



The National Park Service EnviroFact Sheet

Environmental Management Program
Mailing/E-mail Address
Washington, DC XXXXX
(202) XXX-XXXX

Managing Antifreeze/Coolant Waste (SW-1)

DRAFT

July 2007

Antifreeze is used for freeze and overheating protection and heat transfer for motor vehicles and heavy equipment, and in buildings. Ethylene glycol antifreeze is toxic in even small amounts. Just three ounces of undiluted ethylene glycol can be lethal if swallowed. Animals are especially attracted to antifreeze because it tastes sweet. Propylene glycol antifreeze is clear and odorless; it is "generally recognized as safe" for use in food.

Unused antifreeze is not hazardous by EPA standards. However, after going through a radiator it may become contaminated with gasoline, oils, and metals.

Many of these contaminants, particularly metals and benzene (from gasoline), are toxic and may cause the used antifreeze to be considered a hazardous waste. Some of the metals commonly found in used antifreeze include lead, mercury, cadmium, chromium, copper, and zinc.

Antifreeze must be carefully managed. Improper disposal can lead to serious health and environmental problems. Disposal of used antifreeze into a river or a stream via storm sewers, road ditches, or direct discharge can cause serious water quality problems.

NPS recommends recycling as the preferred method of managing used antifreeze.

FOR MORE INFO ...

"Used Antifreeze Management," Oregon DEQ:
<http://www.deq.state.or.us/lq/pubs/docs/hw/Policy/1997-PO-004.pdf>

NPS EnviroFact Sheets on Hazardous Waste Management (HW-1 thru -5)



APPLICABLE REGULATIONS

EPA's hazardous waste regulations set limits for certain metals and organic compounds in wastes. When these limits are exceeded, the waste is considered hazardous and must be appropriately managed and disposed of according to the Resource Conservation and Recovery Act (RCRA) regulations, and applicable state and local regulations.

DETERMINING IF IT IS HAZARDOUS

Anyone who drains used antifreeze (propylene glycol or ethylene glycol) from radiators is required to determine if that used antifreeze is hazardous. To do so, you must **either**:

- Have the used antifreeze tested using the Toxicity Characteristic Leachate Procedure (TCLP) to determine the concentration of specific metals and organics; **or**
- Have knowledge of the characteristic of the used antifreeze, such as knowing the types of materials it has been in contact with or if it has been mixed with other types of wastes. If this is the method chosen, you must document how you arrived at your conclusion.

Individual states have the right to regulate wastes, such as used antifreeze, more stringently. State regulations must also be consulted to determine waste handling requirements.

STORAGE AND HANDLING

Antifreeze (new or used) should never be dumped on the ground or discharged into storm drains, septic systems, or streams. Small amounts of antifreeze spilled on a floor should be dried with sorbents and put in the trash.

Store new and used antifreeze in labeled, sealed containers so that they are less likely to be spilled or used for anything other than their intended purpose. Keep used antifreeze in a covered container and out of the way of animals, who are often attracted to its sweet flavor.

Even though there are "safe" alternatives, do not assume that one type of waste antifreeze/coolant is less of a health hazard than another.

Above all, **never mix used antifreeze with other fluids such as fuels, oils, hydraulic fluids, or solvents.**

DISPOSAL

If your used antifreeze **is** a hazardous waste, the available waste management options include on-site and off-site recycling, and treatment or disposal by a waste management company. If you determine that your used antifreeze is **not** hazardous waste, the available management options also include on-site and off-site recycling.

Whether hazardous or non-hazardous, the NPS recommends that all park units recycle their waste antifreeze.

POLLUTION PREVENTION

Recycling

Recycling helps keep antifreeze from being improperly dumped into waterways or on land. Recycling antifreeze also saves money because less new product will need to be purchased, disposal costs are avoided, and cleanup and liability costs for improper disposal are avoided.

Source Reduction

- Consider the **use of safer alternatives** such as propylene glycol.
- **Test** for effectiveness and change antifreeze only when necessary.
- Properly **train** anyone who uses new or waste antifreeze about proper handling.



ANTIFREEZE MANAGEMENT COMPLIANCE CHECKLIST

Checklist Item	Notes
1. Determine whether your state has adopted regulations specific to the management of used antifreeze/coolant.	
2. Establish whether your antifreeze has been determined to be hazardous or non-hazardous.	
3. Determine if the park's antifreeze/coolant is mixed with any hazardous waste (halt that process in the future) and assure that the resulting mixture is being managed as a hazardous waste.	
4. Ensure that used antifreeze is recycled.	
5. If recycling off-site, ensure that recyclers of waste antifreeze/coolant have EPA ID numbers.	
6. Confirm that records of off-site shipments include the amount sent, dates and transporter/recycler ID numbers.	
7. Ensure that employees are being trained about the hazards of and safe handling practice for new and waste antifreeze/coolant.	
8. Determine if your operation has investigated pollution prevention opportunities such as ensuring proper mixture ratios, testing prior to disposal/recycling, and the use of less toxic alternatives where applicable.	