



DEPARTMENT OF
ECOLOGY
State of Washington

Vehicle Recycling Manual

A Guide for Vehicle Recyclers

**You
Auto
Recycle**



The Key to a Better Environment

Department of Ecology
Hazardous Waste and Toxics Reduction Program
Revised, May 2011
Publication No. 97-433

The Department of Ecology's mission is simple: To protect, preserve and enhance Washington's environment. These are responsibilities of great magnitude and we need your help. Consider how your daily actions affect the environment and take an active interest in pollution prevention.

This booklet briefly identifies areas of interest to your industry and provides some helpful information on how to reduce and manage waste at the source.

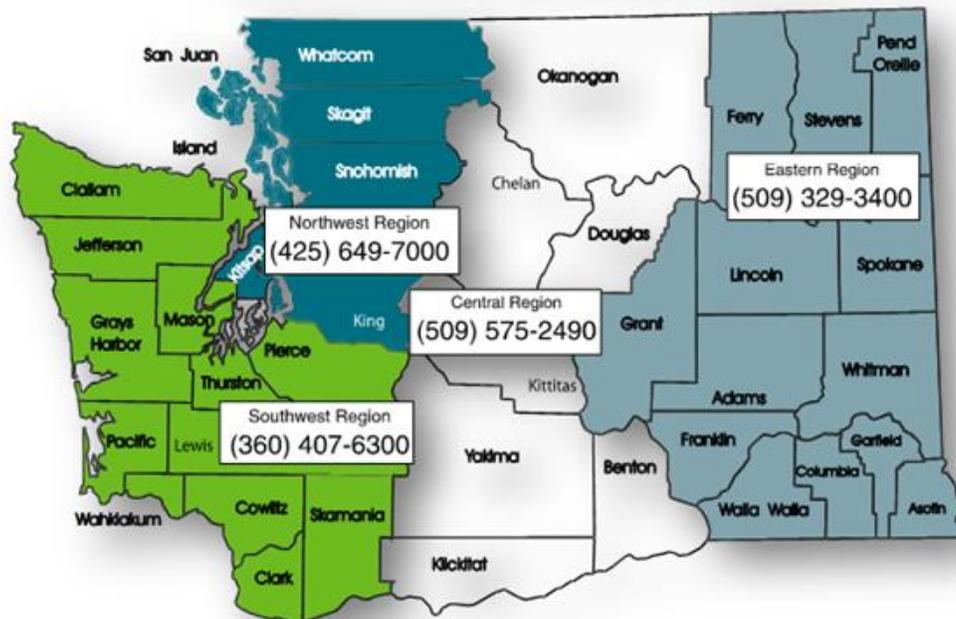
This booklet is not intended to be a substitute for the state's *Dangerous Waste Regulations*. For "up to date" information regarding specific or regulatory questions, your nearest Ecology regional office has specialists in the following programs: hazardous waste, solid waste, water quality and air quality. We are here to help!

- On-Site Technical Assistance
- Information and Referral Hotline
- Resource Center
- Workshops and Seminars
- Materials Exchange Information

Contact the Department of Ecology at the phone number(s) shown on the map below.

Department of Ecology Regions

<http://www.ecy.wa.gov/programs/hwtr>



If you need this information in an alternate format, please call the Hazardous Waste and Toxics Reduction Program at 360-407-6700. If you are a person with a speech or hearing impairment, call 711, or 800-833-6388 for TTY.



Introduction

Approximately 275 million tons of hazardous waste are generated each year in the United States — enough to fill the Louisiana Super Dome seven times each year. That equates to about one ton of hazardous waste for every American man, woman, and child.

Manufacturing even a simple product produces hazardous waste. For example, the manufacture of a tennis ball creates 50 different hazardous waste streams, stain resistant carpet creates 118 different waste streams, and **a large car (fully loaded, of course) creates eight 55-gallon drums of hazardous waste during manufacturing!** These wastes can pollute groundwater, rivers, lakes, aquifers, air, and the soil that we grow our food in and live on. It takes only one gallon of used oil to pollute one million gallons of drinking water.

Ever since vehicles were first manufactured in the early 1900s, they have been reused and recycled. The recycling system depends heavily on vehicle recyclers. When an automobile is no longer usable, it generally ends up in the hands of a recycler. The United States vehicle recycling and shredding industry is a multi-billion dollar per year business. Vehicle recyclers play a valuable role by recovering, rebuilding, and reselling usable parts from worn out or damaged vehicles, as well as recycling materials that cannot be used in their present form. They make it easy for consumers to find clean, used parts for all types of vehicles. Even though generation of wastes is sometimes unavoidable, vehicle recyclers improve the quality of our environment through good waste management practices.

Waste reduction and pollution prevention practices can benefit the vehicle recycling industry in many ways, including:

- A healthier, safer work environment for you and your employees creating possible savings in medical insurance, fewer sick days, and increased production.
- Protection for yourself and others from serious injury or illnesses.
- Avoidance of long-term liability concerns. Remember, you are legally and financially responsible for the proper handling of your wastes.
- Maintaining the ability to get insurance or bank loans.
- Minimizing the chances of not being able to sell your property due to contamination problems.
- Substantial monetary savings on hazardous waste management costs.
- Avoiding waste transportation and disposal costs.
- Reducing regulatory requirements.
- Reducing operation costs by using fewer raw or new materials.
- Saving money when you buy and using only what you need.
- Thinking of everything as a product. Selling or exchanging surplus materials with other businesses may produce additional income for your business.
- Creating a great marketing and public relations tool. Tell everyone that your business is environmentally responsible!



You Auto Recycle!

Here are the facts:

- ✓ Approximately 10 million vehicles are recycled annually.
- ✓ At least 95% of all cars scrapped in the United States are collected for reuse and recycling compared to 55% of aluminum cans.
- ✓ Cars are the number one recycled product in the United States.
- ✓ 75% of the material in a vehicle is currently recycled.
- ✓ Vehicle recycling generates approximately 12 million tons of recycled steel every year in the United States. That is 37% of all ferrous scrap to the scrap processing industry generating an energy savings of about 74%— enough energy to power 18 million households for one year.
- ✓ Recycling saves an estimated 85 million barrels of oil that would otherwise be used to manufacture new replacement parts.
- ✓ Recycling one car conserves 2,500 pounds of iron ore, 1,000 pounds of coal and 40 pounds of limestone.
- ✓ Recycling steel reduces air pollution by 86%, water use by 40%, water pollution by 97% and mining wastes by 97%.

Everyone has a vested interest in vehicle recycling. Using recycled materials in the manufacture of new vehicles can reduce costs for both automakers and consumers while conserving valuable natural resources.



What Happens When the Vehicle Gets to the Yard?

All businesses are different—some are larger than others, some perform tasks that others do not. The following list offers helpful best management practices for any size vehicle recycler.

Incoming Cars

- ✓ Inspect incoming vehicles for leaks from engines, radiators, transmissions, differentials, fuel tanks, and damaged areas.
- ✓ Place drip pans under leaks to collect all fluids.
- ✓ Remove fuel, refrigerants, and battery as soon as possible.
- ✓ Remove mercury switches from hood/trunk and ABS sensors.
- ✓ Drain all fluids from vehicles over a covered concrete drip pad with spill containment before crushing or storing on bare ground. This includes fluids in: engines, radiators, transmissions, heater cores, brake lines, differentials, all lines and hoses, fuel tanks, air conditioning units and window washing fluid tanks. Remove and capture refrigerants as required by the federal Environmental Protection Agency (EPA).
- ✓ Do not tip vehicles on their sides. This allows fluids to run out and spill on the ground.

Vehicle Crushers and Crusher Fluids

- ✓ Vehicle crushers and drain racks should be situated on a bermed or self-contained impervious surface, preferably under a roof and protected from the weather. The floor surface should be sloped to contain fluids.



Position crushers and drain racks toward the center of the surface or concrete pad rather than along the edge.

- ✓ Mobile crushers should always be situated on an impervious surface. Containers designed to be fitted to the crusher can help capture fluids. Keep crusher in designated area to keep potential contamination localized.
- ✓ Vehicles should be adequately drained prior to crushing in order to minimize the volume of waste fluids to manage. **The yard owner is responsible for the waste.**
- ✓ Collect the fluids that drain from the crusher reservoir and dispose of them properly.
- ✓ Keep crusher drains clean and properly dispose of the residue. **The fluids and residue are generally hazardous waste.**

Waste Reduction - A Good Start

Waste is defined as any material you intend to discard. Waste is considered yours if your actions or business operations cause clean material to become contaminated and unusable for its intended, original purpose. **If waste is on your property (even if someone else dumped it there or left it behind) you are responsible for it.**

Material is considered a waste until recycling makes it usable again. Recycling is better than disposal, but less beneficial than waste reduction.

These ideas should help to reduce waste, free up labor, and may even provide you payback on investments.

To begin:

- ✓ Take a walk through your business and look at all the processes that use chemicals or generate solid, liquid, or air wastes.

- ✓ Don't get overwhelmed! Make small incremental changes.
- ✓ Ask yourself how you can change a process so that it does not produce a waste or how you can lower the toxicity of the products you use.

Substitute a less toxic raw material:

- ✓ Switch to non-chlorinated compounds or a cabinet parts washer for parts cleaning.
- ✓ Always ask for a material safety data sheet before ordering any new product.

Biodegradable does not necessarily mean environmentally safe, or that the product is exempt from regulations. Safe products that become mixed with hazardous substances may need to be handled as hazardous waste. Call Ecology for help if you are unsure.

Use good operating practices:

- ✓ Do not let liquids evaporate; maintain equipment to prevent leaks and spills; monitor usage.
- ✓ Maintain equipment and use drip pans to minimize the use of any absorbents. If you must use absorbents, consider reusable or combustible materials.
- ✓ **LABEL** everything (including small spray bottles) to avoid cross contamination. This will facilitate recycling.
- ✓ **Keep all chemicals in closed, covered, or sealed containers. Liquid storage containers need secondary containment.**
- ✓ Always use funnels or pumps when transferring or dispensing chemicals.
- ✓ Place a platform or step next to storage drums so employees do not have to lift drain pans above their waists.



- ✓ Seal floor drains. Never discharge wastewater to the ground, dry wells, or septic systems. Only discharge into a sewer after you get prior approval from your sewer utility.

Recycle wastes and wastewater that you cannot reduce:

- ✓ Consider putting dirty floor washing water into your spray cabinet instead of down the drain.

The following types of wastes may be produced by the vehicle recycling industry during dismantling or disassembly:

Possible Hazardous Wastes:

- ✓ Absorbents
- ✓ Air bags
- ✓ Air emissions
- ✓ Antifreeze
- ✓ Asbestos
- ✓ Auto body shop waste
- ✓ Auto fluff
- ✓ Batteries (lead-acid)
- ✓ Brake fluid
- ✓ Brake & carburetor cleaners
- ✓ Contaminated soil
- ✓ Fuel and fuel filters
- ✓ Hot tank solutions
- ✓ Lead parts
- ✓ Mercury switches
- ✓ Parts washer solvent
- ✓ Refrigerants, (e.g., CFCs)
- ✓ Scrap metal
 - Catalytic converters
 - Smelters
- ✓ Shop towels
- ✓ Spray cans (aerosols)
- ✓ Storage tanks (AST/UST)

- ✓ Sump sludges
- ✓ Transmission filters & fluids
- ✓ Used oils
- ✓ Used oil filters
- ✓ Windshield washer fluid

Non-hazardous Wastes:

- ✓ Dust
- ✓ Empty containers
- ✓ Glass
- ✓ Plastics
- ✓ Tires

Absorbents: Floor Dry, Foam Pads, Booms

- ✓ Maintain absorbent material in areas where fluids are generated, managed, and stored.
- ✓ Soak up leaks and spills as soon as they occur and dispose of cleanup materials in a proper and timely manner.
- ✓ Do not put spent absorbent in drains, on the ground, or in vehicles to be crushed or shredded.
- ✓ Maintain written verification from your solid waste hauler regarding the disposal of absorbent in the dumpster.

Air Bags

Most new cars come equipped with air bags. The propellant used in air bags is sodium azide, a hazardous substance that is dangerous if inhaled and may burn exposed skin.

- ✓ Leave deployed air bag units in vehicles. (Air bags that have been deployed do not pose a risk to human health or the environment.)
- ✓ Remove all unused air bag units when vehicles enter the facility.



- ✓ Many vehicle recyclers have developed processes to deploy undeployed air bags thus making them solid waste, not hazardous waste. If you choose to deploy undeployed air bags, be sure whatever process you use is safe for your employees involved.
- ✓ You must dispose of undeployed air bags as hazardous waste.
- ✓ Store undeployed air bag units indoors, protected from the weather.

Air Emissions, Toxic Air Pollutants, and VOCs (Volatile Organic Compounds)

These emissions may result from running engines, the volatilization of gasoline and solvents, CFCs from air conditioning units, airborne substances from spray cans, or cutting and welding when dismantling and cleaning. A permit from your state, local county, or city air program may be necessary if you generate hazardous, toxic, or odorous air emissions.

- ✓ Try to control hazardous emissions at the source: keep drums, containers and washers covered when not in use.
- ✓ Remove CFCs, using EPA approved equipment that is operated by an EPA certified technician.
- ✓ Do not air dry solvent-soaked towels or parts.

Antifreeze

Antifreeze is commonly made up of ethylene glycol, propylene glycol, or another chemical that will transfer heat from a vehicle engine to its radiator.

Antifreeze often becomes contaminated with traces of fuel, metal particles, and grit. Some recent toxicity characteristic tests have shown lead, benzene, and other contaminants present at

levels which make antifreeze a hazardous waste. Still bottoms, antifreeze filters, or solids should also be handled as hazardous waste.

Flushing wastes are not considered the same as antifreeze and are not typically hazardous if generated through simple water rinsing with a hose. Reusable or recycled antifreeze should be used in facility vehicles, sold, or given away. Fact sheets on antifreeze management are available by request from Ecology.

- ✓ Drain antifreeze from radiators and heater cores as soon as possible.
- ✓ Determine if the antifreeze is reusable or waste fluid.
- ✓ Store all antifreeze in closed containers on an impermeable concrete surface with spill controls and secondary containment. Consider keeping antifreeze in three separate, closed containers: one for antifreeze that cannot be reused marked "WASTE ANTIFREEZE ONLY;" one for antifreeze to be recycled either on-site or off-site marked "SPENT ANTIFREEZE ONLY;" and one marked "USABLE ANTIFREEZE ONLY."
- ✓ Recycle by reuse, distillation, filtration, or ion exchange. Recycling can be done on-site or off-site by an antifreeze recycling service.
- ✓ Do not mix waste antifreeze with any other waste.
- ✓ Do not dispose of antifreeze down storm drains, in septic tanks, dry wells, sewer systems, or on bare ground.
- ✓ If you sell or give away used antifreeze, you are required to add an aversive agent to the antifreeze before you sell it or give it away, beginning January 1, 2010. Keep records of who you sell or give antifreeze away to. A vehicle license number is recommended.



Asbestos

Under the Toxic Substances Control Act (TSCA) asbestos, if airborne, has been declared hazardous to human health. Brake shoes and clutches are not typically removed for reuse in vehicle recycling and are crushed with the vehicle. This may pose a significant problem at the shredder site where fine asbestos particles become airborne. Human health may also be impacted during transport to the landfill.

If you remove brake shoes and clutches at your business, you may be exposed to asbestos dust. When these parts are removed from a vehicle, some dust can generally be seen. But many very small dust particles cannot be seen with the naked eye. These invisible particles may be asbestos or other brake lining material. Asbestos is only one of many materials used in brake linings today.

Until the use of asbestos products is phased out, the best way of limiting exposure and health damage to workers is to use proper controls, contain brake dust, and prevent its release into the air.

- ✓ Do not clean brakes or clutches with air hoses, dry brushes, wet brushes, rags, garden hose, liquid squirt bottles, solvent spray, or ordinary wet-dry vacuum.
- ✓ If you clean brakes or clutch assemblies, use a “HEPA” filter vacuum cleaner.
- ✓ If you remove brake shoes or clutches, use specially designed, low-pressure spray equipment that wets down brake or clutch dust and properly catches the run-off to reduce asbestos being released in the garage. This may prevent some asbestos from being released in the garage.

✓

- ✓ Dispose of asbestos waste according to federal and local regulations. Call your nearest regional Ecology Air Quality Program office for further information.
- ✓ Place asbestos waste in a heavy plastic bag, double tied, and store in a leak proof, airtight container designated for asbestos waste.
- ✓ Do not eat, smoke, or drink in asbestos work areas.
- ✓ Wash thoroughly before eating or going home.
- ✓ Change into clean clothes before going home and do not take work clothing home. Asbestos particles can become embedded in clothing, carried home, and released into the air that your family breathes.

Auto Body Shop Wastes

If your vehicle recycling facility also does auto bodywork, you need to consider the waste streams associated with bodywork and painting. Contact Ecology for a copy of [A Guide for Autobody Shops, publication #92 BR-16](#).

Auto Fluff

After vehicles have been drained and dismantled, the bodies to be salvaged are shredded. Then, metal pieces are magnetically picked from the shreds. The residue after picking is called “fluff.” Auto fluff has been known to contain high levels of cadmium, chromium, lead, and PCBs if fluids are not totally drained from the vehicle when the vehicle is crushed. **Drain all fluids from vehicles before crushing.**

Batteries (Lead-Acid)

Spent lead-acid batteries contain lead and corrosive acids that are considered hazardous



waste if not recycled or returned to a battery manufacturer.

- ✓ Test batteries to determine usability or resale quality.
- ✓ Sell reusable batteries.
- ✓ If not reuseable, remove cable ends from batteries and store lead parts in a covered container that is strong enough to hold the weight of the lead. Most battery recycling firms provide specially designed battery recycling containers for vehicle recyclers to use.
- ✓ Leave lead battery cable ends attached to scrap batteries for recycling.
- ✓ Place cracked or leaking batteries in a closed leak-proof storage container or on a curbed, impermeable asphalt surface with spill controls. Battery acid can degrade concrete.
- ✓ Store batteries indoors. If stored outdoors, the area should be covered to keep rainwater from collecting and causing runoff. Protect batteries from freezing to prevent cracked battery casings.

Brake & Carburetor Cleaners

- ✓ Keep containers of brake and carburetor cleaner closed when not in use.
- ✓ Do not mix brake/carburetor cleaners with other solvents, e.g., solvents from parts washers.
- ✓ Conduct a waste determination on spent cleaners and dispose of properly.

Brake Fluid

Shops occasionally deal with small amounts of brake fluid. Because brake fluid is not crude- oil based, **it shouldn't be treated as used oil.**

Brake fluid is typically hazardous, due to toxicity. Brake fluid also becomes hazardous when it gets contaminated with chlorinated solvents from spray can brake cleaner.

- ✓ Collect brake fluid in a separate, labeled, closed container.
- ✓ Look for a waste hauler that will recycle used brake fluid.
- ✓ Do not put brake fluid down any drain or on the ground.

Contaminated Soil

At some facilities, soil has become contaminated by past or ongoing vehicle handling practices. The severity of the contamination will depend on such factors as the toxicity of the pollutant, total cumulative fluid loss to the ground, and spill cleanup procedures.

- ✓ Prevent spills before they happen.
- ✓ If a spill does occur, assess the potential for ground water contamination.
- ✓ Collect the soil in appropriate containers and store the containers on a covered, impermeable containment area until soil can be cleaned or transported.
- ✓ Cover remaining contaminated soil with a plastic cover to prevent contact with rainwater.
- ✓ Divert stormwater away from the covered contaminated soil to prevent contamination of the stormwater.

Dust Suppression and Prevention

Listed below are some techniques to prevent and suppress dust:

- ✓ Vegetate or mulch areas that don't receive traffic.



- ✓ Apply gravel or rock, or pave areas.
- ✓ Clear vegetation only from areas you will be working in immediately.
- ✓ Construct natural or artificial wind breaks or wind screens.
- ✓ Apply water to reduce dust from temporary sources.
- ✓ Surface-apply chemical suppressants to non-traveled areas. Used oil cannot legally be used for this purpose and will be very costly to clean up.
- ✓ Lower speed limits on roads.
- ✓ Request Ecology's Focus sheet entitled [*Techniques for Dust Prevention and Suppression, publication #96-433.*](#)

Empty Containers

An empty container is one that has had all contents removed by normal practical means, such as inverting and draining, shaking, scraping, or scooping. After all these methods have been used, the container is considered empty when:

1. No more than 1 inch or 3% of the container volume remains for containers less than 110 gallons.
 2. No more than 0.3% of the container volume remains for containers greater than 110 gallons.
 3. Compressed gas pressure inside the container is equal, or nearly equal to atmospheric pressure.
- ✓ Store empty containers in an area protected from the weather.
 - ✓ Make sure all containers are covered, bungs are tightly in place, all labels are removed except for one label indicating the container

is "EMPTY." Include the name of the last product stored in the container (if known) and the date it was emptied.

- ✓ If you do not plan to reuse the empty containers on-site, recycle them if possible.

Containers of acutely hazardous waste, extremely toxic hazardous waste, or pesticides marked with "DANGER" or "WARNING" labels, must be rinsed at least 3 times with water or solvent, depending on the original contents. Reuse or properly dispose of the rinse water. Refer to Ecology Fact Sheet [*#96-431 Safe Handling of Empty Containers.*](#)

Fuel and Fuel Filters

- ✓ Remove fuel tanks as soon as possible after the vehicle enters the facility.
- ✓ Remove plug where sensor and gas line enter the tank and pour into containers or drums.
- ✓ If tank is still in place on the vehicle, use air-driven pump or self-contained portable gas pump to remove fuel and drain into storage tank or drum.
- ✓ Determine if fuel is reusable or waste fuel.
- ✓ Label containers clearly "Reusable Fuel" or "Waste Fuel."
- ✓ Store waste fuel in closed, leak-proof containers.
- ✓ Reusable fuel may be used in facility or employee vehicles.
- ✓ Do not mix fuel with any other waste streams.
- ✓ Drain excess fuel from filters into a proper fuel container.
- ✓ Accumulate used fuel filters in a separate, fireproof container marked "Used Fuel Filters Only."



- ✓ Fuel filters should be handled as hazardous waste and disposed of accordingly. Some landfills will take used fuel filters if they are punctured and drained for 24 hours. Check with your local landfill for information.



Glass

Automotive windshield glass is typically manufactured with two layers of glass and a sheet of PVC membrane in between. Because of this layering, recycling options for automotive windshield glass are limited. In addition, automotive glass has a different chemical composition from container glass.

Automotive glass can be recycled into construction aggregate or other secondary markets if the PVC film can be completely removed. For more information, contact the [Clean Washington Center](http://www.cwc.org/glass.htm) at www.cwc.org/glass.htm.

Hot Tank Solutions

- ✓ Accumulate spent cleaning solutions and sludge removed from hot tanks in closed, labeled containers.
- ✓ Conduct a waste determination on spent solution and sludge and dispose of properly.
- ✓ Maintain records of analytical waste determinations and disposal receipts.
- ✓ Notify and get written approval from sanitary sewer system prior to discharging wastewater.

- ✓ Never pour any waste hot tank solution into a septic system, storm drain, or onto the ground.

Lead Parts

Lead is a well-known toxic substance. The amount of lead found in a single BB or shotgun pellet is enough to contaminate an entire truckload of auto fluff, making it hazardous waste and requiring costly disposal.

- ✓ Remove lead tire weights and lead battery cable ends before crushing vehicles. Lead battery cable ends may be left on unusable batteries and recycled along with the batteries.
- ✓ Remove other known sources of lead from vehicles when practical. Rainwater falling on lead will contaminate the stormwater at your facility.
- ✓ Store lead parts in a covered container that is strong enough to hold the weight of the lead.
- ✓ Recycle lead parts with a metal recycler or battery recycler.

Material Safety Data Sheets (MSDSs)

As a business, you are required to keep MSDSs for all products available to employees on-site. An MSDS should come with each of the chemical products you purchase from a manufacturer or vendor. They contain important chemical hazard information, such as:

- ✓ The physical and chemical properties of the hazardous substances contained in the product.
- ✓ Spill cleanup instructions.
- ✓ Health hazards and appropriate first aid.
- ✓ Fire and explosion hazards.
- ✓ Proper management and disposal practices.



MSDS files should be maintained at the workplace and located so that all employees have easy access. If the MSDSs are kept on a computer, a hard copy should also be available in case of a computer failure or loss of electrical power.

You must let your employees know where your MSDSs are kept and any access procedures necessary. Assign someone the responsibility to obtain, maintain, and update MSDS information.

Mercury Switches

Mercury is a highly toxic metal often found in the hood and trunk light switches in vehicles prior to 2003. Some ABS sensors also contain mercury. Once released into the environment, mercury cannot be eliminated.

- ✓ **Participate in Washington State's Vehicle Mercury Switch Removal Program (WVMSRP) and receive a \$3 reimbursement for each mercury light switch assembly you collect. Collection container, transportation, and disposal are provided.**
- ✓ Remove all mercury switch assemblies from the hood/trunk as soon as possible.
- ✓ Do not attempt to remove the mercury capsule from the mercury switch. A broken capsule releases mercury, which is very costly to clean up. Recycle the entire switch assembly as described below.
- ✓ Store mercury switches in a leak-proof, closed container. WVMSRP provides a 3 ½, 1¼, or ¾ gallon container.
- ✓ Clearly label the container "Used Mercury Switches" or use the Universal Waste Mercury-Containing Equipment label provided by WVMSRP.

For information about how to participate in the \$3 reimbursement program, contact [Jan Brydsen](mailto:Jan.Brydsen@ecy.wa.gov) at Ecology, (509) 575-2477. A mercury switch removal packet will be sent with a list of vehicles that contain switches and instructions on how to remove them. Go to www.ecy.wa.gov/mercury/mercury_auto_switches.html.

Plastics

Recycling of plastics saves 90% of the energy over its primary production energy use. Unfortunately, plastics are made of many different materials which are not compatible with each other and cannot be recycled to high value products as mixed plastics. For successful recycling, materials must be separated in their pure form.

To date, there is no real market for plastics recovered from used automobiles. Industry is trying to incorporate recyclability at the design stage thereby creating eventual markets. Check with your local recycling firm for plastic recycling options.

Refrigerants (e.g., Freon, R-12, R-134a)

One of the single largest users of refrigerants is automotive air conditioning. It accounts for over 20% of all the refrigerants used in this country.

Refrigerants refer to Freon, R-12 and R-134a used in air conditioning units; a family of chemicals that are stable, nonflammable and noncorrosive. If released into the air, refrigerants drift into the upper atmosphere and degrade the ozone layer that protects the Earth from harmful ultraviolet radiation.

It is illegal to vent any refrigerant into the environment, including Freon, R-12, and R-134a.



Spent refrigerants not reclaimed or recycled and refrigerants used as solvents are considered dangerous waste.

Refrigerants are processed using one of two methods:

1. **Recovery**—removing refrigerant from air conditioning units and storing it in a container without testing or processing it.
 2. **Reclaiming**—processing refrigerant, usually by distillation, until it meets resale specifications.
- ✓ Remove refrigerants from all vehicles using EPA approved recovery equipment by an EPA certified technician.
 - ✓ Verify that all vehicles entering the facility without refrigerant have had the refrigerant removed using the proper methods.
 - ✓ Store refrigerant in tanks that meet federal Department of Transportation (DOT) or Underwriters Laboratory (UL) standards.
 - ✓ Sell refrigerant only to an EPA certified technician or EPA certified reclaiming facilities who will reclaim it to its original purity specifications.
 - ✓ Reuse refrigerant only in vehicle air conditioning units owned by your facility.
 - ✓ Dispose of filters from CFC refrigerant recovery system as hazardous waste.

Scrap Metal

- ✓ Catalytic converters may be removed prior to crushing and recycled for their platinum content.
- ✓ Do not attempt to reclaim the platinum by melting. You must first obtain an (air) Operating Permit or Exemption to operate a smelter or reclaiming furnace on-site.

- ✓ Do not operate a smelter in a manner allowing wastes or wastewater to impact soil.
- ✓ Conduct waste determinations on wastes generated by the smelter (i.e., wastewater, ash, slag, sludge) and manage appropriately.

Shop Towels

- ✓ Try not to use disposable towels. Cloth towels can be cleaned and reused.
- ✓ When possible, use non-chlorinated cleaning compounds.
- ✓ Do not throw dirty towels into the dumpster. Use an industrial laundry service.
- ✓ Do not saturate towels. If you do, wring them out and reuse the liquid.
- ✓ Keep waste shop towels in a closed, fireproof container labeled “Used shop towels only.”

Solid Wastes

Solid wastes are normal business wastes and food wastes that are not contaminated with any of the other wastes listed here.

- ✓ Place solid wastes in closed containers, either garbage cans or dumpsters.
- ✓ Keep containers covered to avoid rainwater leaching contaminants out of the waste and contaminating your facility’s stormwater.
- ✓ Dispose of solid wastes using a local garbage hauler or take the waste to the local solid waste facility for disposal.

Solvents for Cleaning Parts

Here are some ideas for reducing solvent-based parts washing waste:



Equipment Management

- ✓ Switch to a re-circulating spray cabinet for cleaning parts instead of using solvent.
- ✓ Negotiate your service contracts so that solvent change-outs fit your use schedule, especially if you have seasonal fluctuations.
- ✓ Segregate cleaning into two stages, each having a dedicated washing unit. Two units extend the usefulness of the solvent.
- ✓ Use parts washers equipped with filters and other separation and treatment options that will keep the solvent cleaner longer. Add-on accessories are available.
- ✓ Consider using a UL approved on-site distillation unit to recycle spent solvent. Check with your local fire department before purchasing or using this equipment.

Equipment Operation

- ✓ Think about when parts need cleaning and when they do not. Each use of a parts washing unit increases contamination of the cleaner and shortens the cleaner's useful life. If only interior surfaces need to be cleaned, avoid cleaning the exterior. Remove caked-on grease and oil from parts with a scraper or knife before washing to reduce cleaning time and water use.
- ✓ Clean carefully (no splashing or dragging) and use drain racks to save solvent and cleanup labor.
- ✓ Cover and turn off circulating sinks to prevent evaporation.
- ✓ Appearance is not always a good indicator of the solvent's ability to clean. Monitoring change-out schedules and filtering helps to extend the useful life of the cleaner.

Inventory Management

- ✓ Limit access to supplies to prevent waste. Use a computer to track parts and wastes.
- ✓ Do not over-order supplies. Use only what you need.
- ✓ Consider the convenience of using a central cleaning station. Weigh individual stations against their potential for accidents and exposure, and waste generation versus convenience and efficiency.

Apply these low-tech, low-cost ideas to other vehicle recycling processes as well.

Spray Cans (Aerosols)

If you throw out partially empty spray cans of products like brake cleaner or carb cleaner, they are typically regulated as hazardous waste because they contain ignitable, chlorinated solvents.

- ✓ Use the entire spray can before starting another.
- ✓ If a spray can malfunctions, handle as a hazardous waste or consider returning it to your supplier.
- ✓ Use refillable spray cans that do not mist the spray. Consider phasing out spray cans.

Storage Tanks (Above and Underground)

- ✓ Contact Ecology or your local county health department to make certain all regulatory requirements have been met for either aboveground (ASTs) or underground USTs).
- ✓ Label tanks and fill pipes clearly to identify contents.
- ✓ Make certain tanks meet appropriate secondary containment requirements.



Stormwater

Avoid contaminating stormwater whenever possible. There is greater emphasis now being placed on stopping the discharge of contaminated stormwater. It is easier and less costly to avoid stormwater contamination in the first place, than to remove the contaminants later.

- ✓ Avoid zinc or galvanized roofs, fences, etc., as zinc is a major stormwater contaminant for vehicle recyclers.
- ✓ Keep all storage piles, waste storage containers, lead, batteries, contaminated soils, etc., covered and protected from rain to avoid stormwater contamination.
- ✓ Keep hoods over all vehicle engine compartments and keep dumpster and garbage cans covered to avoid stormwater contamination.
- ✓ Apply for coverage under the state's general industrial stormwater permit from Ecology if your business discharges any stormwater to any ditch, culvert, creek, stream, or any other surface water or into a storm drainage system that discharges off your property.
- ✓ If you use a drain field or French drain to dispose stormwater into the ground, you must register it with Ecology (it is called an underground injection control or UIC). Call your nearest Ecology regional office for more details and a registration form.
- ✓ The stormwater permit or UIC registration requires the development and implementation of a stormwater pollution prevention plan, which includes best management practices (BMPs) that are discussed in this manual.
- ✓ The stormwater permit also requires you to take samples of your stormwater discharge.

Send the sample(s) to a laboratory for analysis and send the test results to Ecology.

- ✓ Request a copy of the following document from Ecology: *Vehicle Recyclers – A Guide for Implementing the Industrial Stormwater General National Pollution Discharge Elimination System (NPDES) Permit Requirements*, January 2006, [publication #94-146](#). It includes information on stormwater pollution prevention planning, monitoring, and sampling.
- ✓ Contact an [Ecology regional office Industrial Stormwater specialist](#) in the Water Quality Program to provide general information about the permitting process.

Sump Sludge

Sludges from your sump or oil/water separator may be hazardous waste. You will need to test sludge at a professional laboratory to determine if it is hazardous, or save testing costs and assume the waste is hazardous and manage it accordingly.

- ✓ If sludge tests as a hazardous waste, send it to a legally operated hazardous waste management facility to minimize your liability.
- ✓ Do not put hazardous sludge in the dumpster or on the ground.
- ✓ Do not use a septic tank pumping service to remove this sludge. There is no legal, environmentally safe way for these services to dispose of the waste if it is hazardous. If it is hazardous, you can be required to pay for any cleanup if they improperly dispose of the waste.



Testing

Sometimes sending a sample of waste to a laboratory for analysis is the only way to determine if the waste is hazardous. Important tests for vehicle recyclers may include pH, volatile organics, total petroleum hydrocarbons, and heavy metals.

If you test a waste once, and continue to use the same process, you may apply those test results when designating future batches of the same waste. A list of testing laboratories can be found in the [Hazardous Waste Services Directory](http://apps.ecy.wa.gov/hwsd/default.htm) on Ecology's Web site at <http://apps.ecy.wa.gov/hwsd/default.htm>.

Tires

More than 50% of the nation's rubber supply is used to make tires. About 242 million tires are scrapped in the United States each year. It is illegal to dispose of waste tires in landfills or in tire piles. You can be required to pay for the cleanup of illegally disposed tires.

- ✓ Do not accumulate more than 800 tires at any time or you are required to get a waste tire storage permit from Ecology.
- ✓ Find out about tire storage requirements in your area. They may be less than 800 tires.
- ✓ Store waste tires in a sunny area to allow evaporation of standing water and to kill heat-tolerant mosquito larvae.
- ✓ Transport stored waste tires regularly using a registered tire transporter service to prevent large accumulations and minimize your liability.
- ✓ Find authorized and registered recycling opportunities in your area.

Transmission Filters

Transmission filters should be handled like used oil filters. This means that transmission filters are exempt from state hazardous waste requirements if they are recycled or properly disposed of in a landfill or hazardous waste facility.

- ✓ Remove fluid by draining for 24 hours.
- ✓ Keep drained filters in a container marked "Used Transmission Filters Only."
- ✓ Put oil drained from filters in your "Used Oil Only" container.
- ✓ Do not put undrained filters in the dumpster.

Transmission Fluid

Transmission fluid is not regulated as a hazardous waste unless it is not recycled or it has been mixed or contaminated with hazardous wastes such as solvents, brake cleaner or carb cleaner.

- ✓ Manage transmission fluids like you manage used oil.
- ✓ Do not dispose of transmission fluid in a storm drain, septic tank, dry well, sewer system, or dumpster.

Used Oils

Used oil is defined as any oil, refined from crude oil that has been used and as a result of such use is contaminated by physical or chemical impurities.

Used oils include but are not limited to:

- Motor oil
- Transmission fluid
- Gear oil
- Cutting oil
- Hydraulic oil



- Differential oil
- Power-steering fluid
- Transaxle fluid
- ✓ Store used oil in a leak-proof and closed container.
- ✓ Never contaminate used oil with brake cleaner, brake fluid, carb cleaner, or solvents. Small amounts of chlorinated solvents turn recyclable used oil into dangerous waste.
- ✓ Purchase and use non-chlorinated aerosol solvents.
- ✓ Drain and collect all oils on a covered and curbed, impermeable concrete area away from any drains.

Most used oils can be mixed together and stored in the same container. However, check with your oil recycling company or Ecology before mixing any wastes together in the same drum. In addition, burning mixed used oils of different viscosities has been reported to cause oil heater feed lines to clog.

- ✓ Properly label every used oil container as "Used Oil Only."
- ✓ Regularly check all used oil storage containers.
- ✓ Used oil may be recycled by recovery and re-refining by an oil hauler or fuel marketer, burning in an approved on-site heating unit, or sent off-site to be burned for energy recovery. Check with Ecology for requirements.
- ✓ Do not mix antifreeze, brake fluid, solvents, gasoline, degreasers, paint, or anything else with used oil. Collect and dispose of separately.

Used Oil Burned in Space Heaters

Burn oil for heating only. You need to use a UL listed used oil heater to burn used oil legally and safely. Do not burn oil simply to dispose of it – it is illegal to do so.

The types of used oils that may be burned in space heaters include:

- ✓ Any used oil from do-it-yourself oil changers who generate used oil as a household waste.
- ✓ On-specification oil from any source, (see criteria below).
- ✓ Off-specification used oil, provided the heater burns only used oil that the owner or operator generates, the heater is designed for a maximum capacity of not more than 0.5 million BTU per hour, and the combustion gases from the heater are vented to the outside.

If your business burns used oil, check with your nearest Ecology regional office or your local air quality agency to inquire about air quality requirements. In addition, check with local building code and fire code personnel to inquire about the installation and use of the oil burner.

On-specification oil means the used oil meets the following specifications:

- ✓ Flashpoint 100 degrees Fahrenheit minimum
- ✓ Arsenic 5 parts per million (ppm) maximum
- ✓ Cadmium 2 ppm maximum
- ✓ Chromium 10 ppm maximum
- ✓ Lead 100 ppm maximum
- ✓ Total halogens 4000 ppm maximum
- ✓ PCB 2 ppm maximum

Off-specification oil is any oil that exceeds one of the maximum concentrations listed above.



Used Oil Filters

Used oil filters are exempt from state and federal hazardous waste requirements. Used oil filters should be punctured and drained for 24 hours, then crushed and kept in a separate container.

- ✓ Keep drained filters in a separate container marked “Used Oil Filters ONLY.”
- ✓ Recycle used oil filters that have been drained and crushed.
- ✓ Put oil drained from filters into your “Used Oil Only” container.

Waste Handling, Storage and Disposal Practices

Keep each waste separate and never mix waste streams. Mixing often means fewer or no recycling opportunities or reuse options, all of which means more expensive disposal or recycling costs. Mixing wastes might even cause a chemical reaction that could produce an explosion or toxic gases.

Focus on recycling your wastes. Recycling does not count as waste disposal. The more waste you dispose, the more regulations and liability your business is subject to.

Proper storage of waste is extremely important. Some key things to remember:

- ✓ Store each waste in a proper container so the waste does not react or corrode the container.
- ✓ Put a label on the container before storing any waste in it. The label should clearly state what is in the container and the first date the container was used to store the waste.

- ✓ If the waste is a liquid:
 - Always use funnels to avoid spills when transferring the waste into the storage container.
 - Keep the waste covered, meaning lids on containers or bungs in barrels.
 - Never store liquid waste without being covered from rain to avoid contaminating stormwater.
 - You must have secondary containment for the storage container so if the container leaks, the waste is captured. Keep the secondary containment clean, don’t allow rainwater to collect, and check for leaks regularly.
- ✓ Have the waste recycled or disposed when the container is full or within 180 days of first placing any waste in the container. See page 21 for more details.
- ✓ Always use an EPA registered recycler or waste hauler to pick up and recycle or dispose of your waste. Always ask them for the EPA registration number – this will minimize your liability.
- ✓ Always get a receipt for the waste your recycler or waste hauler picks up that indicates the type of waste and the amount of waste collected.
- ✓ Keep every receipt for waste picked up to provide proof where your waste has gone to minimize your future liability.

Please remember **-Label, Label, Label!**



Wastewater Management

Wastewater is water that has been used for a purpose such as engine cleaning and must be disposed properly and legally. All process wastewater can only go to a sanitary sewer if authorized in advance by the sewer utility and never to any other type of drain. Check with your local sewage plant for information on discharge limits, obtain a discharge permit if required, and verify which drain is okay to use.

If your facility is not on a sanitary sewer, wastewater must be tested to see if it is hazardous waste (which it usually is). If it is, it must be disposed as hazardous waste. NEVER dispose of wastewater in a storm drain, drain field, or other ground disposal system. For more information, fact sheets are available from Ecology. Call (360) 407-6752 and request:

- *Floor Drains and Generator Responsibility*, [#94-117](#)
- *Wastewater Discharge Permits in Washington State*, [#WQ-R-019](#)
- *Vehicle and Equipment Washwater Discharges Best Management Practices Manual*, [#95-056](#)
- ✓ Use either an on-site capture and reuse system for wastewater or have a connection to a city sewer and wastewater treatment facility with the proper permitting.
- ✓ Floor-cleaning wastewater may be contaminated with heavy metals and grease that needs to be treated before discharging to the sewer. If not contaminated, the water may go to an oil/water separator (or other type of appropriate system) and then the sanitary sewer.
- ✓ Recycle floor mop water into cabinet washers.

- ✓ Steam-cleaning, pressure-washing, and spray cabinet wastewater should go to an oil/water separator (or other type of appropriate system) and then the sanitary sewer.
- ✓ Recirculate and reuse water until unusable.
- ✓ Evaporate cabinet washer water to reduce its volume.
- ✓ Keep floors clean. Catch leaks before they hit the floor.



Windshield Washing Fluid

- ✓ Although window-washing fluid is mainly alcohol, water, and detergent, it may also contain small amounts of antifreeze.
- ✓ Reuse window-washing fluid in recycling facility or employee vehicles.
- ✓ Drain all wiper fluid during dismantling and before vehicle is stored in yard.
- ✓ Sell or give away reclaimed window-washing fluid to customers.
- ✓ Store window-washing fluid in covered containers on a curbed, impermeable, concrete surface with spill controls.
- ✓ Label containers properly.
- ✓ Do not pour window-washing fluid down septic drains.



A Quick Look at the Waste Streams

Waste	Best Handling Method
Air bag cartridges	Sell or dispose properly. See page 4.
Antifreeze	Sell, give away, reuse, or recycle on- or off-site. See page 5.
Batteries	Remove, store in proper containers, and recycle. See page 6.
Brake fluid	Collect, store in a proper container and dispose through a hazardous waste company. See page 7.
Empty containers	Reuse on-site or recycle off-site. See page 8.
Fuel and fuel filters	Dispose of through a hazardous waste company. See page 8.
Mercury switches	Remove mercury switch assembly for convenience lights in vehicle hood and/or trunk and anti-lock braking (ABS) system sensors. Dispose properly through the Washington Vehicle Mercury Switch Removal Program . See page 10.
Parts washer solvent	Recycle through service provider or dispose as hazardous waste. Extend change-out time until solvent is unusable. See page 11.
Refrigerants	Remove refrigerant using EPA certified equipment and technician. Reuse on-site or send off-site to EPA certified recycling firm. See page 10.
Shop towels	Use a commercial service that provides laundered cloth towels. See page 11.
Solid waste	Place in a closed container (garbage can or dumpster). Do not contaminate with any other wastes on this list and dispose as normal solid waste. See page 11.
Solvents	Recycle or dispose of as hazardous waste. See page 11.
Stormwater	Avoid contamination. Get covered by stormwater permit if discharging off-site, or register if using UIC. See page 13.
Sump sludge	Test sump sludge to determine if it is a hazardous waste. If test shows it is hazardous, send it to an EPA registered hazardous waste management facility. See page 13.
Tires	Recycle when possible, sell, or transport and dispose properly. See page 14.
Transmission filters	Drain fluid, recycle through scrap metal dealer. See page 14.
Transmission fluid	Recycle. See page 14.
Used oils	Recycle. See page 14.
Used oil filters	Drain oil, recycle filter through scrap metal dealer. See page 16.
Waste storage and disposal	Do not mix wastes. Store all wastes properly, in proper containers with labels. Recycle, or dispose with an EPA registered firm. See page 16.
Windshield washer fluid	Reuse or sell. See page 17.



Best Management Practices for Vehicle Recyclers

When working with any kind of vehicle fluids, please consider the following to help reduce waste streams and keep hazardous substances out of building drains, sumps, and off the bare ground:

If you...	Please consider that...	Best Management Practices
Wash engines or parts	The resulting wastewater is likely to be hazardous from greases, oils, and solvents.	<ul style="list-style-type: none">• Only wash engine and parts if absolutely necessary.• Keep wastewater separate and evaluate it.
Use aerosol solvents or other degreasers	These chemicals can compound waste problems by contaminating washwater, sludge, or bare ground with hazardous materials.	<ul style="list-style-type: none">• Put parts to be cleaned on a drip pan – not on the floor.• Use a filtered parts washer to clean engine parts and manage the solvent as a hazardous waste.• Don't use aerosols that designate as hazardous waste.
Drain vehicle fluids (oil, brake fluid, antifreeze, refrigerant, etc.)	These chemicals can compound waste problems by contaminating washwater, sludge, or bare ground with hazardous materials.	<ul style="list-style-type: none">• Use drip pans under vehicles to collect fluids.• Recycle used oils and other fluids.• Drain radiators before flushing and recycle waste antifreeze.• Remove air conditioning CFC before removing parts from the vehicle or putting the vehicle in the yard storage.
Clean shop floors	Hosing the floors with water or solvent can flush contaminants into the floor drains, contaminating sludges in the system or possibly causing runoff to the bare ground outside.	<ul style="list-style-type: none">• Keep floors clean to avoid the need to wash.• Use dry sweeping compounds.• Reuse sweeping compounds as long as they remain absorbent.• Use dead-end sump to catch and temporarily hold washwater if necessary.• Dispose washwater as hazardous waste.
Store solvents	Spilled or leaking solvents and their vapors are dangerous and can contaminate bare ground or wastes in the plumbing system.	<ul style="list-style-type: none">• Keep containers closed at all times when not in use.• Store solvents in a Flammables cabinet.• Do not use solvents near drains.
Store waste vehicle fluids in a room with no floor drain	Many materials used in vehicles can be dangerous and can contaminate bare ground or wastes in the plumbing system.	<ul style="list-style-type: none">• Keep waste containers in a separate, covered storage area with no floor drain.• Use a good secondary containment system or install an adequate curb or berm to contain any wastes that may leak from storage containers.
Accidentally spilled material	Many materials used in vehicles can be dangerous and can contaminate bare ground or wastes in the plumbing system.	<ul style="list-style-type: none">• Clean up spills immediately.• Notify the State Emergency Management Division at (800) 258-5990 or nearest Ecology Regional Office if appropriate.• Have the materials needed for spill cleanup on hand and train all employees how to use them properly.



Identifying Wastes

A hazardous waste is a solid, liquid, or gaseous material with certain properties that could cause injury or death to a person, or could damage and pollute land, air, surface water or groundwater. Some wastes are specifically listed in the Dangerous Waste Regulations as hazardous. Other wastes may be regulated because they exhibit certain characteristics (ignitability, corrosivity, reactivity, toxicity) or because they are waste mixtures, which meet the criteria of toxicity or persistence.

Major Category	Hazardous Waste Type	Vehicle Recycler Examples
Listed wastes	Discarded Chemical Products are unused, discarded, pure substances that have only one active ingredient.	<ul style="list-style-type: none"> • Pesticides. • Unrinsed containers. • Discarded chemicals may not be generated by vehicle recyclers.
	Dangerous Waste Sources are hazardous wastes from specific industry sources such as plating, and generic activities (such as degreasing) and are listed in the Dangerous Waste Sources List .	<ul style="list-style-type: none"> • Chlorinated solvents. • Contaminated oil.
Characteristic wastes	Ignitable waste is capable of causing a fire and has a flashpoint of less than 140 degrees Fahrenheit.	<ul style="list-style-type: none"> • Spent solvents. • Solvent still bottoms.
	Corrosive material is so strong it can dissolve metals and burn skin and eyes. It has a pH of 2 or less or 12.5 or greater.	<ul style="list-style-type: none"> • Acid from lead-acid batteries. • Acids/bases.
	Reactive material will become unstable (burn, explode, give off vapors) if mixed with air, water, heat, or other materials.	<ul style="list-style-type: none"> • Not typically generated by vehicle recyclers.
	Toxicity Characteristics (TCLP) material is toxic if the waste is tested by a qualified lab using the Toxicity Characteristic Leaching Procedure (TCLP) and generates a positive result.	<ul style="list-style-type: none"> • Spray cabinet washwater (possible). • Sludges. • Heavy metals.
Criteria wastes	Toxic wastes contain chemical constituents that are toxic to fish and other animals.	<ul style="list-style-type: none"> • Waste antifreeze. • Oil and transmission fluid. • Brake fluid (possible).
	Persistent wastes can be any chemical that starts with chloro, fluoro, or bromo. Please refer to the list in the <i>Dangerous Waste Regulations</i> .	<ul style="list-style-type: none"> • Solvents with the word “chlor” as part of the main ingredients. • Used oil. • Metal cutting oil. • Methylene chloride.



Determining Generator Status

Most auto recyclers should be small quantity generators if hazardous materials are managed properly.

If you generate...	Then your size is...
220 pounds or less per month (less than ½ of a 55 gallon drum) of hazardous waste or less than 2.2 pounds of acutely hazardous waste.*	SQG (Conditionally Exempt Small Quantity Generator)
More than 220 pounds but less than 2200 pounds per month (about ½ to 4 drums) of hazardous waste.	MQG (Medium Quantity Generator)
2200 pounds or more per month (about 4 drums or more) of hazardous waste or 2.2 pounds of acutely hazardous waste.	LQG (Large Quantity Generator)

**Extremely Hazardous waste and Acutely Hazardous waste pose a greater threat to the environment and human health than Dangerous waste. Extremely Hazardous waste is restricted from land disposal and may have a Quantity Exclusion Limit (QEL) of 2.2 pounds instead of 220 pounds. Acutely Hazardous waste also has a 2.2 pound QEL. Most businesses generate Dangerous waste and not Extremely Hazardous waste, but pesticide applicators and generators discarding products with poison labels should pay special attention to this category.*

Requirements for Small, Medium, and Large Quantity Generators

For All Waste Generators:

- ✓ Clearly label all waste storage containers with the contents of the container and the date the container was first used to store waste.
- ✓ Keep lids or bungs in place on all waste storage containers.
- ✓ Use funnels or other device to avoid spills when transferring liquid waste into a waste storage container.
- ✓ Provide adequate secondary storage for all liquid waste storage containers. Adequate storage is either the volume of the largest container or ten percent of all the containers where multiple storage containers are located – whichever is larger.
 - Keep the secondary storage clean of debris.
 - Regularly check to see if any of the storage containers are leaking and take immediate action to transfer the contents of any leaking container.
- ✓ Keep all waste storage containers covered from rainfall to prevent contamination of stormwater and to avoid collecting rainwater in the secondary containment system.

Small Quantity Generators (SQG):

- ✓ Identify hazardous wastes and keep track of how much you generate or accumulate each month.
- ✓ Manage your waste in a way that does not pose a threat to human health or the environment.
- ✓ Ensure that your wastes are treated, recycled, reused, or disposed of properly.
- ✓ If you have a generator [RCRA Identification Number](#), remember to file your annual [Dangerous Waste Report](#) with Ecology by March 1 of each year.
- ✓ Contact your county public works department for hazardous waste assistance.



Regulated Generators (MQG or LQG):

- ✓ Identify your hazardous wastes.
- ✓ Obtain a [RCRA Identification Number](#).
- ✓ File your annual [Dangerous Waste Report](#) with Ecology by March 1 of each year.
- ✓ **Perform preventative maintenance:** maintain an alarm system for emergencies, have a spill cleanup plan, have fire control equipment and cleanup equipment on hand, maintain all emergency equipment, inspect and maintain containers, have a fire inspection once per year.
- ✓ **Properly accumulate hazardous waste:** be sure your secondary containment is capable of holding all leaks.
- ✓ **Plan for emergencies:** have an emergency coordinator, post emergency information, report spills, and train employees. LQGs must have a written training plan and a written contingency plan. (See pages 22 and 23.)
- ✓ **Use proper containers and manage them correctly:** store ignitable waste using approved containers, keep incompatible wastes separated, use leak-proof and covered containers, inspect containers weekly, maintain 30" of aisle space between container rows, and label clearly.
- ✓ **Arrange for proper transportation and disposal:** LQGs must transport and dispose of hazardous wastes within 90 days of the start date noted on the container accumulation label.
 - MQGs must transport and dispose of hazardous wastes within 180 days of the start date noted on the container accumulation label.
 - SQGs have no time limit past the start date on the container accumulation label. Accumulation time limits start when waste is first generated.
- ✓ Manifest shipments of hazardous waste.
- ✓ **Keep records of hazardous waste activities:** keep results of laboratory tests, keep copies of annual reports, manifests, and all records for at least 5 years.

Plan for Emergencies

- Designate an emergency coordinator
 - ✓ At all times there should be at least one employee on the premises or on call, who is responsible for coordinating all emergency response measures. It is also a good idea to have at least one back-up emergency coordinator.
- Make sure the emergency coordinator is familiar with the:
 - ✓ Operations and activities at your site.
 - ✓ Location and hazardous properties of all the wastes that you handle.



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- ✓ Location of all records.
 - ✓ Layout of your facility (inside and outside).
 - ✓ Agreements you have made with state or local authorities and outside emergency response contractors for their assistance.
 - Prepare and post an emergency directory near all phones and intercoms that contains:
 - ✓ The name and telephone number of the emergency coordinator and his or her backups.
 - ✓ A description and the location of emergency equipment, such as fire extinguishers, spill control materials, and alarm system.
 - ✓ The telephone number of the fire department, unless you have a direct alarm.
 - Educate your employees on waste handling and emergency procedures that are relevant to their job responsibilities.
 - If you generate, or accumulate at any time, more than 2,200 pounds of hazardous waste, or 2.2 pounds of certain pesticides or poisons, you must also comply with the following training requirements, prepare a written contingency plan, and develop emergency procedures as outlined on the next page.

Additional Training Requirements for Generators of 2,200 Pounds or More

Include the following in your training program:

- ✓ The capabilities and proper use of emergency equipment including communication and alarm systems.
- ✓ How to respond to fires, explosions, spills, releases to air, and groundwater contamination incidents.
- ✓ Procedures for using, inspecting, repairing, and replacing your emergency and any monitoring equipment.
- ✓ The details of any automatic waste feed cut-off systems. Steps for the shut-down of operations.

Provide annual refresher training for employees. Prepare and follow a written training plan which includes:

- ✓ A listing of the job title, job description, and name of the employee in each position that handles or relates to hazardous waste management in your business.
- ✓ A written description of the type and amount of both introductory and refresher training you require for each position.
- ✓ Records documenting that your employees have received and completed required training.

Written Contingency Plans

Your written contingency plan should include the following:

- ✓ A description of actions employees will take in an emergency.



- ✓ A description of any arrangements you have made with local police, fire departments, hospitals, contractors, and state or local emergency response teams and the appropriate telephone numbers.
- ✓ Your emergency directory, with the emergency coordinator and his or her backups clearly identified.
- ✓ An up-to-date list and location of emergency equipment on the premises such as fire extinguishers, spill- control materials, and alarm system.
- ✓ An evacuation plan for your employees that describes evacuation routes, alternate routes, and the signal you will use to begin evacuation.

Required Emergency Procedures

Make sure that you are not generating any more hazardous waste than you absolutely must. Businesses that generate less than 220 pounds per month do not have to comply with the emergency planning requirements listed here (although it is a very good idea to use these safety practices anyway).

For Generators of less than 2,200 pounds per month

During an emergency, the Emergency Coordinator must:

- In the event of a fire, call the fire department or attempt to extinguish the fire.
- In the event of a spill, contain the flow of the spill as much as possible, cleanup the waste and any contaminated material, and call the nearest Ecology regional office.
- If a fire, explosion or other release could threaten human health outside your business or reach streams, lakes or groundwater, call the nearest [Ecology regional office](#) and the National Response Center (800) 424-8802 with the following information:
 - ✓ Your name, address and RCRA Identification Number.
 - ✓ Date, time, and type of incident.
 - ✓ Amount and type of hazardous waste involved in the incident.
 - ✓ Extent of any injuries.
 - ✓ Estimate the amount of recovered materials and how you have managed these wastes.

For Generators of 2,200 pounds or more per month

During an emergency, the Emergency Coordinator must:

- Activate internal alarms to notify employees.
- Call state or local agencies if their help is needed.
- Identify the released material's character (is it flammable?), exact source, amount released, and the area it covers.
- Assess the possible hazards to human health and the environment.
- Call local authorities if evacuation of local areas may be advisable.



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- Call the nearest [Ecology regional office](#) and the National Response Center (800) 424-8802 and give them the following information:
 - ✓ Name and telephone number of the caller.
 - ✓ Name and address of the business or organization.
 - ✓ Time and type of hazardous waste incident.
 - ✓ Name and amount of the material involved.
 - ✓ Extent of any injuries.
 - ✓ Possible hazards to human health or the environment beyond your property.
 - Take steps to control the incident such as stopping equipment, removing or isolating containers, and collecting any released material.
 - If appropriate, monitor leaks, pressure buildup, gas generation or ruptures while you're handling the incident.
 - Immediately after the emergency:
 - ✓ Properly manage the recovered waste and contaminated materials (soil, water, rags, clothing).
 - ✓ Make sure that emergency equipment is cleaned and fit for the next use.
 - ✓ Call the nearest [Ecology regional office](#) and appropriate local authorities before resuming operations in the affected area of your business.

Spills – Be Prepared

Spill Control Equipment

- ✓ Fire extinguishers are required in all vehicle recycling buildings. They should also be kept where any cutting torches are used and in yard vehicles.
- ✓ Safety equipment for employees should include rubber or latex gloves and safety glasses.
- ✓ Industrial spill clean-up products or absorbent material for soaking up oils and solvents such as rags, towels, pads, booms, and organic absorbents (peat, corn cobs, cellulose fiber, sawdust, wood chips, rice and cotton seed hulls, granular clay, and lime for battery acid).
- ✓ Brooms, shovels and dust pans to pick up clean-up materials.
- ✓ Containers to hold spill waste: drip pans, pails, drums.

Spill Prevention

- ✓ Confine inspection, draining, and dismantling of vehicles to one covered area with secondary containment to avoid stormwater contamination.
- ✓ Check vehicles immediately upon arrival for leaks. Use drip pans for temporary leak collection and remove fluids from vehicles as soon as possible.
- ✓ Dismantle vehicles, parts, and cores on a curbed, impermeable, concrete surface, that is covered to avoid stormwater contamination, with drip pans and absorbent materials.



- ✓ Plug all hoses after draining.
- ✓ Place all fluids in proper storage containers immediately after draining.
- ✓ Store vehicles, parts, and cores with proper covers and spill containment to avoid contaminating stormwater. Keep hoods over all engine compartments to avoid stormwater contamination.
- ✓ Secondary spill containment efforts must be large enough to contain the maximum volume of fluid that could be spilled from the largest container in the area or ten percent of all the containers, whichever is greater.
- ✓ Clean up small spills right away. Use the smallest amount of absorbent possible or drain into a sump.
- ✓ Dispose of used absorbents properly: launder, or test and properly manage either as solid or hazardous waste (according to test results). Store all used absorbents in closed, covered, and leak-proof containers.
- ✓ Store all waste fluids in closed containers to prevent spills and under cover to prevent stormwater contamination. Close tightly to prevent evaporation, and check levels daily.
- ✓ Inspect containers regularly for leaks and immediately transfer the contents of the container if a leak is detected.
- ✓ Develop a maintenance plan for all facility equipment, such as crushers, forklifts, and hydraulic lifts. Keep them well-maintained, free of leaks and problems.
- ✓ Clean crusher regularly by wiping off accumulated grease and oil - this prevents runoff. It is best to keep the crusher under cover to avoid contaminating stormwater.
- ✓ Do not crush vehicles on unprotected ground. Crushing on a paved area is best or on an area covered with tarps to collect any leaks or spills. Clean up all spills immediately after crushing operation is complete to avoid contaminating stormwater.

Spill Cleanup

- ✓ Clean up spills right away.
- ✓ Report petroleum, fuel spills, and any other chemical spill (including lead-acid batteries) to the nearest [Ecology Regional Office](#) if they threaten human health or the environment.
- ✓ Organic absorbents that contain hazardous wastes cannot be recycled or burned on-site.
- ✓ Keep spill control equipment and absorbent materials in a central location, accessible to all employees.
- ✓ Train all employees to quickly respond to different kinds of spills.



Spills and Leaks Reporting

To report a spill or leak call: **1-800-258-5990**
State Emergency Management Division 24-Hour Spill Number

Report:	Reportable Quantity:
Uncontained spills of toxic, flammable, corrosive, and otherwise dangerous chemicals or spills or discharges of environmentally damaging materials to water.	Determine whether human health or the environment is threatened. Clean up the spill if you are equipped to handle it safely. If uncertain, stop and contain the spill, then request assistance from your nearest Ecology regional office.

If a spill occurs, follow these steps:

1. Observe the safety precautions associated with the material spilled.
2. Stop the source of the spill if possible.
3. Call local fire and/or police departments if fire or public safety hazards are created.
4. Contain the spilled material. Dirt, sand, or any semi-impermeable material may be used to create a containment structure to prevent material from moving.
5. Report the spill. The number of the [nearest Ecology office](#) is listed on the inside cover. State Emergency Management Division 24-Hour Spill Number is 1-800-258-5990.
6. Recover the spilled substance while observing safety precautions. Professional contractors may need to be hired if large quantities or dangerous substances are involved, or if long-term cleanup and investigation is required.

Ecology Regional Spill Reporting Numbers:

For Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima counties:

Central Regional Office (509) 575-2490

For Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman counties:

Eastern Regional Office (509) 329-3400

For Island, King, Kitsap, San Juan, Skagit, Snohomish, and Whatcom counties:

Northwest Regional Office (425) 649-7000

For Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, and Wahkiakum counties:

Southwest Regional Office (360) 407-6300

If you are a person with a speech or hearing impairment, call 711, or (800) 833-6388 for TTY.

On the next page is a detachable emergency contact poster that you can fill in with your local information and post near the phone in your shop. Make copies if you have more than one phone.

DANGEROUS WASTE EMERGENCY INFORMATION

Emergency Coordinator	Name: _____ Phone: _____	Map of facility with emergency equipment, exit routes, and alarm locations: 
Alternate:	Name: _____ Phone: _____	
Fire Department:	Phone: _____	
Hospital:	Phone: _____	
Police:	Phone: _____	
Fire alarm is located:	_____	
Spill-control equipment is located:	_____ _____	
Fire extinguishers are located:	_____ _____ _____	

IN CASE OF A SPILL OR OTHER CHEMICAL EMERGENCY, ALSO CALL:

- **NATIONAL RESPONSE CENTER: 1-800-424-8802**
- **WASHINGTON EMERGENCY MANAGEMENT DIVISION: 1-800-258-5990
OR 1-800-OILS-911**
- **DEPARTMENT OF ECOLOGY REGIONAL OFFICE _____**

For Technical Assistance, call your Ecology Regional Office or go to www.ecy.wa.gov/programs/hwtr.

Ecology Publication Number 08-04-022

If you have special accommodation needs that require this in an alternative format, please call 360-407-6700 or 360-407-6006 (TDD).





Who is required to report?

EVERY PERSON who has any hazardous substance or material under their control, including:

- ✓ Individuals, partnerships, companies, corporations.
- ✓ Government subdivisions, including officers of these entities.
- ✓ Owners of substances being stored or transported by another company.
- ✓ Property owners who discover contamination.
- ✓ Contractors that are in physical control of a discharged substance.

Know your facility

Materials stored

Understand the characteristics, behaviors, and safety precautions associated with the material. The Material Safety Data Sheets (MSDS) provided by the manufacturer or supplier should provide this information.

Material management

Review how your business stores and handles its chemicals. Inspect the dispensing equipment and containment construction to prevent accidents from happening.

Planning

Does your business have a written Contingency Plan or similar document? If your business does not have one, perhaps they should draft one to assist employees in planning for a spill.

Exercises

Conduct table-top exercises to see if your business response plan works as planned. Improve and review the response plan with your personnel. Check telephone numbers and ensure the plan contains useful and accurate information.

Hazardous Waste Disposal

The following is a partial list of hazardous waste disposal and recycling companies. These are examples, not recommendations. For additional companies see Ecology's [Hazardous Waste Services Directory](http://apps.ecy.wa.gov/hwsd/default.htm) at <http://apps.ecy.wa.gov/hwsd/default.htm>, your county's *Hazardous Waste Disposal Guide*, or your local phonebook.

Vendor and agency personnel listings can change frequently. While these listings were current at the time of this printing, for the most current information available, check Ecology's Web site at <http://apps.ecy.wa.gov/hwsd/default.htm> or call your [nearest Ecology regional office](#) and ask for a hazardous waste and toxics reduction technical assistance officer.



ANTIFREEZE RECYCLING (equipment and/or services)

Chem-Safe Environmental, Inc.

PO Box 616
Kittitas WA 98934
Phone: (509) 968-3973
Fax: (509) 968-4680
www.chemsafeenv.com
Pacific Northwest

Emerald Services, Inc.

7343 E Marginal S
Seattle WA 98108
Phone: (206) 832-3000 or (888) 832-3008
Fax: (206) 832-3030
www.emeraldnw.com
Pacific Northwest

ORRCO (Oil Re-refining)

4150 N Suttle Road
Portland OR 97217
Phone: (800) 367-8894 (WA/OR)
Fax: (503) 286-5027
www.orrco.com
Pacific Northwest

Phoenix Environmental

2212 Port of Tacoma Road
Tacoma WA 98421
Phone: (253) 779-8472 or (888) 475-0116
Fax: (253) 779-8470
www.phoenixenviro.com
Pacific Northwest

PSC Environmental Services

625 S 32nd Street
Washougal WA 98671
Phone: (360) 835-8743 (800) 547-2436
Fax: (360) 835-8872
www.pscnow.com
Pacific Northwest

Safety Kleen (Auburn)

3210 C Street NE
Auburn WA 98002
Phone: (253) 939-2022
Fax: (253) 939-7277
www.safety-kleen.com
Statewide

Safety Kleen (Pasco)

814 E Ainsworth
Pasco WA 98301
Phone: (800) 769-5803
Fax: (509) 544-6111
www.safety-kleen.com
Statewide

Safety Kleen (Spokane)

E 9816 Montgomery
Spokane WA 99206
Phone: (509) 928-8353 (800) 769-5902
Fax: (509) 928-6881
www.safety-kleen.com

Thermofluids, Inc.

PO Box 1321
Sumner WA 98390
Phone: (253) 863-3310 (800) 350-7565
Fax: (253) 863-3490
www.thermofluids.com
Statewide

Thermofluids, Inc.

508 N Friske Street
Spokane WA 99202
Phone: (509) 536-6630
www.thermofluids.com
Statewide



BATTERY RECYCLING

Allied Battery Co., Inc.

105 S Brandon
Seattle WA 98108
Phone: (206) 762-5522
Fax: (206) 762-0713

www.alliedbattery.com

East Wenatchee: (509) 886-9033

Renton: (425) 255-6342

Tacoma: (253) 627-5050

Yakima and Union Gap: (509) 248-4874

Emerald Services, Inc.

7343 E Marginal S
Seattle WA 98108
Phone: (206) 832-3000 or (888) 832-3008
Fax: (206) 832-3030

www.emeraldnw.com/

Pacific Northwest

Interstate Batteries

3480 Martin Way
Olympia WA 98506
Phone: (360) 438-2747 (800) 325-2902

www.interstatebatteries.com

Interstate Batteries

727 S 134th Street SW
Everett WA 9804
Phone: (425) 743-7677 (800) 562-3212
Fax: (425) 742-1739

www.interstatebatteries.com

Interstate Batteries

5417 E Trent
Spokane WA 99212
Phone: (509) 534-0676

www.interstatebatteries.com

Interstate Batteries

1202 E Mead Avenue
Union Gap WA 98903
Phone: (509) 457-3640
Fax: (509) 457-1566

www.interstatebatteries.com

Phoenix Environmental

2212 Port of Tacoma Road
Tacoma WA 98421
Phone: (253) 779-8472
(253) 779-8474
(888) 475-0116

Fax: (253) 779-8470

www.phoenixenviro.com

Statewide

Standard Batteries of Moses Lake

400 E Broadway
Moses Lake WA 98837
Phone: (509) 765-8246

www.standbatteries.com

Standard Batteries of Spokane

601 N Napa
Spokane WA 99202
Phone: (509) 534-9030

www.standardbatteries.com

Eastern Washington



USED OIL AND OIL FILTER RECYCLING AND DISPOSAL

Chem-Safe Environmental, Inc.

PO Box 616
Kittitas WA 98934
Phone: (509) 968-3973
Fax: (509) 968-4680
www.chemsafeenv.com
Pacific Northwest

Emerald Services, Inc.

7343 E Marginal S
Seattle WA 98108
Phone: (206) 832-3000 or (888) 832-3008
Fax: (206) 832-3030
www.emeraldnw.com/
Pacific Northwest

ORRCO (Oil Re-refining)

4150 N Suttle Road
Portland OR 97217
Phone: (800) 367-8894 (WA/OR)
Fax: (503) 286-5027
www.orrco.com/
Pacific Northwest

Phoenix Environmental

2212 Port of Tacoma Road
Tacoma WA 98421
Phone: (253) 779-8472 or (888) 475-0116
Fax: (253) 779-8470
www.phoenixenviro.com
Statewide

PSC Environmental Services

625 S 32nd Street
Washougal WA 98671
Phone: (360) 835-8743 (800) 547-2436
Fax: (360) 835-8872
www.pscnow.com
Pacific Northwest

Safety Kleen (Auburn)

3210 C Street NE
Auburn WA 98002
Phone: (253) 939-2022
Fax: (253) 939-7277
www.safety-kleen.com
Statewide

Safety Kleen (Pasco)

814 E Ainsworth
Pasco WA 98301
Phone: (800) 769-5803
Fax: (509) 544-6111
www.safety-kleen.com

Safety Kleen (Spokane)

E 9816 Montgomery
Spokane WA 99206
Phone: (509) 928-8353 (800) 769-5902
Fax: (509) 928-6881
www.safety-kleen.com

Thermofluids, Inc.

PO Box 1321
Sumner WA 98390
Phone: (253) 863-3310 (800) 350-7565
Fax: (253) 863-3490
www.thermofluids.com
Statewide

Thermofluids, Inc.

508 N Friske Street
Spokane WA 99202
Phone: (509) 536-6630
www.thermofluids.com
Statewide

Univar/Chemcare

8201 S 212th Street
Kent WA 98032
Phone: (253) 872-5000 (800) 562-4860
Fax: (503) 222-2714
www.univar/usa.com

Univar/Chemcare

4515 E Wisconsin Avenue
Spokane WA 99212-1325
Phone: (509) 534-0405
www.univar/usa.com



REFRIGERANTS (recycling, recovery, and reclamation equipment and services)**Able Cleanup Technologies**

4117 Nebraska Avenue
Spokane WA 99217
Phone: (509) 466-5255 (866) 466-5255
www.ablecleanup.com
Eastern Washington and Northern Idaho

Chem-Safe Environmental, Inc.

PO Box 616
Kittitas WA 98934
Phone: (509) 968-3973
Fax: (509) 968-4680
www.chemsafeenv.com
Pacific Northwest

Emerald Services, Inc.

7343 E Marginal S
Seattle WA 98108
Phone: (206) 832-3000 or (888) 832-3008
Fax: (206) 832-3030
www.emeraldnw.com/
Pacific Northwest

ORRCO (Oil Re-refining)

4150 N Suttle Road
Portland OR 97217
Phone: (800) 367-8894 (WA/OR)
Fax: (503) 286-5027
www.orrco.com/
Pacific Northwest

PSC Environmental Services

625 S 32nd Street
Washougal WA 98671
Phone: (360) 835-8743 (800) 547-2436
Fax: (360) 835-8872
www.pscnow.com
Pacific Northwest

Total Reclaim

2200 6th Avenue S
Seattle WA 98134
Phone: (206) 343-7443
Fax: (206) 343-7445
www.totalreclaim.com
EPA Certified Refrigerant Reclaimer

Thermal Supply Company

202 W Spruce Street
Yakima WA 98902
Phone: (509) 452-9155
www.thermalsupply.com
*Also in Bellevue, Bellingham, Everett, Fife, Kennewick, Kent,
Seattle, Spokane, Tumwater, and Vancouver*



SOLVENT RECYCLING (equipment and/or services)

Chem-Safe Environmental, Inc.

PO Box 616
Kittitas WA 98934
Phone: (509) 968-3973
Fax: (509) 968-4680
www.chemsafeenv.com/
Pacific Northwest

Emerald Services, Inc.

7343 E Marginal S
Seattle WA 98108
Phone: (206) 832-3000 or (888) 832-3008
Fax: (206) 832-3030
www.emeraldnw.com/
Pacific Northwest

Inland Technology, Inc.

401 E 27th Street
Tacoma WA 98421
Phone (253) 383-1177 (800) 552-3100
Fax: (253) 593-8749
www.inlandtech.com
Statewide

ORRICO (Oil Re-refining)

4150 N Suttle Road
Portland OR 97217
Phone: (800) 367-8894 (WA/OR)
Fax: (503) 286-5027
www.orrco.com/
Pacific Northwest

Phoenix Environmental

2212 Port of Tacoma Road
Tacoma WA 98421
Phone: (253) 779-8472 or (888) 475-0116
Fax: (253) 779-8470
www.phoenixenviro.com
Statewide

PSC Environmental Services

625 S 32nd Street
Washougal WA 98671
Phone: (360) 835-8743 (800) 547-2436
Fax: (360) 835-8872
www.pscnow.com
Pacific Northwest

Safety Kleen (Auburn)

3210 C Street NE
Auburn WA 98002
Phone: (253) 939-2022
Fax: (253) 939-7277
www.safety-kleen.com

Safety Kleen (Pasco)

814 E Ainsworth
Pasco WA 98301
Phone: (800) 769-5803
Fax: (509) 544-6111
www.safety-kleen.com

Safety Kleen (Spokane)

E 9816 Montgomery
Spokane WA 99206
Phone: (509) 928-8353 (800) 769-5902
Fax: (509) 928-6881
www.safety-kleen.com

Thermofluids, Inc.

PO Box 1321
Sumner WA 98390
Phone: (253) 863-3310 (800) 350-7565
Fax: (253) 863-3490
www.thermofluids.com

Thermofluids, Inc.

508 N Friske Street
Spokane WA 99202
Phone: (509) 536-6630
www.thermofluids.com

Univar/Chemcare

8201 S 212th Street
Kent WA 98032
Phone: (253) 872-5000 (800) 562-4860
Fax: (503) 222-2714
www.univar/usa.com



Univar/Chemcare

4515 E Wisconsin Avenue
Spokane WA 99212-1325
Phone: (509) 534-0405
www.univar/usa.com

SPILL ASSISTANCE & CLEANUP MATERIALS (emergency spill response and equipment)**Advanced Environmental Solutions, Inc.**

8643 S 212th
Kent WA 98031
Phone: (800) 275-3549
Fax: (253) 872-0260
www.advenvironmental.com

Big Sky Industrial

9711 W Euclid Road
Spokane WA 99224
Phone: (509) 624-4949
Fax: (509) 624-0099
www.bigskyind.com

Chem-Safe Environmental, Inc.

PO Box 616
Kittitas WA 98934
Phone: (509) 968-3973
Fax: (509) 968-4680
www.chemsafeenv.com
Pacific Northwest

Emerald Services, Inc.

7343 E Marginal S
Seattle WA 98108
Phone: (206) 832-3000 or (888) 832-3008
Fax: (206) 832-3030
www.emeraldnw.com
Pacific Northwest

NRC Environmental Services

20500 Richmond Beach Drive NW
Seattle WA 98177
Phone (206) 546-7150 (800) 337-7455
Fax: (206) 546-7170
www.nrces.com
Washington, Oregon, California

ORRCO (Oil Re-refining)

4150 N Suttle Road
Portland OR 97217
Phone: (800) 367-8894 (WA/OR)
Fax: (503) 286-5027
www.orrco.com
Pacific Northwest

Phoenix Environmental

2212 Port of Tacoma Road
Tacoma WA 98421
Phone: (253) 779-8472 or (888) 475-0116
Fax: (253) 779-8470
www.phoenixenviro.com

PSC Environmental Services

625 S 32nd Street
Washougal WA 98671
Phone: (360) 835-8743 (800) 547-2436
Fax: (360) 835-8872
www.pscnow.com
Pacific Northwest

Safety & Supply

5510 Marginal Way S
Seattle WA 98134
Phone: (206) 762-8500 (800) 525-7233
Fax: (206) 762-2939
www.safetyandsupply.com
Statewide

Safety & Supply

15310 E Marietta Avenue #5
Spokane WA 99216
Phone: (509) 534-0661
Fax: (509) 534-0991
www.safetyandsupply.com
Statewide

**Safety Kleen (Auburn)**

3210 C Street NE
Auburn WA 98002
Phone: (253) 939-2022
Fax: (253) 939-7277
www.safety-kleen.com
Statewide

Safety Kleen (Pasco)

814 E Ainsworth
Pasco WA 98301
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Fax: (509) 544-6111
www.safety-kleen.com
Statewide

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Spokane WA 99206
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Fax: (509) 928-6881
www.safety-kleen.com

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Fax: (253) 863-3490
www.thermofluids.com
Statewide

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508 N Friske Street
Spokane WA 99202
Phone: (509) 536-6630
www.thermofluids.com
Statewide

Univar/Chemcare

8201 S 212th Street
Kent WA 98032
Phone: (253) 872-5000 (800) 562-4860
Fax: (503) 222-2714
www.univar/usa.com

Univar/Chemcare

4515 E Wisconsin Avenue
Spokane WA 99212-1325
Phone: (509) 534-0405
www.univar/usa.com

TIRE DISPOSAL OR RECYCLING**L & S Tires (Lakewood)**

9215 39th Avenue SW
Lakewood WA 98499
Phone: (253) 588-0717
Fax: (253) 588-0809
www.lstires.com
Statewide

L & S Tires (Spokane)

8119 N Regal Street
Spokane WA 99217
Phone: (509) 464-0976
www.lstires.com
Statewide

Tire Disposal, Inc.

14377 S Macksburg Road
Molalla OR 97038
Phone: (503) 829-8322
www.usedtires@molalla.net

*Need to have 800 or more tires for pick up in Washington State.
Call first, amount may be negotiable if they are going to be in the
area anyway.*

**Additional businesses with Washington State Waste
Tire Carrier License can be found at:**

www.ecy.wa.gov/programs/swfa/facilities/tire.html



TRANSPORTATION (Hazardous Waste) (Hazardous waste transporters)**Chem-Safe Environmental, Inc.**

PO Box 616
Kittitas WA 98934
Phone: (509) 968-3973
Fax: (509) 968-4680
www.chemsafeenv.com
Pacific Northwest

Emerald Services, Inc.

7343 E Marginal S
Seattle WA 98108
Phone: (206) 832-3000 or (888) 832-3008
Fax: (206) 832-3030
www.emeraldnw.com
Pacific Northwest

ORRCO (Oil Re-refining)

4150 N Suttle Road
Portland OR 97217
Phone: (800) 367-8894 (WA/OR)
Fax: (503) 286-5027
www.orrco.com
Pacific Northwest

PSC Environmental Services

625 S 32nd Street
Washougal WA 98671
Phone: (360) 835-8743 (800) 547-2436
Fax: (360) 835-8872
www.pscnow.com
Pacific Northwest

Phoenix Environmental

2212 Port of Tacoma Road
Tacoma WA 98421
Phone: (253) 779-8472 or (888) 475-0116
Fax: (253) 779-8470
www.phoenixenviro.com
Statewide

Safety Kleen (Auburn)

3210 C Street NE
Auburn WA 98002
Phone: (253) 939-2022
Fax: (253) 939-7277
www.safety-kleen.com
Statewide

Safety Kleen (Pasco)

814 E Ainsworth
Pasco WA 98301
Phone: (800) 769-5803
Fax: (509) 544-6111
www.safety-kleen.com
Statewide

Safety Kleen (Spokane)

E 9816 Montgomery
Spokane WA 99206
Phone: (509) 928-8353 (800) 769-5902
Fax: (509) 928-6881
www.safety-kleen.com

Thermofluids, Inc.

PO Box 1321
Sumner WA 98390
Phone: (253) 863-3310 (800) 350-7565
Fax: (253) 863-3490
www.thermofluids.com
Statewide

Thermofluids, Inc.

508 N Friske Street
Spokane WA 99202
Phone: (509) 536-6630
www.thermofluids.com
http://Statewide

Univar/Chemcare

8201 S 212th Street
Kent WA 98032
Phone: (253) 872-5000 (800) 562-4860
Fax: (503) 222-2714
www.univar/usa.com

Univar/Chemcare

4515 E Wisconsin Avenue
Spokane WA 99212-1325
Phone: (509) 534-0405
www.univar/usa.com



COUNTY SPECIALISTS FOR SOLID AND HAZARDOUS WASTE MANAGEMENT

COUNTY SPECIALISTS FOR SOLID AND HAZARDOUS WASTE MANAGEMENT

ADAMS

Dixie Fultz
Hazardous and Solid Waste Coordinator
425 East Main Street
Othello WA 99344
Phone: (509) 488-9441 or (509) 488-6171
Fax: (509) 488-4155
dixief@co.adams.wa.us

ASOTIN

Steve Becker/Matt Lynch
Asotin County Public Works Department
2901 Sixth Avenue
Clarkston WA 99403
Phone: (509) 758-9230
acrl@clarkston.com

BENTON

Donna Holmes
Benton County Solid Waste
620 Market Street (PO Box 110)
Prosser WA 99350-0110
Phone: (509) 786-5611 (Ext. 5682)
donna.holmes@co.benton.wa.us

CHELAN

Brenda Harn
Chelan County Public Works
316 Washington Street, #402
Wenatchee WA 98801-9655
Phone: (509) 667-6415
Brenda.s.harn@co.chelan.wa.us

CLALLAM

Bob Martin
Clallam County Public Works
223 E 4th Street #6
Port Angeles WA 98362
Phone: (360) 417-2305
bmartin@co.clallam.wa.us

CLARK

Jim Mansfield
Clark County Public Works
PO Box 9810
Vancouver WA 98666
Phone: (360) 397-6118 (Ext. 4016)
Fax: (360) 397-2062
jim.mansfield@clark.wa.gov

COLUMBIA

Andrew Woods
Columbia County Public Works
415 Guernsey (PO Box 5)
Dayton WA 99238
Phone: (509) 382-2534
ich@co.columbia.wa.us

COWLITZ

Don Olson
Cowlitz County Public Works
1600 13th Avenue South
Kelso WA 98626
Phone: (360) 577-3125
Fax: (360) 636-9845
olsond@co.cowlitz.wa.us

DOUGLAS

Ron Draggoo or Christine Johnson
Solid and Hazardous Waste
140 19th Street NW #B
East Wenatchee WA 98802
Phone: (509) 886-0899
Fax: (509) 884-5350
rdragoo@co.douglas.wa.us
cjohnson@co.douglas.wa.us

FERRY

Kristy Cromwell
Ferry County Public Works
350 E Delaware #8
Republic WA 99166
Phone: (509) 775-5217
swcoord@co.ferry.wa.us



FRANKLIN

Sally McKenzie
Franklin County Public Works
3416 Stearman Avenue
Pasco WA 99301-3776
Phone: (509) 545-3514
smckenzie@co.franklin.wa.us

GARFIELD

Lillian Heytvelt
Garfield County Public Works
PO Box 160
Pomeroy WA 99347
Phone: (509) 843-1301 or (509) 843-3710
Fax: (509) 843-1412

GRANT

Joan Melvin, Solid Waste Program Coordinator
Grant County Public Works
124 Enterprise Street SE
Ephrata WA 98823
Phone: (509) 754-6082
joanmelvin@co.grant.wa.us

GRAYS HARBOR

Mark Cox
Grays Harbor County Public Utility
100 W Broadway #31
Montesano WA 98563
Phone: (360) 249-4222
Fax: (360) 249-3203
mcox@co.grays-harbor.wa.us

ISLAND

Jerry Mingo
Island County Solid Waste Department
PO Box 5000
Coupeville WA 98239-5000
Phone: (360) 679-7386
Fax: (360) 687-4550
jerrym@co.island.wa.us
www.recycle@whidbey.com

JEFFERSON

Dennis Bates
Jefferson County Public Works
623 Sheridan Street
Port Townsend WA 98368
Phone: (360) 385-0404 or (360) 385-9160
Fax: (360) 379-2752
dbates@co.jefferson.wa.us

KING

Laurel Tomchick
King County Hazardous Waste Program
130 Nickerson Street #100
Seattle WA 98109-1658
Phone: (206) 263-3063
Fax: (206) 263-3070
Laurel.tomchick@kingcounty.gov

KING

Rey Verduzco
King County Hazardous Waste Program
130 Nickerson Street #100
Seattle WA 98109-4658
Phone: (206) 263-8899
Fax: (206) 689-3070
Wasteline.business@kingcounty.gov

KITSAP

Rick Gilbert
Kitsap County Public Works
614 Division Street MS-27
Port Orchard WA 98366-4614
Phone: (360) 337-5777
Fax: (360) 337-4867
rgilbert@co.kitsap.wa.us

KITTITAS

Reno Allphin
Kittitas County Solid Waste
925 Industrial Way
Ellensburg WA 98926
Phone: (509) 962-7542
Fax: (509) 962-7087
Reno.allphin@kittitas.wa.us

**KLICKITAT**

John Longfellow
Klickitat County Solid Waste Department
127 W Court Street
Goldendale WA 98620
Phone: (509) 773-4448
Fax: (509) 773-4521
johnlf@co.klickitat.wa.us

LEWIS

Mark Bronson
Moderate Waste Programs Coordinator
Lewis County Solid Waste Utility
1411 S Tower Avenue (PO Box 180)
Centralia WA 98531
Phone: (360) 740-1451
Fax: (360) 330-7805
m.bronson@lewiscounty.wa.us

LINCOLN

Roy Wintersteen
Lincoln County Public Works
27234 State Route 25N
Davenport WA 99122
Phone: (509) 725-7041
Fax: (509) 725-4467
rwintersteen@co.lincoln.wa.us

MASON

Mason County DCD Utilities
PO Box 578
Shelton WA 98584-0578
Phone: (360) 427-7772
Fax: (360) 427-7798
tommom@co.mason.wa.us

OKANOGAN

Sue Christopher
Okanogan County Public Works
1234 A Second Avenue S
Okanogan WA 98840
Phone: (509) 422-2602
schristopher@co.okanogan.wa.us

PACIFIC

Megan McNelly
Pacific County Community Development
PO Box 68
South Bend WA 98586-0068
Phone: (360) 875-9356
Fax: (360) 875-9304
mmcnelly@co.pacific.wa.us

PIERCE

John Sherman
Environmental Health Division MS 1047
Tacoma-Pierce County Health Department
3629 S D Street
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OTHER RESOURCES

Automotive Recyclers of Washington Association

Independent Business Association
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ECOSS

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ENVIROSTARS Business Recognition Program

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YOU AUTO RECYCLE PROJECT

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Internet Sites and Hotlines

American Chemical Society (Client Services)	(800) 631-1884
Asbestos Hotline	(800) 368-5888
Chemical Transportation Emergencies	(800) 424-9300
Department of Ecology	Ecology's Toll-Free Phone Lines
Ecology's Hazardous Substances Information Line	(800) 633-7585
Ecology's Hazardous Waste Services Directory	http://apps.ecy.wa.gov/hwsd/default.htm
Environmental Protection Agency (EPA)	www.epa.gov
EPA Hotlines and Clearinghouses	www.epa.gov/epahome/hotline.htm
EPA Statutory and Regulatory Enforcement Publications	www.epa.gov/compliance/resources/publications/civil/programs/index.html
EPA Region 10 Public Information Center	(800) 424-4372
EPA Region 10 Global Recycling Network	www.grn.com/grn/
Federal Information Center	(800) 688-9889
GreenLink Auto Compliance Information	www.ccar-greenlink.org
Industrial Materials Exchange	(888) 879-4639
King County Hazardous Waste Directory	www.govlink.org/hazwaste/business/wastedirectory
Lead Exposure (specific inquiries)	(800) 262-5323
VendInfo National Database of P2 products and services	http://epa.gov/vendors/index.html
National Response Center Oil/chemical spill reporting	(800) 424-8802 (24-hours)
NIOSH – Occupational Safety and Health	(800) 232-4636
RCRA (EPA)	(800) 424-9346
Recycling (Ecology)	(800) 732-9253
Washington State Emergency Reporting	(800) 258-5990 (24-hours)
Waste Treatment Technology	www.epa.gov/owm/mtb/index.htm
Water Quality & Wastewater Treatment (Ecology)	(800) 633-6193
Worker Right-to-Know (L&I)	(800) 423-7233

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Publications of Interest

Number	Title
91-12	<i>Step by Step: Subject Index for Hazardous Waste Generators</i>
91-12a	<i>Step by Step: Hazardous Waste – More Common Than You Think</i>
91-12b	<i>Step by Step: Generator Checklist</i>
91-12c	<i>Step by Step: Contacts</i>
91-12i	<i>Step by Step: Step 1 – Identify Your Waste and Generator Requirements</i>
91-12j	<i>Step by Step: Step 2 – Obtain a RCRA Site Identification Number</i>
91-12k	<i>Step by Step: Step 3 – Report Annually</i>
91-12l	<i>Step by Step: Step 4 – Perform Preventive Maintenance</i>
91-12m	<i>Step by Step: Step 5 - Properly Accumulate Hazardous Waste</i>
91-12n	<i>Step by Step: Step 6 - Plan for Emergencies</i>
91-12o	<i>Step by Step: Step 7 - Use Proper Containers and Manage Them Correctly</i>
91-12p	<i>Step by Step: Step 8 - Arrange for Proper Transportation and Disposal</i>
91-12q	<i>Step by Step: Step 9 - Manifest Shipments of Hazardous Waste</i>
91-12r	<i>Step by Step: Step 10 - Keep Records of Hazardous Waste Activity</i>
09-04-015	<i>Shop Guide for Dangerous Waste Management</i>
92-BR-16	<i>Managing Hazardous Waste – A Guide for Auto Body Shops</i>
92-91	<i>Dangerous Waste Regulations</i>
92-119	<i>Focus on: Spill Reporting Under the Dangerous Waste Regulations</i>
94-146	<i>Vehicle Recyclers: A Guide for Implementing NPDES Permit Requirements</i>
96-416	<i>Usted Debe Reciclar (Manual de Reciclar Automoviles)</i>
96-431	<i>Safe Handling of Empty Containers</i>
97-1165 CP	<i>Emergency Spill Response in Washington State</i>
98-1252	<i>A Guide for Hazardous Waste Generators</i>
02-04-006	<i>Used Oil Facts</i>

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