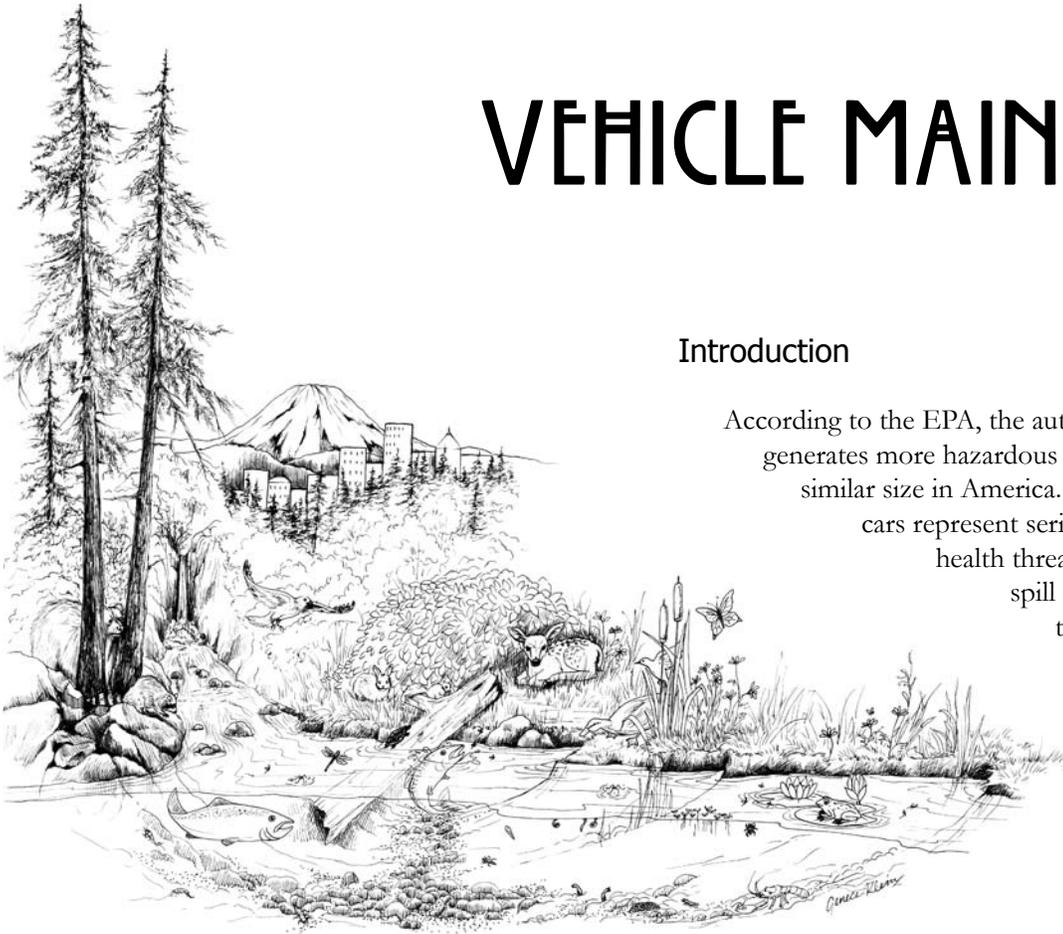


# VEHICLE MAINTENANCE



## Introduction

According to the EPA, the automotive repair industry generates more hazardous waste than other industries of similar size in America. Most of the fluids used in cars represent serious human and environmental health threats and even a small leak or spill can be a problem. Rain washes these pollutants off a street or driveway, into a road ditch, down a storm drain, and directly into our streams and rivers. Pollution can also infiltrate into the soil and eventually contaminate groundwater which most people in Clark County rely on for drinking water.

## Quick Tips

Regularly check vehicles for leaks. Try placing a clean sheet of cardboard under the car overnight and check for any leaks the next day. Have leaks repaired immediately. This not only will help a vehicle last longer, it also reduces the impact on the environment. Keep a spill kit handy so you can immediately clean up and dispose of any spills (see box at right).

When filling your fuel tank, prevent any fuel from dripping onto the ground or your vehicle. Fuel persists for a long time and can cause

serious damage to the environment; it may even damage a car's finish. Never top off a vehicle's fuel tank since this increases the likelihood of a spill. When the pump stops, push the nozzle into the tank and slowly back it out, allowing any air to escape without spilling or splashing. If you do spill, notify the station attendant immediately.

Recommended maintenance intervals vary dramatically between different models and manufacturers. Check the owner's manual and service vehicles at appropriate intervals. Ask your mechanic to check for leaks or other problems as a part of your maintenance regime. Paying careful attention to your car will make it last longer and reduce your impact on our streams and rivers.

WATERSHED



STEWARDS

## SPILL KIT

Keep kitty litter or sawdust and some old rags near your car to soak up spills. Double bag and place in the trash after use.



## Car & Engine Cleaning

Using commercial car washes recycles dirty water to the sanitary sewer instead of down storm drains and into our creeks. When washing a vehicle at home, avoid washing it in the driveway. In areas with storm drains, the wash water will flow into the drain and then into local streams. Instead, try washing vehicles on the lawn where wash water will soak into the ground and the soap will not hurt your lawn. Use a nozzle to save water!

Consider using non-industrial cleaners, such as baking soda for carpet stains. Clean chrome with a paste of baking soda and water by rubbing the paste on the chrome and rinsing with warm water. Windows can be cleaned with a mixture of white vinegar and warm water in equal parts.



Never attempt to clean vehicle engines at home. All degreasing products marketed for engine cleaning require hosing the product off your engine. This grease and road grime, as well as the cleaning product, can flow into a storm drain or into the ground. When having a professional clean your engine, ensure they have a recovery system installed in their shop to collect the runoff for proper disposal.

### Why Use a Professional Mechanic?

Some of us grew up as do-it-yourself backyard mechanics in an era of simple engines and limited knowledge about the impacts of pollution. Professional mechanics operated in much the same way as the backyard type, often dumping oil or solvents onto the ground. A modern automotive repair shop looks quite different. Not only do these shops house computers to diagnose and maintain modern vehicles, most shops have procedures and equipment handle spills promptly and efficiently.

Professional shops often utilize closed transfer systems for changing fluids and flushing cooling systems. As mechanics pump new fluids into a vehicle, old fluid is forced out and into a recycling container. These systems minimize spills and provide a much cleaner product to be recycled. In most cases, using a professional mechanic will reduce the risk of pollution and maintain the warranty on a newer vehicle.

## WHERE TO TAKE HAZARDOUS WASTE

Central Transfer and Recycling  
11034 NE 117th Ave.  
Vancouver  
Saturday & Sunday, 8 a.m. - 4 p.m.  
(360) 256-8482

West Van Materials Recovery Center  
6601 NW Old Lower River Rd.  
Vancouver  
Friday & Saturday, 8 a.m. - 4 p.m.  
(360) 737-1727

### Engine Oil

A single gallon of oil can pollute a million gallons of water. The sheen of oil blocks photosynthesis and slows oxygen production which stresses aquatic organisms. Some of the compounds in oil which dissolve are carcinogens and/or mutagens.

A general guideline for changing vehicle engine oil is every 3000 miles, however, check your owner's manual for the suggested interval for a particular vehicle. Oil changes generate 760 million gallons of used oil annually and EPA estimates 200 million gallons of this oil gets disposed of improperly. Recycled oil can be re-refined and reused in cars, or burned for energy at industrial



plants. Clark County uses recycled oil in most county vehicles. Ask for recycled oil the next time you get an oil change. Increased consumer demand encourages businesses to both recycle and offer recycled products and is just one more way to help keep oil and other pollutants out of our water.

When changing oil at home, carefully drain the used oil to avoid spills. Clark County residents who have access to curbside recycling can transfer the used oil into a rinsed one-gallon plastic milk jug with a tight fitting lid and place it alongside their regular recycling containers. Do not mix the oil with other fluids! Other disposal options include bringing the used oil to a transfer station or to one of many auto parts retailers. (See Clark County's Recycling Directory for locations <http://www.clark.wa.gov/recycle/documents/Publications/DirectoryforWeb.pdf> ) If you recycle just two gallons of used oil it can generate enough electricity to run the average household for almost 24 hours (<http://www.recycleoil.org/>).



## Batteries

Batteries, especially lead-acid batteries used in most cars, contain several toxic materials. Fortunately, 90% of car batteries used in America get recycled. To recycle a battery, take the battery to the local transfer station or one of the many auto parts retailers who offer recycling services. Keep the battery upright to avoid spills while transporting. When handling batteries and cleaning up spills, wear gloves to protect against battery acid. Neutralize spills using lime or baking soda, and then clean using old rags. Double bag the rags and dispose of them in the trash.

## Anti-Freeze

Most antifreeze contains ethylene glycol, a substance toxic to humans, pets, and the environment. Its sweet smell and taste attracts children and pets, often with disastrous results. The American Humane Society estimates antifreeze poisons 10,000 pets annually. According to the EPA, waste antifreeze contains heavy metals such as lead, cadmium, and chromium. If allowed into our streams, heavy metals can pollute the water for years to come.

Currently, Americans recycle only 12% of their waste antifreeze. Clark County residents with curbside recycling can put antifreeze in a one-gallon milk jug and place it alongside their other recyclables. For those without curbside recycling, bring the containers to the closest transfer station.

## Resources

### Information:

Recycling collection information: <http://www.clark.wa.gov/recycle/recycles/index.html>

Recycling used oil filters: <http://www.clark.wa.gov/recycle/documents/Publications/web%20page%20oil%20filter.pdf>

Locations to purchase re-refined oil: <http://www.clark.wa.gov/recycle/A-Z/Materials/motoilre.html>

Clark County Solid Waste: <http://www.clark.wa.gov/recycle>



## Publications:

*Clark County Recycling Directory* contains locations and information on recycling automotive batteries, motor oil, automotive fluids, tires, and vehicles. <http://www.clark.wa.gov/recycle/documents/Publications/DirectoryforWeb.pdf>

*In the Home and Garage – Safer Alternatives* provides information on alternative products and ideas to reduce the environmental impact of antifreeze, batteries, automotive cleaners, degreasers, motor oil, windshield wiper fluid, and oil spots on garage floor. <http://www.clark.wa.gov/recycle/documents/Publications/InHomeGarageWeb.pdf>

Dispose of Household Hazardous Wastes: <http://www.clark.wa.gov/recycle/waste/disposal.html>

Clark County web page for clean water fact sheets: <http://www.clark.wa.gov/water-resources/education/facts.html>

Environmental Protection Agency web page on hazardous wastes: <http://www.epa.gov/epaoswer/osw/topics.htm>

National Oceanic and Atmospheric Administration: <http://www.seco.noaa.gov/ENV/Factsheets.htm>

Humane Society of the United States: [http://www.hsus.org/pets/pet\\_care/antifreeze.html](http://www.hsus.org/pets/pet_care/antifreeze.html)

Oregon Department of Environmental Quality: <http://www.deq.state.or.us/pubs/factsheets.htm>

Regional Coalition for Clean Rivers and Streams: <http://www.cleanriversandstreams.org/index.html>

Department of Ecology Factsheet, *Protect Your Car and The Environment* <http://www.ecy.wa.gov/pubs/94110.pdf>

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*Going Green - Vehicle Maintenance*

