts by dry brushing or wiping before using a solvent or water based cleaner.
- A two part solvent cleaning process first using a dirty solvent, then a cleaner solvent may reduce the amount of solvent used.



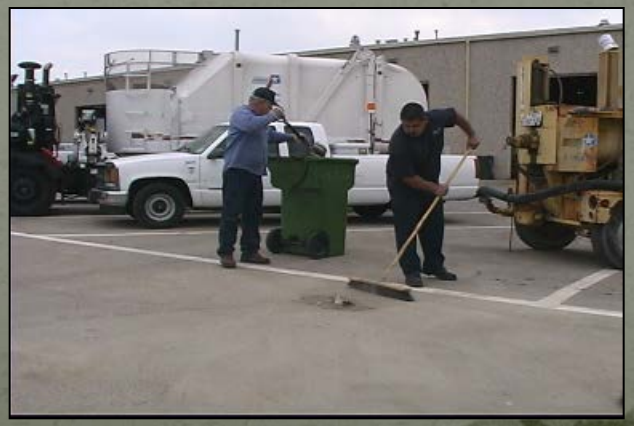
Parts Cleaning

- If you first clean the majority of the debris from the part in one basin and then finish cleaning in a second (cleaner) basin, you may use less cleaner.
- The first basin can be dirtier and still be effective since the final cleaning will be in a cleaner solution.
- When the first basin gets too dirty to use, dispose of only that cleaner.
- The second basin now becomes the dirtier basin and pour up some fresh cleaner for the final cleaner.
- You will be able to use the cleaner longer (less waste and a cost saving) and have cleaner parts when finished.

Shop and Pavement Cleaning

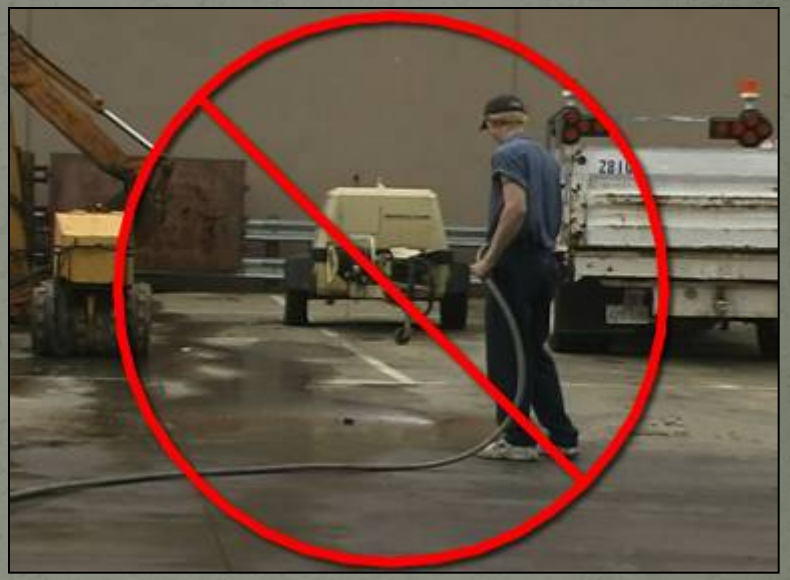
- Use dry methods (sweeping, wiping, absorbents) to clean work areas as often as possible.
- Dispose of mop water properly. It is usually acceptable to pour it down a sanitary sewer drain.
- A Draft MS4 Audit Checklist asks:

  "Are parking lots owned/operated by the permittee swept?" "At what frequency?"



Shop and Pavement Cleaning

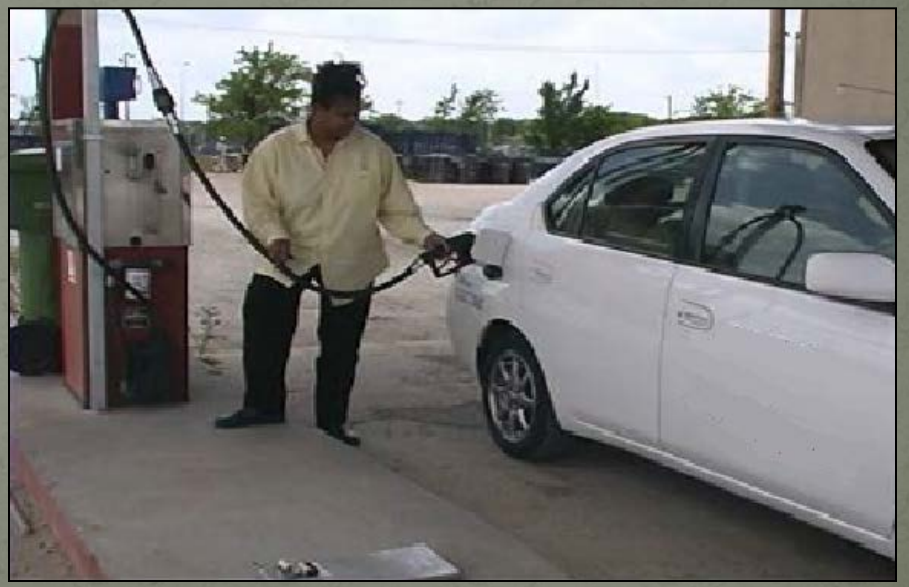
In addition to regular, periodic cleaning, clean outside work areas when rain is in the forecast.



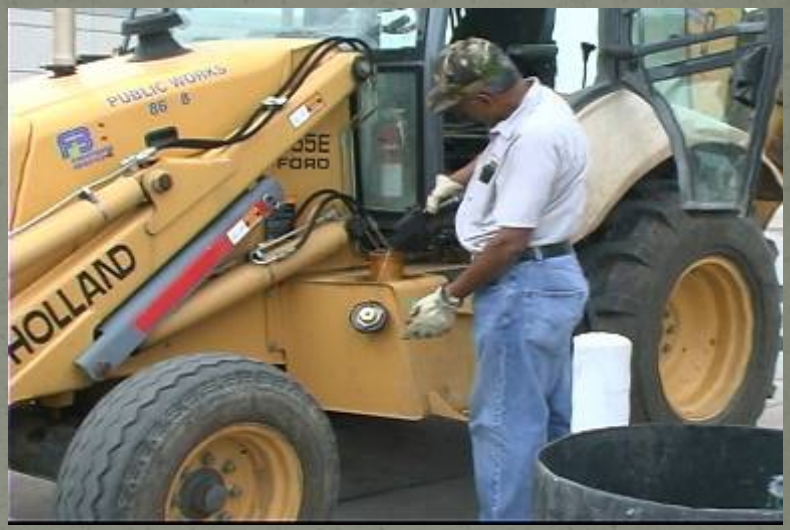
Don’t hose down outside work areas.

Fueling

- To prevent overfilling and spills, don't top off the fuel tank or leave a vehicle being fueled unattended.
- Know where the emergency pump shut-off button is located.
- Keep absorbent materials on site for use in prompt cleanup of spills.



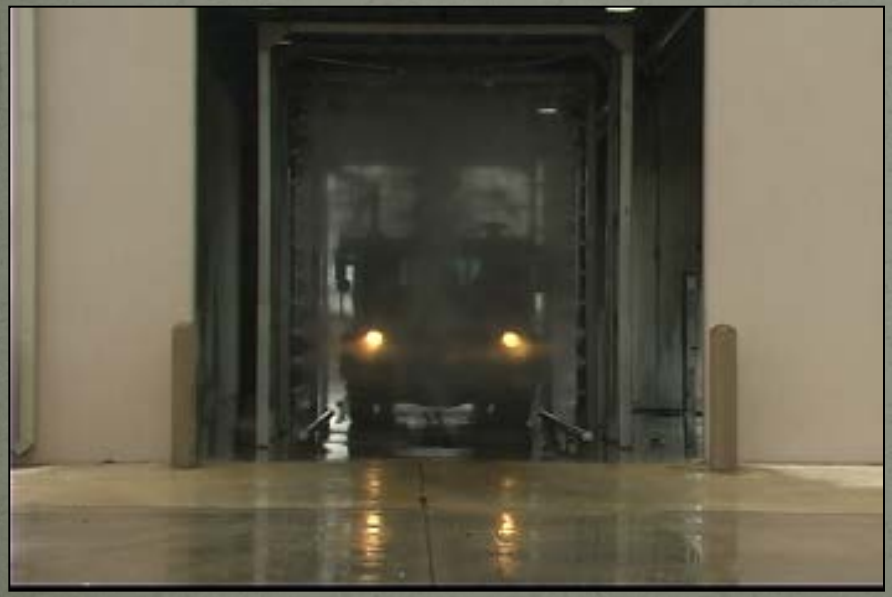
Fueling

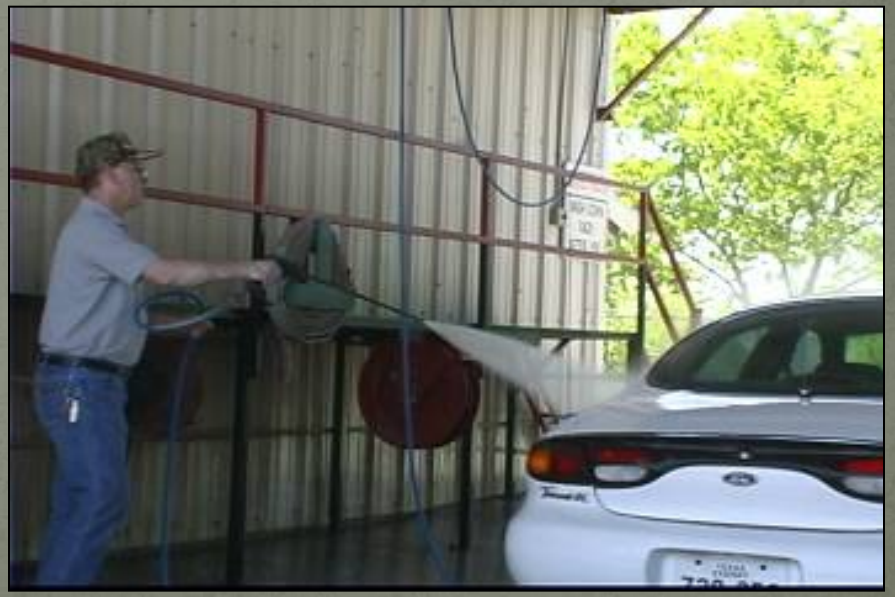


- Periodically clean fueling areas using approved methods to remove accumulated fuel and grease.
- Fuel equipment at designated fueling areas rather than using mobile fueling.
- If mobile fueling is used, keep a spill kit on the fuel truck.

Washing

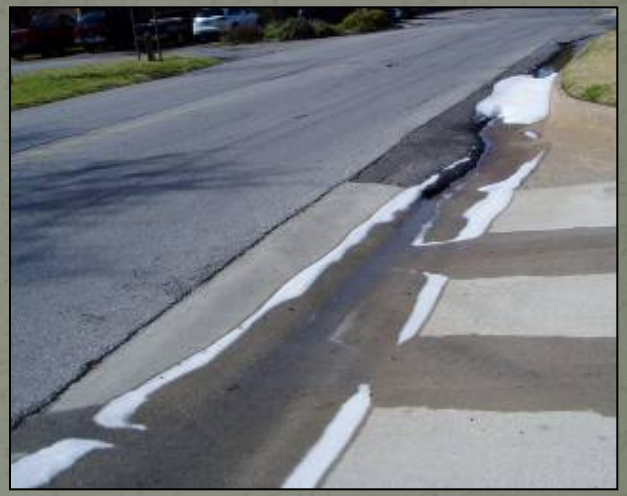
Wash equipment and vehicles ONLY in designated facilities where the wash water drains to the sanitary sewer system or is collected and recycled.

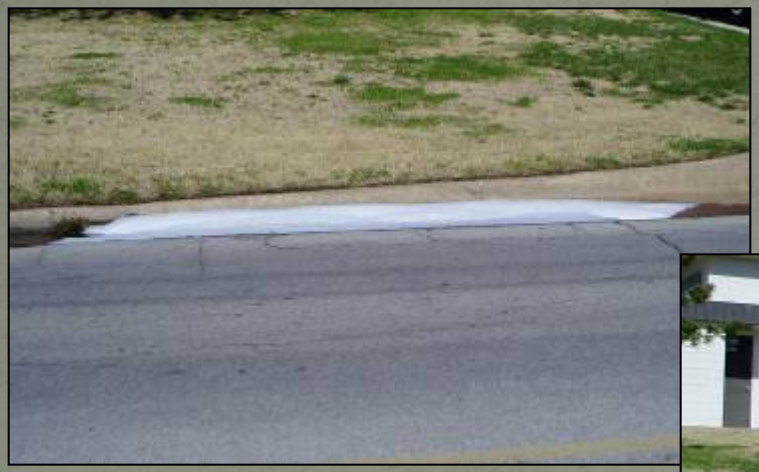




Washing

Don't wash city vehicles in driveways or on the street.





Set a good example and only wash vehicles in bays that can contain the wash water.

Municipal Fleet Maintenance

Protecting water quality requires that all employees do their part to prevent storm water pollution.

Green Country Stormwater Alliance

Give Clean Water a Helping Hand

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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TCEQ

North Central Texas Council of Governments