

## ALERT FOR RV, BOAT AND MOBILE HOME OWNERS AND PARK OPERATORS ABOUT SAFE WASTEWATER DISPOSAL

### DO NOT USE CHEMICALS WHICH HARM SEPTIC SYSTEMS

Formaldehyde: active ingredient in some deodorizers, also called Formalin. Formaldehyde is an EPA-recognized probable carcinogen (i.e., causes cancer).

Para-dichlorobenzene: Known carcinogen and drinking water contaminant. Common ingredient in mothballs, urinal cakes and bowl fresheners.

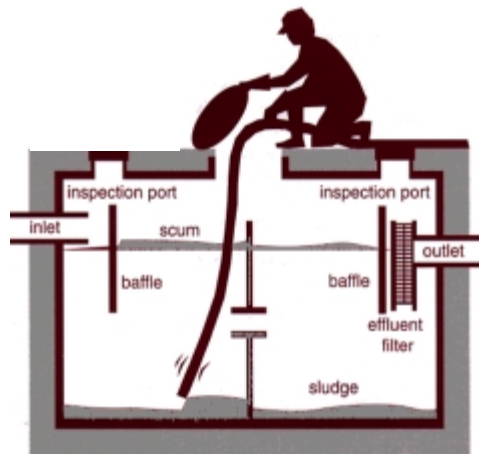
OTHER CHEMICALS TO BEWARE OF INCLUDE heavy metals (such as Zinc), benzene, toluene, xylene, ethylene glycol (anti-freeze), methylene chloride, 1,1,1-trichloroethane (TCA), trichlorethylene (TCE) and perchloroethylene (PCE). Strong acids and bases, such as sulfuric acid or caustic soda, can destroy biological activity and damage tanks and pipes.

If you spend any time in a recreational vehicle (RV) or boat, you probably know of the problem of odors from sewage holding tanks. There are a number of commercial products available to control those odors. Some of those products contain chemicals which may pollute water resources. If you use those chemicals and then empty your holding tank into a septic system (or other onsite wastewater treatment system) or dispose of holding tank waste illegally, you may be creating health and environmental hazards. These chemicals and their by-products may pass through onsite wastewater treatment systems, flowing to soil, ground water, and possibly nearby surface waters. They may also corrode treatment system parts, creating a safety hazard.

**How septic systems work.** A typical septic system contains two major components: a septic tank and an absorption field, also known as a drainfield or leachfield. These systems use natural processes to treat wastewater onsite, as opposed to offsite at a municipal wastewater treatment plant. The purpose of the septic tank is to separate solids from the liquid waste, and to promote partial breakdown of contaminants by microorganisms (bacteria) naturally present in wastewater. The leachfield also treats the wastewater through physical, biological and chemical processes in the soil.


### Mixing chemicals with waste in sewage holding tanks or septic systems may produce toxic fumes, corrode pipelines and tanks, and pollute soil and ground water when discharged.

When chemicals, such as formaldehyde, are added to septic systems, they can cause bacteria in the system to die. When this happens, the septic system cannot treat waste adequately. Solids that are allowed to pass from the septic tank, due to inadequate or incomplete treatment, may clog the leachfield. Furthermore, clogged systems may send inadequately or incompletely treated sewage to the surface, threatening the health of people or pets who come into contact with it. Or it may percolate to ground water, where the chemicals and untreated wastewater could contaminate nearby drinking water wells, rivers and streams. Please **read labels carefully** to identify any hazardous ingredients.



\* NATIONAL SMALL FLOWS CLEARINGHOUSE

The restoration of contaminated ground water is extremely costly and can take years. To prevent problems, RV and mobile home parks, as well as dump station operators, may take measures to control hazardous chemical disposal into their waste treatment systems. If they do not, and their system causes contamination, they may be forced to **close the dump station or the park** until the problem can be corrected.

 A healthy, well-maintained and appropriately sized septic tank will generally require less pumping over its service life, saving time and money.

**REPORT SEWAGE SPILLS  
and other health hazards to the local  
health department.  
Keep People and Pets Away!**

**PARK OPERATORS:**

*The United States Department of Health, Education and Welfare said in 1957 that "... there are no known chemicals, yeasts, bacteria, enzymes or other substances capable of eliminating or reducing the solids and scum in a septic tank" and according to EPA, this is still true. No products have been verified by EPA to eliminate the need for routine maintenance, and some may actually accelerate system failure by allowing solids to clog the dispersal system; while the products may claim to "remove" sludge, they may just "move" sludge. Tanks should be checked routinely (see photo) for solids and scum buildup.*

Sludge Removal (pumpouts) may be needed more often for RV, Mobile Home and Boat waste systems than for single-family septic systems, especially if your tanks are undersized and/or your residents are conservative with water. Oversizing your tanks, or adding additional tanks, may allow greater waste stabilization. Consult a wastewater professional.



RVers CAN HELP...  
Here's How:

- Minimize your need of holding tank deodorizers by using rest stop facilities when you can.

- If you must use a holding tank deodorizer, read the label carefully. **Biodegradable** (enzyme and citrus-based) products are available. Whichever product you

choose, **follow label directions** and add no more than recommended amounts.

- Some products that claim to be flushable, such as some types of cat litter, may clog hoses and septic tanks; use toilets for waste and toilet paper only.

- Ask questions of your park manager about drinking water and wastewater management. Sanitation costs can be minimal, but not free.

- Educate other RVers. Don't be shy about health.

## FREE HOTLINES!

Septic System Care: The National Small Flows Clearinghouse, (800) 624-8301, EST, or [www.nsfcc.org](http://www.nsfcc.org)  
The Safe Drinking Water Act Hotline, US EPA: (800) 426-4791, EST, or [www.epa.gov/ogwdw](http://www.epa.gov/ogwdw)

U.S. EPA, Region 9, WTR-9  
Ground Water Office  
75 Hawthorne Street  
San Francisco, CA 94105-3109

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