



HOUSEHOLD HAZARDOUS WASTES

Disposal Recommendations

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HOUSEHOLD HAZARDOUS WASTE

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When most people think of "hazardous waste," they picture huge smokestacks spewing pollutants into the air, pipes discharging toxic chemicals into our lakes and rivers or dump sites containing buried barrels of toxic chemicals. However, all of us are part of a society in which chemicals are used everyday in many aspects of our lives. These everyday household chemicals are also potentially "hazardous waste." Any substance when used, stored, handled or disposed of improperly is *hazardous*, meaning that it *poses a risk to people or to the environment*. Many household products fit such a definition — automotive products, pesticides, household cleaners and solvents, paints and many others.

What happens to the potentially dangerous chemicals we put out with our garbage or dispose of ourselves? How can we minimize their effect on our health and their release into our environment?

One Household DOES Make a Difference

Many of us take our water supply for granted; only in rare instances do we question the purity of our drinking water. However, our society's hazardous waste can have a significant impact on the safety of our water supply. Small household sources of hazardous chemicals are not regulated by the laws that control the large industrial polluters, but the additive effect of these small sources can be substantial. If each

household in an average city of 158,000 (about the size of Flint, Warren, Grand Rapids or the Lansing/East Lansing community) disposes of a small amount, the city would discharge 6 tons of toilet bowl cleaner, 22 tons of liquid household cleaner and 5.5 tons of motor oil *each month*. It is easy to see how these amounts could pose a potential threat to our environment. (See Figure 1.) Therefore, *each* citizen must be aware of the proper methods for consumption, storage and disposal of household products.

This publication will serve as a guide for proper handling and disposal of the various types of potentially dangerous household chemical wastes within the legal guidelines of the State of Michigan.



READ THE LABEL!

By following label directions you will get the best results from the product and minimize all potential hazards associated with the product.

Labels are usually helpful in directions and precautionary statements. However, sometimes directions for storage and disposal may be unclear. The explanations and directions in this guide are intended to provide guidance when the label does not answer all the questions you may have about household chemical products.

Major Points to Note When Reading the Label

Make sure you are buying the product for its intended use.

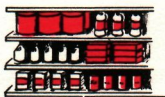
Make sure you read *all* **PRECAUTIONARY STATEMENTS** and **WARNINGS** before you use the product.

FOLLOW ALL LABEL DIRECTIONS CAREFULLY!

WHAT TO DO

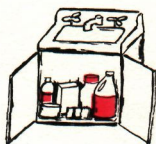
GENERAL GUIDELINES

Whenever available, follow label directions for proper use, storage, handling and disposal. The following recommendations may be used for general information if label instructions are not complete for the specific product.



BEFORE YOU BUY

- **Think before you buy.**
 - Do you really need this product?
 - Could some natural substance or less hazardous substance serve the purpose? Try to find non-toxic alternatives to use. (Contact your County Cooperative Extension Service.)
- **Read the label before you buy.**
 - Make certain that you are buying the product for its intended use. The label specifies proper applications of each product.
- **Buy only as much as you will use.**



STORAGE

- **Follow label directions for storage, if available.**
 - A cool, dry place is usually suitable.
 - Do not allow chemicals to spill or mix together. Toxic or explosive reactions may occur.
- **Keep unused products in their original containers.**
 - The label directions and list of contents may be needed for reference in the case of accidental poisonings and for future use of the product.
- **Never store near food.**
- **Keep all chemicals out of reach of children and pets.**
- **Be aware of what you have on hand to eliminate duplication and more waste.**

USE AND HANDLING



- *Read the label carefully and thoroughly for directions and precautions before using any household chemical.*
 - **USE THE PRODUCT ONLY IN THE MANNER DIRECTED BY THE MANUFACTURER ON THE LABEL.**
 - In the case of pesticides and some other hazardous chemicals, use of the product in any other manner is an infringement of the law.
- *Use common sense and avoid creating hazards.*
 - Make sure you use all chemical products with adequate ventilation.
 - Avoid splashing, skin contact and breathing of fumes.
- *Do not overuse a product.*
 - More is **NOT** better.
 - Twice as much does not mean twice the results.
 - **FOLLOW DIRECTIONS!**
- *Do not mix different chemicals together for use.*
 - Explosive or poisonous chemical reactions may occur.



DISPOSAL

Existing regulations for disposal of hazardous waste clearly exempt household products. However, household wastes containing hazardous substances should be disposed of properly to minimize deleterious effects on human health and the environment.

In view of this, several communities in Michigan have recently held collection days for hazardous household products. If such a collection is held in your area, it is an excellent way to properly dispose of such wastes. If not, the recommendations in this document should be followed. If you have questions about products which are not explicitly mentioned, contact one of the information sources listed at the end of this booklet.

GENERAL DISPOSAL GUIDELINES

DO

- If available, follow label directions for disposal.
- Solidify liquid wastes (see "OTHER LIQUID HOUSEHOLD WASTES") and then dispose of with other household solid waste.
- Dispose of solid waste in original container whenever possible.
- Wrap empty container in several layers of newspaper (to prevent environmental contamination and human and/or animal exposure) and dispose of with other household garbage.
- Keep all chemical wastes out of reach of children and pets.
- Contact the proper authorities if you are not certain what to do.
- Leftover products may be given to others who can use them **ONLY** if in the original, labeled containers, and **ONLY** if precautionary statements accompany them.



DON'T

- Do not bury containers or leftover chemicals or products in your yard or garden.
- Do not burn containers or leftover chemicals.
- Do not dispose of liquid chemicals as household waste.
- Never reuse any pesticide or chemical containers yourself (although the chemical itself is gone, residues of the chemical remain in the container and will contaminate whatever is subsequently placed in the container).
- Do not mix wastes together.
- Do not collect various containers and leftover chemicals to dispose of at one time.



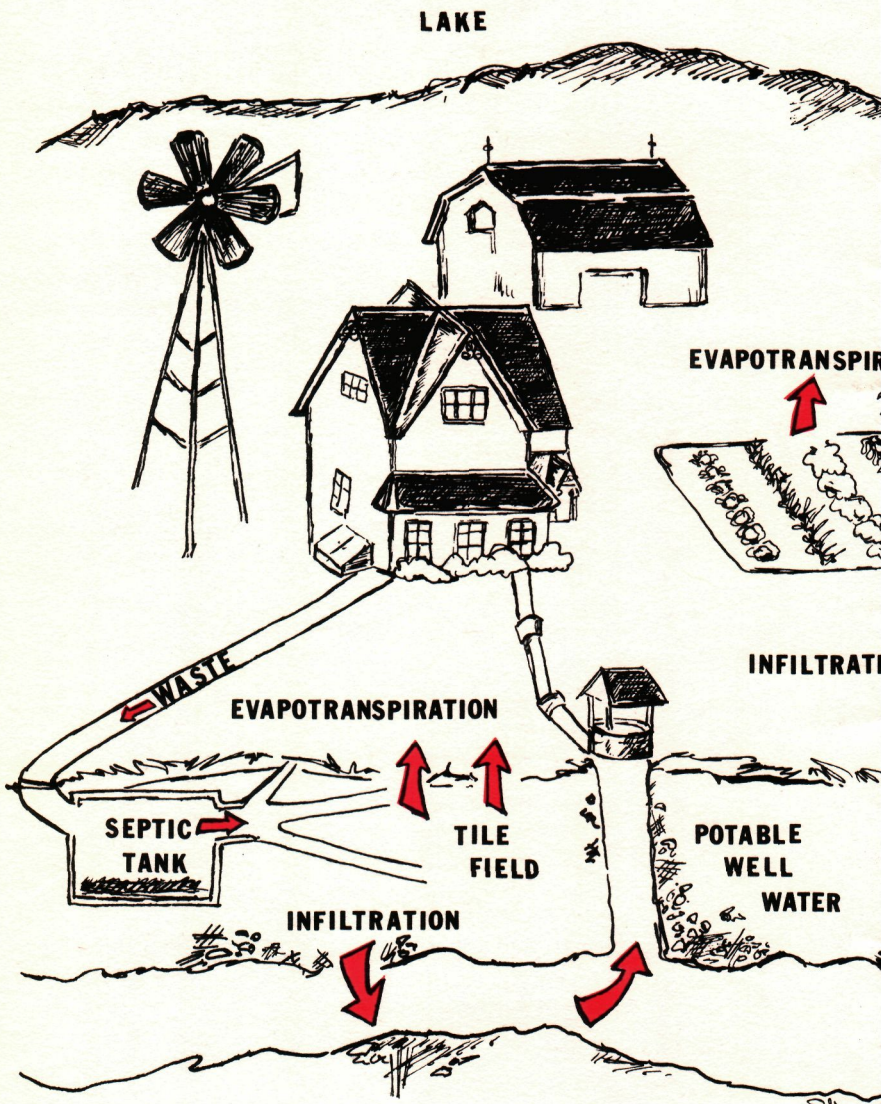
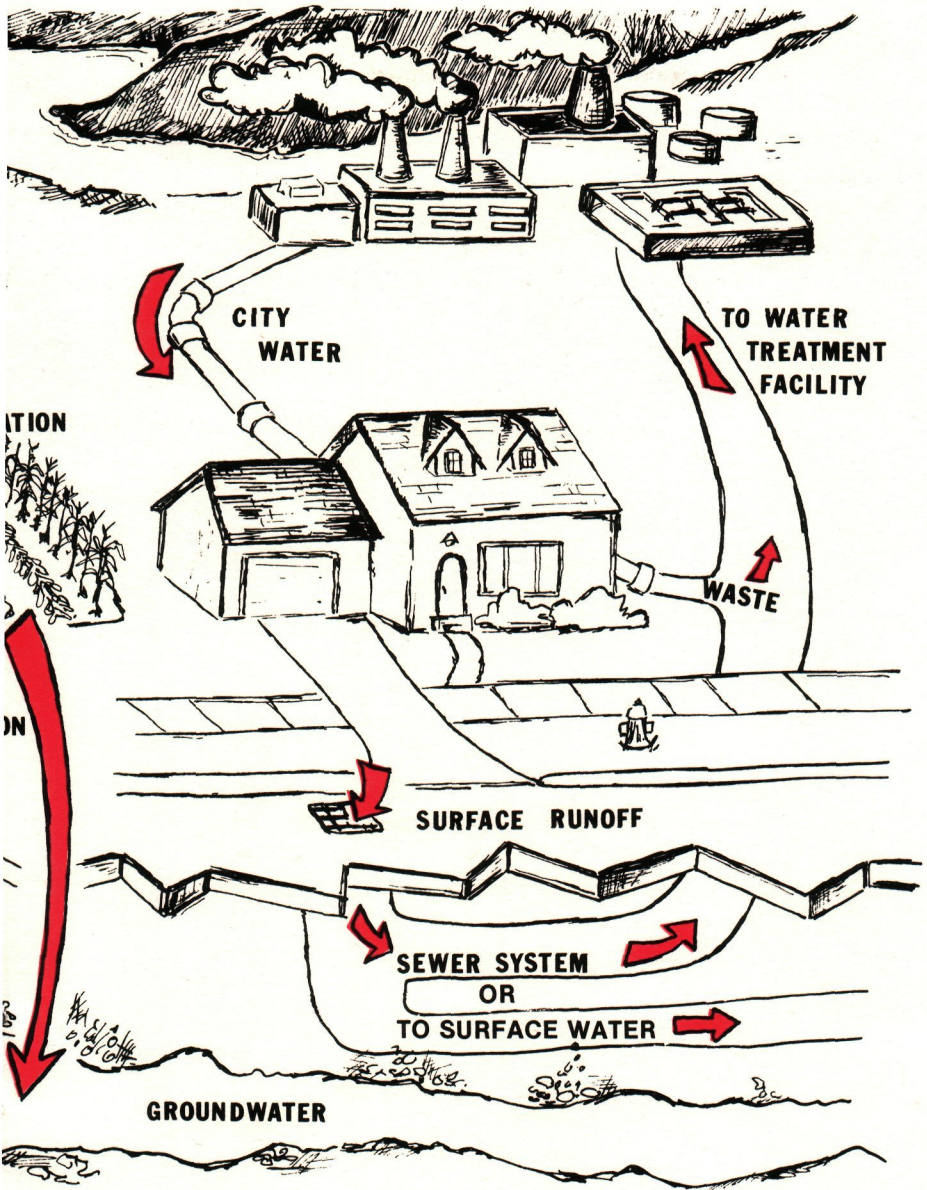


Figure 1. Sometimes chemical wastes are dumped in lakes and rivers and pollute our groundwater. Some chemical wastes may allow the substances to seep into the ground. Some chemicals are not destroyed by treatment plants and may be re-



...poured directly down the drain, toilet or sewer and surface waterways, or simple use of a...
 ...nce to reach the ground or surface water sup-
 ...graded in the soil, in septic tanks or sewage
 ...cycled into our drinking water supply.

SPECIFIC DISPOSAL GUIDELINES

PESTICIDES



- Follow label directions (if available) for disposal of individual products.
- Never dump leftovers into soil, down drains, sewers or septic tank systems.



Due to their toxicity, the use of the following pesticides has been a controversial subject. Many of these products have had restrictions placed on their use. You are strongly urged to use less toxic alternatives when possible. Some of these products are available for specific uses or for use according to label instructions. Call the Center for Environmental Toxicology at (517) 353-6469 for information on the legal uses of these pesticides. Be particularly careful when handling these products and call the Michigan Department of Natural Resources, Office of Hazardous Waste Management at (517) 373-2730 for specific disposal recommendations.

DDT	Mirex
Aldrin	Safrole
Dieldrin	Sodium Cyanide
Endrin	Strobane
Chlordane	Strychnine
DBCP	Thallium Sulfate
Heptachlor	2,4,5-T/Silvex
Lindane	Toxaphene
Kepone	



- Empty pesticide containers should be triple-rinsed and the rinse water used as pesticide.
- The empty container should be wrapped securely in a plastic bag or several layers of newspaper and disposed of with other household waste.
- Leftover products may be given to others who can use them **ONLY** if in the original, labeled containers, and **ONLY** if precautionary statements accompany them.



Treated Wood and Wood Preservatives

Wood preservatives and treated wood should be regarded as pesticides. A wood preservative is a pesticide dissolved in a carrier solution to penetrate wood. Treated wood is simply wood that has had such a solution penetrated through it.



- Follow disposal instructions for "**PESTICIDE WASTES**" for wood preservative solutions.

For Treated Wood Scraps



- **DO NOT BURN** treated wood scraps. (Wood treated with any of the commonly used wood preservatives produces highly toxic compounds when burned).



- Wrap in newspaper and dispose of treated wood scraps with other household garbage.

CLEANER, PAINT AND SOLVENT WASTE



- Try to use up the products.
- Leftover products may be given to others who can use them **ONLY** if in the original, labeled containers, and **ONLY** if precautionary statements accompany them.



- **DO NOT DUMP** onto soil, down sewers, drains or toilet.
- Let used turpentine, brush cleaner or other cleaning solvent sit in a *closed* jar until particles settle out. Then, strain and reuse. Wrap the waste material in newspapers and discard with household garbage.
- Used latex (water-based) paints may be discarded with household garbage if solidified first.

AUTOMOTIVE WASTES



Oil

- Do not dump waste oil on the driveway, on the soil, into storm sewers or down the drain or toilet.
- Motor oil should be recycled. Contact your county Extension office for the location of oil collection sites in your area.
- If you can't find an oil collection site in your community, call your local highway department, environmental organizations listed in the Yellow Pages, or the Michigan Department of Natural Resources, Resource Recovery Division.
- A convenient way to hold oil for recycling is to funnel it into an old antifreeze jug or gallon-sized container.
- If you cannot or will not recycle your oil, at least follow directions for "Other Liquid Household Wastes" and dispose of it with other household waste.



Transmission Fluid

- Transmission fluid can be added to oil and recycled, as well.

Antifreeze



- Do not pour used antifreeze on the ground or into a ditch. If disposed of in this way, not only is it available for possible ingestion by animals, but it can also seep into the water supply.
- The proper means of disposal are either to put the antifreeze in a septic tank or, if connected to a municipal sewer system, to flush down the toilet or sink with large amounts of water.
- The latter is the preferred method, but the septic tank disposal method may be used for small quantities of antifreeze (about one gallon).



Gasoline

- Gasoline must be handled with extreme caution — it is one of the most hazardous (flammable, combustible, poisonous) substances found around the home.
- ***Uncontaminated gasoline:*** Quantities of uncontaminated gasoline should be used up in an automobile or other engine. It is not recommended that it be used as a solvent (such as for cleaning tools) because this procedure is very dangerous and also contaminates the gasoline. It is difficult to dispose of contaminated gasoline, whereas kerosene, diesel fuel or other solvents for tool cleaning and related purposes can be mixed with waste oil for recycling.
- ***Contaminated gasoline:*** Because of the flammability, combustibility and toxicity of gasoline, disposal recommendations must be tailored for individual situations. Contact the Michigan Department of Natural Resources — Division of Hazardous Waste Management for advice.



Batteries

- Automobile batteries should be recycled, repaired and reused. Contact a local battery shop (listed in the Yellow Pages under "Batteries-Storage-Retail").



OTHER LIQUID HOUSEHOLD WASTES

- Liquid is not legally allowed to be disposed of in landfills.
- Solidify liquid wastes so that they can be picked up with other household garbage and disposed of in landfills.
- Solidify liquid wastes individually — **DO NOT MIX TOGETHER**. Explosive or toxic reactions may occur.
- To solidify the waste, add absorbent material (soil, kitty litter, disposable diapers, sawdust, paper towels, old rags) — enough to soak up all excess liquid.
- Sweep and scoop into a paper bag (wear rubber gloves) or onto newspaper, then place in a plastic bag, (or place directly in a heavy duty plastic bag) and dispose of with other household garbage.



SUMMARY

The welfare of humans and of the environment depends in part on proper management of society's wastes. Proper management means more than just careful disposal. There are a number of options that should be considered in using household products. From the decision to purchase a product to consideration of disposal of recycling, every small effort makes a difference.

The options presented in this document require just a little extra time and effort for the good of our health and our environment. Just as every citizen's wastefulness or misuse of a product adds to the pollution of our environment, so every citizen's efforts toward proper use, disposal and recycling of household products aid in the preservation and protection of a safe environment.

WHERE TO FIND INFORMATION

General information and referrals:

Your County Cooperative Extension Service Office or

Your local Health Department or

Center for Environmental Toxicology
Michigan State University
East Lansing, MI 48824
(517) 353-6469

For questions about how to dispose of hazardous waste:

Michigan Department of Natural Resources
Office of Hazardous Waste Management
(517) 373-2730

For question relating to health problems related to environmental toxicants:

Michigan Department of Public Health Center for
Environmental Health Science
(517) 373-2037

In case of human poisoning, call your local Poison Control Center, your physician or:

1-800-632-2727

(State Poison Control Center in the Lower Peninsula)

1-800-562-9781

(State Poison Control Center in the Upper Peninsula)

494-5711

(Metro Detroit) Regional Poison Control Center, Detroit

1-800-462-6642

(from area code 313) Regional Poison Control Center, Detroit

1-800-572-1655

(from all other areas in Michigan) Regional Poison Control Center, Detroit

In case of animal (pet) poisoning, call your veterinarian or

Michigan State University
Animal Toxicology Hotline
(517) 353-5123

For educational materials relating to hazardous chemicals:

Hazardous Chemicals Education Project
Michigan Environmental Education Association
c/o Mr. Dave Chapman
4360 Hagadorn Road
Okemos, MI 48864

HAZARDOUS PRODUCT INVENTORY

Name of Product	Date Purchased	Storage Location	Important Precautions
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