

AUTO SERVICE AND SMALL ENGINE REPAIR

WHY BE CONCERNED?

Auto service and small engine repair shops often use a variety of processes and chemicals that may generate wastes that differ from domestic wastes generated by a home. Home-based businesses and hobbyists that offer auto service and small engine repair may generate the same types of wastes (solvents, engine fluids) that some commercial businesses do. These chemicals and associated wastes should be labeled, used, stored, and disposed of in a responsible manner to prevent environmental contamination and comply with the law. While it may seem that your contribution to pollution is minor, effects of chemicals, runoff, and wastes improperly disposed of from hundreds or thousands of homes in your region can really add up. The following pages contain a self-assessment checklist that you can complete to help identify potential sources of pollution.

IDENTIFY ENVIRONMENTAL RISKS

Specific processes and potential wastes associated with auto service and small engine repair that could harm the environment are listed below. Check the processes and wastes that apply to your business.

- Parts washing: waste solvents, carburetor cleaner, and containers
- Waste fluids and filters service: oil, antifreeze, brake and transmission fluid services, and associated filters
- Use of solvent-contaminated shop towels
- Battery and part replacement: old batteries and parts
- Tire service: spent tires and rims
- Air-conditioning repair: refrigerants
- Vehicle washing: wash water and cleaning chemicals
- Vehicle parking: leaking fluids
- Storage of materials such as solvents
- Unused or abandoned well on site

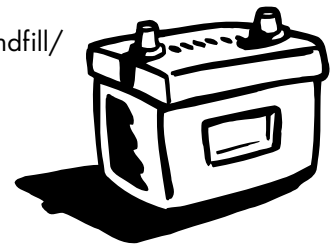
IDENTIFY METHODS OF WASTE DISPOSAL

Check the waste disposal methods that you use.

- Municipal sanitary sewer
- Septic system or lagoon
- Ground, storm sewer, or surface water
- Licensed hazardous waste disposal option



- Licensed sanitary landfill/transfer station
- Compost
- Recycle
- On-site landfill (prohibited in most cases)
- Incineration/on-site burning (see Solid Waste section in Introduction)



If your home-based business discharges its non-domestic waste to a septic system, then your business is required to complete and submit an inventory form to KDHE. For inventory forms, call KDHE at 785-296-5560. Some wastes associated with a home business are considered "industrial waste" and may not be disposed of in a septic tank or domestic lagoon. Non-domestic waste from your home-based occupation should not be disposed of in a sanitary sewer without written permission from the municipality. Never put wastes in a storm drain or dump on the ground! See Wastewater section in the front of this publication.

BEST MANAGEMENT PRACTICES

- Wastes generated from parts washing can be the most problematic waste stream for auto service and small engine repair hobbyists and home-based businesses. If you are using common solvent, then the waste from it is generally considered hazardous and will need to be treated as such (see definitions of hazardous waste in general section). Even if you use an aqueous or water-based solvent, the waste may still be hazardous due to the heavy metals it picks up after being in contact with the parts. Never mix these potentially hazardous wastes with other non-hazardous fluids. Never dispose of them via sanitary or septic systems, or storm drains. Instead, determine whether these wastes are hazardous and if they are, containerize, label, and dispose of them properly, keeping waste streams separated (refer to waste section in Introduction).
- Most vehicle/engine fluids such as used oil, antifreeze, brake fluid, and transmission fluid are reusable or recyclable. As long as these fluids have not been contaminated with another type of

fluid or solvent, label and containerize them for reuse or proper recycling. For example, if anti-freeze is removed for a certain type of repair but is still considered clean, capture and return it to the same engine after the necessary repairs have been made. Used oil that cannot be returned to the engine should be put in a leak-free container labeled "used oil." When the container is full, contact a licensed oil hauler to remove the used oil. If you intend to give the oil away to another

It only takes one gallon of waste oil to contaminate the drinking water of one million people.

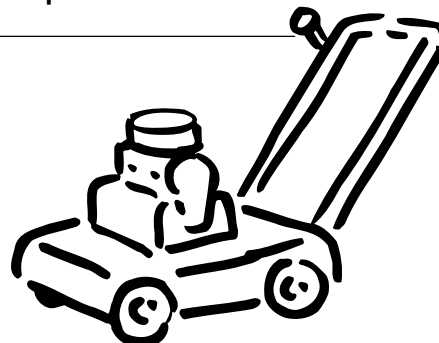
business or burn it in a space heater, the oil will need to be tested and meet certain specifications. Transmission, brake, and other hydraulic fluids should be captured for refining or fuel-blending programs.

Check with your oil vendor to see if this fluid can be blended with your used oil. Never dispose of any of these fluids in the environment, a septic system, or the landfill. Hot-draining the filter for 24 hours and crushing it, if possible, should capture oil from used filters. The drained filter can then be either sent to the landfill or to specialized recycling services. For more information on used oil requirements, contact SBEAP at 800-578-8898.

- Old parts and auto batteries that are no longer usable can be recycled. Store these items so they do not contaminate the environment, and periodically recycle them through a licensed recycler or scrap metal dealer. If a battery is cracked or leaking, it needs to be handled as a hazardous waste. Never dispose of batteries in the regular trash.
- Shop rags contaminated with solvents may or may not be hazardous depending on the type of solvent used. If you use a solvent that contains a non-F003 "listed" waste (see the *Hazardous Waste Generator Handbook*) such as methyl ethyl ketone or toluene, then these rags may need to be treated as hazardous waste. Washing them in a home washer hooked to an on-site septic system or lagoon may cause contamination of that system and the associated groundwater, and is strictly prohibited. If you are hooked up to a sanitary sewer, permission to discharge this wash water is required. Whenever possible, choose less hazardous alternatives like water or alcohols. See *Solvent Contaminated Rags*, KDHE Technical Guidance, available on the KDHE Web site or by calling SBEAP.

- Waste tires are prohibited from municipal landfills unless the material has been chopped or ground. Send these items to a licensed waste tire hauler for proper disposal or beneficial reuse.
- Air-conditioning services should only be provided if you have been properly trained and certified. This type of service usually requires specialized equipment that can capture and contain refrigerant for reuse so it is not released to the atmosphere. For more information, contact SBEAP at 800-578-8898.
- Vehicle and fleet washing includes exterior washing to remove dirt and may or may not include use of soap. Washing equipment, vehicles, or pavement generates wastewater that should be diverted away from storm drain inlets and to a sanitary sewer whenever possible. Some cities in Kansas regulate by permit an activity that generates this type of wash wastewater. Contact your local health or environmental management office or SBEAP if you have questions.
- When parking areas are used for vehicle storage and maintenance, or supply loading and storage, wastes related to leaking vehicle fluids and possible spills can become an environmental liability. Use care to capture and quickly repair vehicle fluid leaks, container leaks, and spills. Use a dry method for cleanup of this material, not a method that simply washes the spilled contents into the gutter or grass (see Spill Control in general section). Oils or other fluids generated as a result of equipment maintenance should be properly stored, recycled, or disposed of.

If you do not have a "spill kit" and a spill occurs, use kitty litter, vermiculite, newspaper, rags, or dirt to contain and absorb the liquid. NEVER wash it down the drain or into the gutter. Determine whether the waste is hazardous or not. If non-hazardous, place it in a plastic bag or sealable can and put in the trash. If hazardous, then see Hazardous Waste section at the front of this publication to determine disposal options.



- Storage of chemicals and wastes should be done in a manner to prevent spills and environmental contamination. Use of secondary containment is a recommended practice. Control of inventory prevents you from having to pay for a product twice —once as a material and then as a hazardous waste. Keep an MSDS on hand for all materials, maintain original labels whenever possible, and label hazardous wastes accordingly. Inspect the area periodically to detect problems associated with leaks or storage incompatibilities.
- Unused or abandoned wells should be plugged in accordance with KDHE regulations. Abandoned wells, if not properly sealed, can provide a direct route for contamination to enter the groundwater. In addition, open wells are a safety threat to small children and animals. A record of the plugging should be filed with KDHE. For more information, consult the general Water section of this document or call KDHE at 785-296-3565.

Disposal of any wastes other than domestic wastes to an on-site septic system or lagoon is prohibited. Never dump wastes onto the ground or into a storm drain. This practice can result in the contamination of streams, lakes, or groundwater.

POLLUTION PREVENTION AND WASTE MINIMIZATION OPPORTUNITIES

- Pre-clean parts by mechanical means such as wire brushes or rags. This will decrease the amount of sludge and soil loading on the system.
- Clean only the parts that need to be cleaned for the repair.
- Use a two-stage cleaning system, using dirty solvent for pre-cleaning, then finish cleaning with clean solvent to prolong clean solvent life.
- Increase time between solvent changeouts. Change solvent only when it loses its cleaning power, not on a preset schedule or because it looks dirty.
- For more details on solvent alternatives, contact SBEAP at 800/578-8898 for one of several specialized documents for this type of business.
- Plug any indoor drains not connected to a sanitary (city) sewer.
- Use catch pans to prevent leaks, drips, and spills from reaching the floor.
- Use “dry cleanup” methods. Scrape and scoop instead of washing the area down.

- Inventory your chemical storage and ensure storage in a manner to prevent spills and leaks.
- Control your inventory to prevent overuse or underuse of materials at your shop. Don't allow your raw materials to become too old and unusable, creating hazardous wastes.
- Determine which wastes are hazardous wastes, solid wastes, or recyclable.
- Properly dispose of all wastes and maintain disposal records for three or more years as required by law.
- Keep waste streams separate for reuse, recycling, or treatment. Keep non-hazardous materials from becoming contaminated. If you put hazardous waste into oil, the entire mixture can become hazardous.
- Substitute less toxic or non-toxic solvent alternatives whenever possible. Consult the MSDS before you buy a new product.
- Label all materials and wastes. Keep tight-fitting lids on containers except when adding or removing material or waste.
- Recycle used oil, antifreeze, and other engine fluids.
- Abandoned wells should be plugged and reported in accordance with KDHE regulations (see Water section in the Introduction).

The Small Business Environmental Assistance Program, SBEAP, is a confidential non-regulatory program funded by the state in an effort to assist small businesses with environmental concerns. Contact the SBEAP at 800-578-8898 or www.sbeap.org if you have questions.

WHERE TO GET MORE INFORMATION

- The Kansas SBEAP has several publications that address in depth these issues of regulatory compliance and pollution prevention for auto service and repair business. See the list of SBEAP publications at the end of this manual or go to www.sbeap.org to view or download.
- For questions, call 800-578-8898. All services are free and confidential.

- A summary of environmental laws is found in the introduction/preface. The following laws may be applicable to this business:
 - wastewater regulations
 - hazardous and solid waste regulations
 - storm water regulations
- Regulatory compliance information can be viewed or downloaded from the KDHE Web site at **www.kdhe.state.ks.us**.
- The Coordinating Committee for Automotive Repair (CCAR) Information Center is a federally sponsored program that has a virtual garage featured on its Web site. Users may point and

click on various items for information. Go to **<http://www.ccar-greenlink.org/>** for more information.

- See Resources section at the back of this document.

SOURCES AND ACKNOWLEDGMENTS

- Some materials adapted with permission from the *Alabama Small Business Environmental Assistance Program*.
- Some materials adapted from the *Pollution Prevention for Automotive Maintenance and Repair Industry*, a KSU SBEAP document.

ACTION STEPS

What can you do to reduce wastes or environmental risks?	Set target dates for action.

Notes: