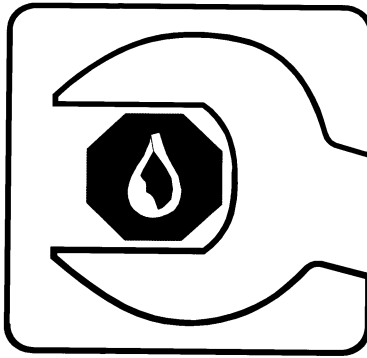


# AUTO SHOPS

## *Preventing Water* **Pollution**



### WATER POLLUTION PREVENTION TIPS FOR AUTO REPAIR SHOPS



Prepared by Oregon Department  
of Environmental Quality,



Oregon Association  
of Clean Water Agencies

and your local sewerage agency

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## What's the Problem?

In the 50s and 60s, we used to think of pollution prevention as keeping polluting substances out of the air and water. We built sewage treatment plants and put scrubbers on smokestacks.

Today, pollution prevention means much more. It means looking at every action to determine:

- how we can use fewer and less harmful substances;
- how we can create fewer waste products;
- how we can reuse or recycle substances; and
- what disposal alternatives are available to keep these substances out of the sewer systems, landfills and the air.

Many business activities have the potential to pollute air, water or soil. This booklet focuses on ways to prevent water pollution by conscious reduction, reuse or recycling of chemicals and hazardous substances. Information about other types of pollution prevention is available from the Department of Environmental Quality and your local recycler or garbage hauler. Many industry groups also offer pollution prevention tips.

### Why Is Water Pollution Prevention Important?

It's in everyone's best interest to reduce the amount of chemicals and hazardous substances that flow into the sewer system. It's good for the earth, it's good for our pocketbooks and it's good for our communities.

**Sanitary Sewers.** The fundamental reason we have to be careful about what goes into sanitary sewers is that *even the best sewage treatment facility has limitations*. Oregon's sewage treatment systems are designed primarily to handle sanitary sewage. Bacteria provide "treatment" by breaking down organic matter in the water. We need to remember that:

- Treatment facilities can't treat many chemicals, so the substances may pass untouched into the environment. This threatens fish, wildlife and vegetation, as well as people using polluted water sources for drinking or recreation.
- Some chemicals can destroy the bacteria in the treatment process — leaving the facility useless. This not only endangers the environment — it means a tremendous expense to community ratepayers.

## What's the Problem?

- If the facility receives too much of one type of waste at a time, it will not be able to process the organic matter. Again, this creates environmental hazards, and the community may need to invest in greater treatment capacity.
- Chemicals in the sewage treatment system put system employees at risk. Exposure to chemicals can cause health problems, and some substances may cause explosions and fires.

**Storm Sewers.** In most Oregon communities, storm drains flow directly into rivers and streams, without passing through a treatment plant. Anything in the storm drain — from leaves to motor oil — can contribute to water pollution. In a few Oregon cities, storm drains feed into the sewage treatment plant. In these cases, pollutants in the storm water can threaten the plant's ability to effectively treat wastewater.

### How Can Pollution Prevention Help Businesses' Bottom Line?

Many businesses find that taking steps to prevent pollution actually saves money.

- Cutting back on chemical use can reduce material costs as well as waste disposal fees.
- Reducing water use means less water down the drain — and lower sewer fees.
- Reducing chemical use can create a safer workplace, with fewer accidents and lower insurance costs.
- Ultimately, we will all pay if we need to build more treatment system capacity. We all save by keeping materials out of the sewer system.



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*Notes:*

## Good Housekeeping

### ✓ **Be conscious of chemical use.**

Even the least toxic chemicals can be harmful if used incorrectly. Chemicals can be dangerous to employees and customers, as well as to the environment. Don't be careless about any aspect of chemicals – from initial use to disposal.

### ✓ **Reduce chemical use whenever possible.**

Many businesses have found that they have saved money by adopting new procedures that require less chemical use.

Whenever possible – substitute. Many manufacturers are creating new products with less environmental impact. Avoid taking free product samples unless you are certain what's in them.

### ✓ **Use good housekeeping practices.**

- Sweep, vacuum and mop floors rather than hosing them down, and don't leave sweepings outside where rain can wash them into storm drains. Do not send wash water down storm drains.
- Clean up spills immediately.
- Sweep parking lots in the fall, before the rains come. Rubber from tires and other products from automobiles contribute to water pollution.

### ✓ **Store chemicals and liquids sensibly.**

- Store chemicals so they can be found and identified easily.

- Follow manufacturers' directions for all product storage.
- Consider requirements for temperature, air circulation, length of time and other storage factors.
- Make sure products are sealed properly and stored safely.
- Buy smaller quantities, more frequently. Avoid purchasing products that won't be used.
- Provide secondary containment for all liquids. Place original containers inside a pan, jar or bottle capable of capturing all the contents in case of a leak. Place large containers on spill control pallets or totes.

### ✓ **Spill prevention and control.**

- Use chemicals only in designated areas where spills can be contained.
- Avoid moving chemicals long distances from storage to use.
- When cleaning up spills, remove liquids with rags and sweep the floor with a dry absorbent; pour mop water into an oil/water separator before sending it down the drain. Keep absorbent materials on hand to handle different types of substances. Properly dispose of rags and absorbents.

### ✓ **Train employees.**

All employees – whether or not they work with chemicals – should receive training about the products in use, storage requirements, spill procedures and potential hazards.

## *Pollution Prevention Practices for Auto Shops*

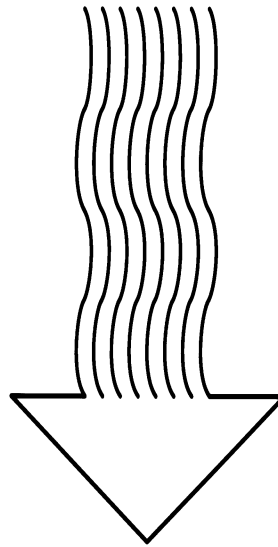
**N**ext to our physicians and our tv repair folks, Americans revere their auto mechanics above all service providers. Service stations and auto repair shops are essential to the American way of life.

But because of the nature of these businesses, they also can contribute significant amounts of water pollution to local rivers and streams. Automotive products like motor oil and solvents endanger water quality and cannot be treated by sewage treatment facilities. Material that collects in parking lots — leaves, mud, rubber from tires, leaked oil— add to pollution problems when collected in rain water or hosed into storm drains.

Oregonians have responded to environmental concerns by keeping cars tuned up and by recycling motor oil. In addition, the automotive industry has been working aggressively to reduce its impact on the environment by promoting recycling and reuse of chemicals and by promoting other actions that keep toxins out of the environment.

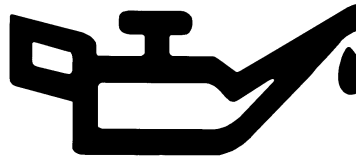
Yet the sheer number of cars on the roads today and those receiving repairs and maintenance represents a threat to clean water, so that each person working around automobiles must be doubly cautious to keep pollutants out of the storm and sanitary sewers.

The following pages outline steps that can help auto repair shops work more efficiently, reduce costs and contribute to improved water quality.



## Steps to Pollution Prevention

1. Know where your waste water goes — does the drain lead to a sanitary sewer and a wastewater treatment facility, or does the water flow directly to a natural body of water? In either case, you will want to reduce pollutants, but if you are sending wastewater directly to a river, stream or lake, you will want to take extra precautions. Direct discharge of wastewater without a permit may be illegal.
2. Keep vehicle fluids and other hazardous wastes out of the sewer system. Store them in well-marked containers for recycling or for disposal at an appropriate facility. Be sure not to include them with your garbage unless your hauler recycles them.
3. Prevent spills, leaks and drips. Keep oil, grease, solvents and other chemicals out of storm and sanitary drains.
  - Use solvents only over self-contained sinks or tanks. Don't allow solvents to drip onto the floor.
  - Prevent leaks in solvent tanks; inspect tanks for leaks and repair any immediately.
4. Recycle wash water from engine and parts cleaning or exterior washing as much as possible.
5. Do not allow wastewater from steam-cleaning to flow into storm drains. It must be diverted to the sanitary sewer system with proper pretreatment.
6. Do you need floor drains? If you are not washing parts or vehicles, or have other uses for the drain, consider plugging the shop floor sewer drains, thereby preventing discharges to sewers.



## Steps to Pollution Prevention

- 7.** Recycle motor oil, batteries, solvents, paints, oil filters, antifreeze, and lubricants. Be aware of any materials you use that are considered hazardous substances, and follow all regulations related to their storage, use or disposal.
- 8.** Keep dust from sanding and Bondo out of the sewers by:
  - Sweeping up, not hosing down, dust;
  - Allowing debris from wet sanding to dry out overnight before sweeping it up;
  - Purchasing sanders with an attached vacuum to reduce clean-up time;
  - Disposing non-hazardous dust in the garbage.
- 9.** Use only as much paint and thinner as necessary. Calculate the amount of paint necessary to cover a surface and use the best sized spray cup for the job. When you clean the spray gun, don't release the waste water to either the sanitary or storm sewer systems. Use an enclosed "gun washer."
- 10.** Keep batteries and chemical containers dry and off the ground to prevent leaks into storm water.
- 11.** Drain and collect fluids from stored vehicles that are being dismantled. Reuse or recycle collected fluids.
- 12.** Inspect, maintain and clean all pretreatment equipment regularly. Separators and grease traps should be cleaned at least every three months.
- 13.** Dry-sweep areas around fuel-dispensing islands.
- 14.** After pollution prevention techniques, the best way to assure that pollutants stay out of the sewer system is to invest in a self-contained wastewater recycling system. Ultimately, this cuts down water and sewer bills and guarantees that businesses are not contributing to water quality



**For More Information...**

A great deal of detailed information exists on ways auto repair businesses can reduce their contribution to water pollution. Some sources are:

- Center for Environmental Research and Information  
26 W. Martin Luther King, Jr., Dr., Cincinnati, Ohio 45268  
513/569-7562
- For copies of:  
EPA Guide to Pollution Prevention,  
Automotive Repair Industry (EPA #6257-91013);  
Automotive Refinishing Industry (EPA #6257-91016)
- Oregon DEQ, 503/229-5630,  
Available toll-free in Oregon at 1-800-452-4011

<b>ROUTING LIST</b>	
Employee's Initials	Date

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**For more information,  
contact your local  
sewerage agency at...**