CLEAN WATER FACT SHEET

Hazardous Substances

CITY OF ABILENE—STORMWATER UTILITY DIVISION

Most people know that hazardous chemicals are dangerous and must be handled with extreme caution. However, when they are mishandled, hazardous materials and waste are released to the environment, endangering the general public and Abilene's natural resources. A variety of hazardous materials and wastes are used and generated by the automotive repair industry such as automotive batteries, caustic parts cleaners, gasoline, blast abrasives containing heavy metals, caustic sludge from radiator boil-out tanks, cleaning oven residues, some paints and used thinners, rust remover, paint booth dust, solder, and muriatic acid. If they are discharged to storm drains, stormwater detention ponds, waterways, or even on the ground, they are not only a danger, but also result in very costly cleanups, site restorations, and stiff fines for the responsible party.

Hazardous substances are dangerous and must be handled with extreme caution.

A hazardous material is any material that is listed in the federal regulations as hazardous or exhibits one or more of the characteristics of a hazardous material. These characteristics are ignitability, corrosivity, reactivity, and toxicity. Any materials meeting the specific criteria for any one characteristic is considered hazardous. In addition, any substance containing a hazardous material is considered hazardous. For example, putting waste solvent (hazardous) in waste motor oil (non-hazardous) classifies the entire mixture as a hazardous waste. A hazardous waste is any hazardous material that no longer has a use or has been spilled or accidentally released.

The City of Abilene's Stormwater Utility Division is responsible for preventing discharges of hazardous materials and wastes to the City's storm sewer system and waterways as mandated by Chapter 32, Article VI (Municipal Drainage Utility-Stormwater Protection) of the City Code.

Did You know…

Any substance that contains a hazardous material is considered hazardous. For example, putting waste solvent (hazardous) in waste motor oil (non-hazardous) results in the entire mixture being classified as hazardous waste.

This fact sheet provides automotive businesses storing and handling hazardous materials and wastes with information on managing them, without polluting the environment.

The Problem:

Careless storage and handling. Liquids stored in containers exposed to rain without lids or overhead cover can overflow onto the ground. Fluids accumulating on the outside or on top of containers from spills are easily washed off by rain water. Containers in poor condition (rusty, bloated, dented) can leak. Unlabeled containers can be misused and neglected. Batteries stored outside increase the chance for leaks from cracked casings and terminal corrosion. Storage tanks, fuel dispensers, drums, and other containers

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not properly secured are subject to vandalism as well as traffic accidents, increasing the chance for a release. Materials are often spilled from uncontrolled practices during oil based paint projects and lead paint abatement.

Hazardous chemicals are toxic to many aquatic organisms. Small quantities of hazardous chemicals such as solvents or gasoline can cause fish kills and destroy aquatic plants. Skin contact or inhalation of hazardous substances by workers can often cause serious injury.

Improper fueling activities.
Gasoline dispensing creates discharges to the environment if done carelessly. Other fuel releases occur from overfilling tanks, customers leaving the station without removing the pump handle from their cars (drive-offs), customers topping off tanks, filling of inappropriate fuel containers, maintenance by untrained workers, inaccessible shut-off switches, or employees unaware of shut-off switch locations. Fueling over a permeable surface such as soil or gravel leads to expensive clean-ups and creates the potential for groundwater contamination should a spill occur.

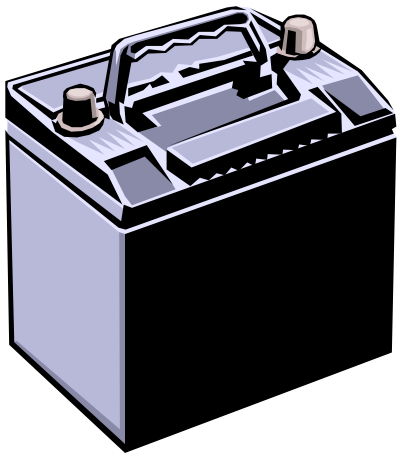
Inappropriate parts cleaning.
Used automotive parts often require heavy duty degreasers and solvents to remove oil and grease buildup. The common solvents used at automotive shops have a high human health risk rating and are extremely flammable and toxic. Cleaning parts outside with cleaning agents and discharging the wash water to the ground, storm drain, oil/grit separator, storm-water detention ponds, or waterways is illegal. Cleaning parts outside also results in difficult, expensive de-contamination of all impacted surfaces, and is a public health threat. Cleaning parts on an asphalt surface not only pollutes the environment, but over time, dissolves the asphalt surface since it is made of heavy petroleum. In addition, plumbing a parts cleaning machine or sink to the ground or storm sewer results in illegal discharges to the environment. Solvent parts cleaning devices installed outside can leak or overflow onto the ground. Parts cleaners (e.g. wet cleaners, dry ovens, bead agitators) also accumulate sludge containing oil and grease, and heavy metals. Disposal of the sludge on the ground, in a drain, pond, waterway, or dumpster is subject to costly penalties.

Mishandling of spills.
Most spills typically occur during the transport of chemicals to and from storage receptacles, fuel transfer, vehicle repair, or from leaking vehicles. Unattended spills outside are carried by rain to the environment. This only spreads the contamination, causing costly cleanup, fines, and site restoration. Some facilities are not properly equipped with spill containment and cleanup materials, a spill plan, or the appropriate training needed to use them effectively. Therefore, spills are often mishandled by flushing them with water to a storm drain, stormwater detention pond, or adjacent property.

Illegal disposal.
Hazardous substances dumped on the ground, in a drain connected to either the storm or sanitary sewer system, in a septic system, or in the trash has serious consequences. Disposing of hazardous substances in the trash results in hazardous waste accumulating in the landfill, where it can contaminate groundwater. It can also spill from trash trucks, harming sanitation workers and the general public. Hazardous substances, such as solvent, generated from automotive parts cleaning are toxic to humans, animals, and aquatic life, not only because the solvent product itself is toxic, but because the waste contains heavy metals such as lead, cadmium and chromium picked up from cleaning engine parts. Dumping hazardous substances on

Did you know…

Most car batteries contain 18 lbs. Of lead and a gallon of sulfuric acid — both are hazardous wastes. So, store batteries in a contained area.



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the ground contaminates the soil causing costly removal, disposal, and replacement of the contaminated soil area. Disposal in a storm drain will carry the pollutant to area creeks and lakes, having a devastating effect on aquatic life. Disposal in a sanitary drain may render a treatment system inoperative by destroying living organism used to treat raw sewage. Disposal in either storm sewer or sanitary sewer system drains also poses a public health threat. Flammable gases may react with natural gases in confined sewers causing violent explosions.

Unknown drain connections.
Businesses in Abilene may have drains and stormwater detention ponds that connect to the storm sewer system or drain into a local creek or other water conveyance. Some may have oil/grit separators and storm drains inside the shop. Some of these business operators don't know the purpose of these structures, especially if the structures already existed when they purchased or leased the property. If you do not know what it is or where it connects, chances are you cannot prevent it from being misused. Many people incorrectly assume that oil/grit separators and stormwater ponds and basins are receptacles for waste disposal.

Storage near storm drains or stormwater ponds.
Businesses may have sewer drains inside work and storage areas. Chances for an illegal discharge are greatly increased when chemicals are handled or stored near interior and exterior drains connected to the storm sewer system. Storm sewer systems provide a direct path to our creeks and lakes without treatment. The discharge of hazardous substances through storm drain oil/grit separators and stormwater ponds can result in expensive repairs to the storm drainage system as well as expensive sampling and disposal of accumulated sediment or sludge.

Unfamiliarity with hazardous waste regulations.
Unfamiliarity with hazardous materials and waste regulations can result in danger to employees and water resources due to mishandling of wastes or illegal storage and disposal practices. For example, hazardous wastes should not be mixed; incompatible chemicals can lead to violent reactions, even explosions and spills. And, combining a hazardous waste, such as a solvent used to clean shop floors, with a non-hazardous waste, such as used motor oil, in the same drum classifies the contents of the entire drum hazardous. The cost for disposal of hazardous waste is much more expensive—in comparison to cost for disposal (recycling) of materials done separately. Furthermore violations of City and State regulations result in legal action with subsequent fines and penalties.

The Solution:

Store and handle product waste properly.
Keep containers under protective cover with secured lids. Properly label and regularly inspect containers to ensure they are in good condition. Storage units must not leak, overflow, or display any signs of failure or incompatibility with their contents. Keep storage containers in a secured area away from traffic and possible vandalism. Store used batteries inside where leaks from cracked casings or terminal corrosion will be contained (e.g. concrete bin with sealed floors and walls). Capture drips and spills during vehicle repair using equipment such as drip pans, containment pallets or absorbent pads. Use impermeable cloths or tarpaulins at the work area to capture particles during activities such as paint applications and removal.

Did you know...

Flushing fuel spills into storm sewers pollutes Abilene's valuable water resources — our creeks and lakes.

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Store fuel and hazardous materials, above certain quantities, within secondary containment as specified in the City of Abilene Fire Code. Ideally, keep any amount of chemicals within secondary containment in the event of an accidental release. For secondary containment requirements and specification, contact the Abilene Fire Department at the phone number provided at the end of this fact sheet.

Ensure careful fueling.
Monitor tank filling activities to prevent overfilling and drive-offs. Install and maintain overfill prevention equipment. Reduce drive-offs by monitoring fueling activities and installing break away hoses currently required at most fuel facilities. In addition, install and anchor shear valves at the dispenser. Also, install automatic closing type hose nozzle valves to prevent spills during customer fill-ups. Clearly mark the shut-off switch and educate employees as to its location and use.

Pave areas where fuel is stored and dispensed so accidental spills are contained and removed. Pave with Portland cement, not asphalt; fuel deteriorates asphalt. Cover the fuel island and do not drain the area to storm drain catch basins. Carefully plan aboveground storage tank structures for product dispensing.

Keep containment and cleanup materials available in the event of a spill.

Contain and properly dispose of waste from parts cleaning.
Clean parts in a system that contains the cleaning material and collects the accumulated sludge for pick up by a certified disposal service. There are sinks, ovens, or wash machines designed specifically for that purpose. Once a system is installed, maintain it properly. Install these systems indoors and do not plumb them to the ground outside, a storm drain, a stormwater pond, or a septic system. Wet parts cleaning machines plumbed to the sanitary sewer system must meet specific conditions including use of a non-hazardous cleaning agent. Contact the City of Abilene Water Department for the requirements and approval to connect to the City sanitary sewer system.

Handle spills properly.
Spills happen. Do not flush spills away with water. Instead, contain them immediately, before they reach a storm drain and spread to a creek or lake. Also, do not put yourself or others in danger. Before containment, evaluate what materials have spilled, make a thorough assessment of risk, and determine how to contain the spill safely. If safe containment is possible, immediately stop the spread of liquids using absorbent materials. Keep spill containment and clean up materials appropriate for the type and quantities of hazardous chemicals used or stored at your facility. Immediately block off nearby drains (storm sewer or sanitary). It is much more costly to decontaminate the inside of a storm sewer pipe and/or restore a contaminated creek than it is to purchase spill containment materials.

Always wear appropriate safety equipment such as gloves, coveralls, goggles, and respirators. Access Material Safety Data Sheets (MSDS) for information about spilled materials. Keep MSDS's readily available for each chemical used or stored at the facility. An MSDS contains information that enables persons responsible for handling, using, or encountering chemicals to estimate the likely harm, potential hazards and risks that might arise in emergency situations involving those chemicals. Obtain an MSDS free of charge by calling the manufacturer's phone number from the label on the chemical container.

Never leave spills unattended; designate someone to make spill notification phone calls. Immediately notify the Abilene Fire Department by dialing 911. Then report the spill to the Stormwater Utility Division by calling the City's 24-Hour Hotline at 676-6000.

Clean up surfaces contaminated by hazardous chemicals only if you are trained, experienced, and qualified. Excavate (e.g. soil) surfaces as quickly as possible

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to prevent spread of the contamination. Contact the Texas Commission on Environmental Quality (TCEQ) for soil cleanup instructions. Sweep up and containerize dry material spills on impervious surfaces (e.g. pavement) for proper disposal. Absorb liquid spills on impervious surfaces with absorbent materials (e.g. clay absorbent, pads, booms, etc.) and containerize for proper disposal.

Post a site-specific spill contingency plan at your facility providing step-by-step instruction in the event of a spill. Practice these steps in a "spill drill". Contact the Texas Commission on Environmental Quality or the City of Abilene's Fire Department to acquire information regarding spill contingency plans and proper spill handling.

Dispose of hazardous sub-stances properly.

Do not dispose of hazardous chemicals on the ground, in the trash, to a septic system, or in a storm or sanitary sewer drain. Instead, containerize hazardous chemicals for recycling or disposal by a certified company. For example, collect spent solder from radiator repair activities for recycling. Also, keep disposal receipts and copies of waste manifests, as verification of proper disposal. Keep them for at least three years, or indefinitely to minimize liability.

Know your drainage.

If you have storm drains, stormwater ponds, or oil/grit separators at your facility, educate all workers on their function and maintenance requirements. Some business operators don't know the purpose of these structures, especially if the structures already existed before they purchased or leased the property. Storm drains, oil/grit separators, and stormwater ponds are not receptacles for waste disposal. Prevent hazardous substances from entering these structures — this prevents costly environmental cleanup, fines, and maintenance. If you are unsure to which sewer system your drain connect (storm or sanitary), contact the City's Water Department, Stormwater Utility Division, or a licensed plumber for a dye trace and/or other verification method.

Keep hazardous substances away from storm drains and stormwater ponds.

Avoid having storm drains inside chemical handling and storage areas. Drains in areas where chemicals are stored and dispensed, vehicle fluids are changes (e.g. vehicle lifts), and parts are repaired, are subject to contamination. Do not store hazardous chemicals in or immediately adjacent to stormwater ponds.

Reduce, reuse, recycle.

The cost for treatment and disposal of hazardous waste is expensive. Reduce disposal costs significantly by:

- Not mixing hazardous and non-hazardous wastes - this may increase the amount of hazardous waste generated or prevent a waste from being recyclable.
- Evaluating the use of hazardous products and findings ways to reduce the quantity of product used.
- Substituting a non-hazardous waste for a hazardous waste - contact your chemical supplier, business association, or fellow shop operators for ideas.
- Recycling wastes, when possible - the useful life of some materials like solvents can be extended by filtration to remove solids or distillation to remove impurities.
- Utilizing TCEQ's RENEW program (waste exchange program) which provides information on businesses and industry that reuse or reclaim waste materials.
- Contacting the City of Abilene's Environmental Recycling Center for other alternatives to waste disposal at 672-2209.

Relocate chemical handling and storage areas away from storm drains.

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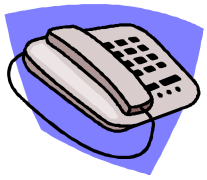

For More Information:

City of Abilene Stormwater Utility Division
555 Walnut Street
(325) 676-6281

City of Abilene Environmental Recycling Center
2209 Oak Street
(325) 672-2209

Hazardous Materials Handling and Storage
City of Abilene Fire Department
(325) 676-6434

National Pollutant Discharge Elimination System (NPDES) Permits
U.S. Environmental Protection Agency (EPA)
Region 6: (214) 665-7523
Federal: (202) 564-9545

Texas Pollutant Discharge Elimination System (TPDES) Permits
Texas Commission on Environmental Quality (TCEQ)
Local: (325) 698-9674
State: (512) 239-4671

Utility types and locations
One Call Location Center
(800) 545-6005 (call 2 working days before you dig)

Waste Disposal Information
City of Abilene Solid Waste and Recycling Division
(325) 676-6053

Emergency Numbers

Abilene Fire Department (emergency)	911
City of Abilene 24-hour Hotline	(325) 676-6000
TCEQ Emergency Response Center (24-hour)	(512) 463-7727 or (800) 832-8224