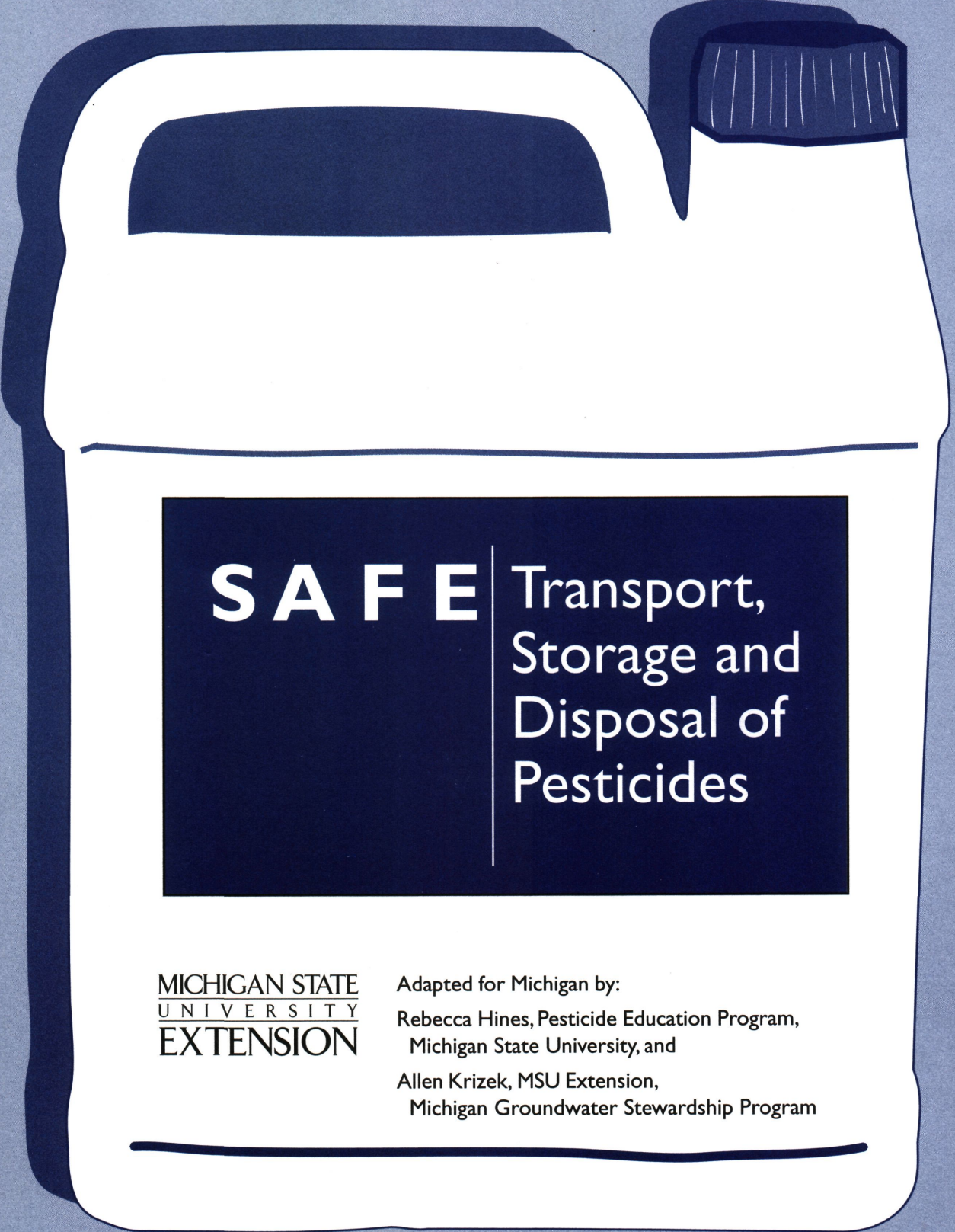


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SAFE | Transport,
Storage and
Disposal of
Pesticides

MICHIGAN STATE
UNIVERSITY
EXTENSION

Adapted for Michigan by:

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Most accidental pesticide poisonings occur when pesticides are mishandled. Young children are often the victims. Pesticide accidents can be prevented by careful planning, using a secure storage location, adopting safe handling methods during transport, and following proper disposal guidelines for both product and containers.

The first step in preventing accidental poisonings and environmental contamination is to use good judgment when buying pesticides.

- Buy only the amount that can be used in a reasonable length of time.

- Don't be tempted by "sale prices."

- Buy pesticides in quantities that you will use in the near future. Some pesticides should not be stored for long periods of time, allowed to freeze or stored in direct sunlight because they may become less effective.

Always keep pesticides in their original containers. Using any other container is illegal and could cause an accidental pesticide poisoning or harm the environment.

Adapted with permission from *SAFE Transport, Storage and Disposal of Pesticides* written by Clyde L. Ogg, Pesticide Education Specialist, Larry D. Schulze, Extension Pesticide Coordinator, Shripat T. Kamble, Professor of Entomology, and Edward F. Vitzthum, Associate Director of the Water Center, University of Nebraska Cooperative Extension EC 01-2507, University of Nebraska, Lincoln, Nebraska, 2001.

T ransporting Pesticides

Certain precautions should be taken when transporting pesticides. Traffic accidents can happen even when you travel only a short distance, and improperly loaded pesticide containers can fall off your vehicle or become punctured or torn. Because pesticides are transported on public roads, the potential damage from such accidents is great.

Never transport pesticides with food, livestock feed or minerals. Also, transport pesticides separately from seed, grain or consumer goods.

Keep a hazardous materials spill kit in your vehicle at all times. A spill kit commonly contains chemical-resistant gloves, coverall and goggles; sorbent pads and absorbent material (such as kitty litter); and a plastic temporary storage container.

In case of a pesticide spill follow the three “Cs”: control, contain, and cleanup. **Control** the spill immediately to prevent further spillage. **Contain** the spill. Dike the spill with absorbent material or sorbent pads to keep it out of water and prevent environmental contamination. **Clean up** the spill. Use absorbent material to soak up the spill, then shovel contaminated material into a plastic storage container for disposal. Additional information is available by calling the Michigan Department of Agriculture’s Agriculture Pollution Emergency Hotline at 1-800-405-0101.

What Vehicle to Use

The safest way to transport pesticides is in the back of a truck or pickup. Never carry pesticides in the passenger compartment of a vehicle. If you use a flatbed truck, it should have side and tail racks. If the truck has a wooden bed, insert an impervious liner such as plastic or a truck bed liner before loading pesticides. Nonporous beds are preferred because they can be easily decontaminated in case of an accidental spill. Make sure your truck is in good operating condition to help reduce the chance of an accident (see *Vehicle Maintenance Checklist*).

Loading Pesticides

Wear work clothing and chemical-resistant gloves even when handling unopened pesticide containers, in case the container should leak. Also, carry protective clothing and equipment in the passenger compartment of the vehicle. You will need protective equipment if a spill or other pesticide-related accident should occur.

Thoroughly inspect all containers at the time of purchase before loading. Accept them only if the labels are legible and firmly attached. Check all caps, plugs, or bungs and tighten them if necessary. If leakage has occurred, do not accept the container. Request another container.

When loading containers, handle them carefully; don’t toss or drop them. Avoid sliding containers over rough surfaces that could rip bags or puncture rigid containers. Know safe handling procedures when using fork lifts. Secure all containers to the truck to prevent load shifts and potential container damage. Protect containers made of paper, cardboard, or similar materials from rain or moisture.

Unloading Pesticides

Never leave pesticides unattended. *You are legally responsible if people are accidentally poisoned from pesticides left unattended in your vehicle.* Move the pesticides into your storage facility as soon as possible. Inspect the vehicle thoroughly after unloading to determine if any containers were damaged or any pesticide leaked or spilled.



Always carry an emergency spill kit and carefully secure all pesticide containers.

Transporting Hazardous Pesticides

The U.S. Department of Transportation (DOT) has designated many chemical compounds, including some pesticides, as hazardous materials (hazmat). If you transport any of these materials on public roads in commerce you are required to comply with DOT hazmat regulation 49 Code of Federal Regulations (CFR) parts 100-185. To determine which pesticides are classified as hazardous, refer to hazmat tables (HMT) I and II (49 CFR part 172.101). To be in compliance, you may be required to:

- Carry shipping papers in your vehicle: including an emergency response phone number and material safety data sheets (MSDS) for the pesticides in transport;

- Receive training concerning DOT hazmat regulatory requirements;

- Be sure that packages are properly labeled and/or marked;

- Placard your vehicle if transporting a bulk container or 1,000 pounds or more of a pesticide from HMT II or any amount of a pesticide from HMT I and,

- Obtain a Commercial Driver's License (CDL) when required.

Shipping Papers. When you transport any hazardous pesticide, carry the proper shipping papers in the passenger compartment of the vehicle. While you are driving (belted and operating vehicle), the

papers must be within your reach and readily recognizable by emergency personnel or placed in a door pouch. These papers provide information about the chemical that can be used to prevent further damage or injury in case of an accident. Your pesticide dealer will help you obtain the proper papers. Also carry the Material Safety Data Sheet (MSDS) for each hazardous pesticide or an emergency response guidance manual that cross references a chemical's shipping name with emergency response information.

Hazardous Materials (Hazmat) Training. The DOT hazmat training increases your awareness of safety considerations involved in loading, unloading, handling, storing, shipping paper preparation, marking, labeling, placarding, and transportation of hazardous pesticides. It also improves emergency preparedness for responding to transportation accidents. Hazmat training includes general awareness training, function-specific training, and safety training.

DOT Training is Available. The DOT Office of Hazardous Materials Safety has prepared training modules that meet the requirements for general awareness hazmat training. These modules are available on-line (<http://hazmat.dot.gov/mod.htm>) or on an interactive CD-ROM. (For more information, phone: 202-366-2301 or 800-467-4922 ext. 3 or email: training@rspa.dot.gov.) A list of training opportunities for the function-specific and safety training sections is available on-line (<http://hazmat.dot.gov/training.htm>) or can be obtained by contacting the DOT Office of Hazardous Materials Initiatives and Training (Phone: 202-366-4900 or email:

training@rspa.dot.gov). Specialized training is available from the DOT Transportation Safety Institute as well (405-949-0036 ext. 374).

Labeling and Marking. Always check each package (e.g., cardboard box, metal drum) to be sure it is properly labeled and/or marked. Labeling means a prescribed hazard warning notice (usually diamond-shaped) on the outer package. Marking means the required words are written on the side of the outer package including shipping name, identification number, specifications or UN marks, plus other required information, instructions or cautions.

Accessing the Regulations

Two sources of the hazardous materials regulations are available:

The U.S. Code of Federal Regulations is available on-line at <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html>

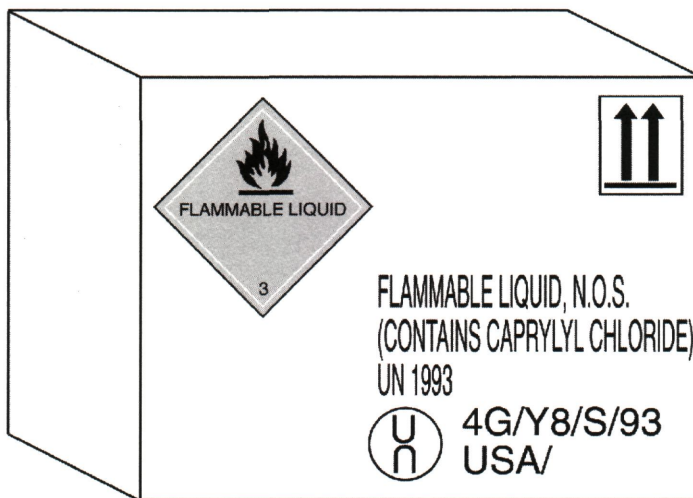
The print version is for sale from the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9828. It is published by the "Office of the Federal Register National Archives and Records Administration" as a Special Edition of the Federal Register.

Placarding. For most hazardous pesticides (HMT II) in non-bulk, you will need to placard your vehicle when you transport as little as 1,000 pounds of the chemical. When transporting hazardous pesticides (HMT II) in bulk (over 119 gallons) or any amount from HMT I, placarding is required at all times. Place placards, which are available from your pesticide dealer, on all four sides of your vehicle.

Commercial Driver's License. Contact the hazardous materials coordinator at the Michigan State Patrol (517-336-6605) or the 911 emergency operator for more information on training, shipping papers, labeling, marking, and placarding. For more information on the CDL, contact the Michigan Secretary of State at 517-322-1460 or your local driver's license examiner.

Farmer Exception

Farmers have been granted exceptions from the DOT hazmat regulations, if they are a private motor carrier transporting pesticides within the state of Michigan. Farmers can transport *DOT-defined hazardous pesticides* (other than compressed gases) between fields of the same farm over any roadway EXCEPT the interstate highway system. Farmers also have had emergency response information and hazmat employee training requirements waived when they were transporting agricultural pesticides to or from their farm (within 150 miles of the farm).



Check all shipping containers for proper DOT labeling and marking.

Storing Pesticides

As soon as pesticides arrive at their destination, they should be properly stored and the area immediately secured. This not only helps discourage theft, but also prevents access to the materials by pets, children, and other persons not trained to use pesticides. Always keep personal protective equipment (PPE) and a hazardous material spill kit readily available in or near the pesticide storage area. These include chemical-resistant gloves, coverall and goggles; sorbent pads and absorbent material such as kitty litter; a plastic temporary storage container, and a rated fire extinguisher.

When storing pesticides on shelving, place liquid formulations on lower shelves and dry formulations above them. If a liquid formulation container leaks, the dry formulations will not be contaminated. Keeping the liquid containers on lower shelving also helps reduce the risk of accidental spills if the container is knocked off the shelf.

To prevent contamination or accidental use of the wrong chemical, store herbicides, insecticides and fungicides in separate areas within the storage unit. Dry formulations of insecticides or fungicides can become contaminated if stored with certain volatile herbicides and may cause plant injury when used. Treated baits (for rodents, insects, and birds) should not be stored near other chemicals because they can absorb odors and become repellent to the pest.

Always store pesticides in the original container with the label intact. Once a container is opened, the shelf life is considerably reduced. Never store pesticides, for even a short time, in any container other than the original. **Doing so is a violation of the law.** Pesticides in soft drink bottles, fruit jars, milk cartons, margarine tubs or glasses are a common cause of accidental poisonings. Store pesticides away from food, pet food, feed, seed, fertilizers, veterinary supplies and plants.

Check all stored pesticide containers (see *Pesticide Storage Checklist*) for any existing or potential problems, including leaks or spills. Transfer the contents of any leaking container into a container with exactly the same original formulation and label. When this is not possible, put the leaking container with the pesticide into a liquid-proof container and dispose of it at a Clean Sweep site as discussed under disposal of excess pesticides, page 9. If necessary, contact either the pesticide manufacturer or CHEMTREC (800-424-9300) for specific directions.

The pesticide storage location should be a cool, dry, well-ventilated area away from sources of heat or flame. See the pesticide label for specific storage recommendations. Some pesticides can be reduced in effectiveness if they are frozen or overheated. Expansion of pesticides caused by freezing or heating can cause containers to crack or break, resulting in potentially dangerous leaks or spills. Heat expansion of a liquid pesticide also may result in contents that are under pressure. When the container is opened, the pressure may cause an overflow and/or contamination of the user or storage site. Excessively high temperatures (120° F or higher) can also change the effectiveness of a pesticide and may produce dangerous fumes, making the storage area unsafe.

To prepare for pesticide applications, remove the pesticide containers from storage and take them to an open area. Always measure and mix pesticides in a well-lit, well-ventilated location. Regardless of whether they are partially or completely emptied, never leave pesticide containers open or unattended while the pesticide is being applied. Return all containers to storage prior to application to prevent accidental spills, ingestion, or exposure to people, pets, livestock or wildlife.

Mixing and applying pesticides requires detailed attention to label instructions, along with common sense and good judgment. So, too, does pesticide storage. **Being careless or using improper storage procedures is an open invitation to disaster.** While all pesticide labels have a section on their storage and disposal, the guidelines do not answer every question. If you have questions on pesticide storage, contact your local Michigan State University county Extension office.

Be Prepared for Pesticide Spills

Despite all safety precautions, accidents can happen. If a pesticide spills in a storage area, quick action is imperative. **Have a pesticide spill kit on hand** (similar to the hazardous pesticide spill kit described earlier). If a pesticide spill occurs on a public right-of-way, contact the Michigan Department of Agriculture's Agriculture Pollution Emergency Hotline at 1-800-405-0101.

If a pesticide is spilled on a person's body or clothing, the person should leave the area immediately. All contaminated clothing should be removed as

quickly as possible — this is no time for modesty! Wash affected areas of the body thoroughly with detergent or soap and water. In any pesticide contamination incident, follow the instructions given in the label's first-aid treatment guidelines. If the label is not available or if there are further questions, seek medical attention. If necessary, contact Poison Control at 1-800-222-1222.

If toxic fumes are present at the spill site, evacuate persons and animals from the immediate area. In addition, secure the area until qualified rescue personnel, with proper protective equipment, arrive at the scene. Except for a small, properly equipped cleanup crew, don't allow anyone to enter the area until it is thoroughly decontaminated.

Spilled pesticides must be contained. If the pesticide starts to spread, contain it by diking with soil or sorbent materials, if this can be done safely without contacting the pesticide or breathing the fumes. Never hose down a contaminated area. This will cause the pesticide to spread and infiltrate into the soil, possibly reaching ground water. If the spill is liquid, use activated charcoal, absorptive clay, vermiculite, pet litter, or sawdust to cover the entire spill area. Sufficient absorbing materials should be used to completely soak up the liquid. The material then should be swept or shoveled into a leakproof drum. Dispose of this material as you would the pesticide involved.

Always refer to the product label and, if necessary, contact either the Michigan Department of Agriculture's Agriculture Pollution Emergency Hotline at 1-800-405-0101 or the chemical manufacturer for information about the appropriate neutralizing materials to be used following a pesticide spill. As a precaution, it is wise to read all product labels thoroughly at the time of purchase and/or delivery to be able to deal quickly and safely with any pesticide emergency.

Pesticide Storage and Spill Reporting

The Superfund Amendments and Reauthorization Act (SARA) amended the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). One part of the provisions, the Community Right-to-Know Act (Title III), established new lists

of "Extremely Hazardous Substances" (EHS) and "Toxic Chemicals" for additional notification and reporting requirements. It also added new reporting requirements for the CERCLA list of "hazardous substances." Michigan State University Extension Bulletin E-2575, Emergency Planning for the Farm, helps farmers comply with SARA Title III.

SARA Title III established threshold planning quantities (TPQ). Any facility that produces, uses or stores these Extremely Hazardous Substances (EHS) in amounts equal to or in excess of the threshold planning quantities has reporting and notification obligations under section 302 of SARA Title III (40 CFR Part 355). If the facility produces, uses or stores hazardous chemicals or Extremely Hazardous Substances exceeding the designated amounts (10,000 pounds for hazardous chemicals and either 500 pounds or the threshold planning quantities, whichever is lower, for Extremely Hazardous Substances), they must submit specific information to state and local officials as defined in sections 311 and 312 of the Act (40 CFR 370).

In addition, owners and operators of most business facilities must report spills or releases of CERCLA hazardous substances and Extremely Hazardous Substances to state and local authorities (section 304, 40 CFR 355). If the spill occurs while in transport, the notification can be made either by the owner or the operator of the motor vehicle. Report spills and releases to the Michigan State Patrol (517-336-6605) or the 911 emergency operator.

Pesticide Storage Site Selection

Several points must be considered when selecting the site for pesticide storage. One of these factors is well location. Pesticide storage sites must have an isolation distance of 150 feet from wells and 200 feet from surface water (Michigan Clean Water Act). Locating storage facilities away from dwellings and livestock facilities will minimize possible contamination.

The site also should be in an area where flooding is unlikely. It should be where runoff can be diverted and drainage from the site cannot contaminate surface or ground water.

The drainage system for a pesticide storage facility must not be connected to the wastewater sewer or septic tank. Pesticides that may be present in tank rinsate, spills, seepage from storage, and heavy runoff must be controlled in the event of fire or flooding. Dikes, collecting pools, and washing slabs with sumps provide a proper drainage system. All of the collected runoff water should be treated as a surplus pesticide and disposed of properly.

Storage Area

Depending on inventory size, a separate building, room or enclosure may be best for pesticide storage. If the inventory is not large enough to warrant a separate facility, enclose the storage area on the first floor of an existing building. In either case, store pesticides and pesticide containers in a fire-resistant structure having good ventilation and a sealed, concrete floor that drains into secondary containment.

Weatherproof signs, stating “Danger - Pesticides - Keep Out - No Smoking” or a similar warning, should be posted on each door and in any windows of the facility. In some cases, it may be advisable to post the warning signs in one or more languages in addition to

English. The name, address, and phone number of an emergency contact person also should be posted at the primary entrance of the storage area. Regardless of whether it is a cabinet, room or an entire building, the pesticide storage area should be lockable to prevent unauthorized entry and should only be used for pesticides and pesticide equipment.

An electrically shielded exhaust fan may be needed in a confined storage area to reduce the temperature and concentrations of toxic fumes. The fan should be installed so that fumes can be vented outdoors without endangering people, animals, or plants in the area.

Whenever large quantities of pesticides must be stored, it is strongly recommended that fire detection sensors and fire-fighting equipment be provided. It is also a good idea to provide the local emergency response coordinator with a floor plan, records related to the storage location, and an annual inventory of the pesticides and containers in storage.

Wooden pallets or metal shelves must be provided for storing granular and dry formulations packaged in sacks, fiber drums, boxes or other water-permeable containers. If metal pesticide containers are stored for a prolonged period, they should be placed on pallets, rather than directly on the floor, to help reduce potential corrosion and leakage.



Danger! Pesticide storage sign.

Disposing of Excess Pesticides and Pesticide Containers

Despite one's best efforts to avoid accumulating excess pesticides, it is sometimes necessary to dispose of leftover chemicals. And, occasionally it may be necessary to dispose of pesticide wastes, such as materials collected while cleaning up a spill. Pesticide wastes are as hazardous as the pesticide itself. These guidelines should be followed in handling both excess pesticides and pesticide wastes.

In addition, empty pesticide containers need to be disposed of properly. Empty containers that have been properly rinsed may be recycled. Other containers are refillable and may be returned to the supplier unrinsed. Empty containers that have been properly rinsed may be disposed of in a sanitary landfill if allowed by state and local laws. In Michigan, it is illegal to burn pesticide containers on site.

Types of Pesticide Containers

There are several types of pesticide containers. A common agricultural pesticide container is the 2.5 gallon plastic jug. Many liquid agricultural pesticides are also sold in bulk containers (mini-bulks, shuttles, shuttle juniors, etc.) that are intended to be returned and reused by the supplier. Liquid, dry, and granular pesticides are often sold in various sizes of plastic containers and some granular pesticides are sold in bags. Another type of pesticide container is the pressurized can, which is commonly used for indoor pesticides.

Some containers are designed to be returned to the supplier upon emptying without rinsing. These containers are commonly referred to as "refillables". Refillable containers must not have the seal broken or the container opened. They should never be rinsed.

Removing Pesticide Residues From Nonrefillable Liquid Containers

Proper rinsing of nonrefillable liquid pesticide containers is easy to do, saves money, is required by state and federal regulations, and is a good, sound management practice that helps protect the environment. Even during a busy season, the few extra min-

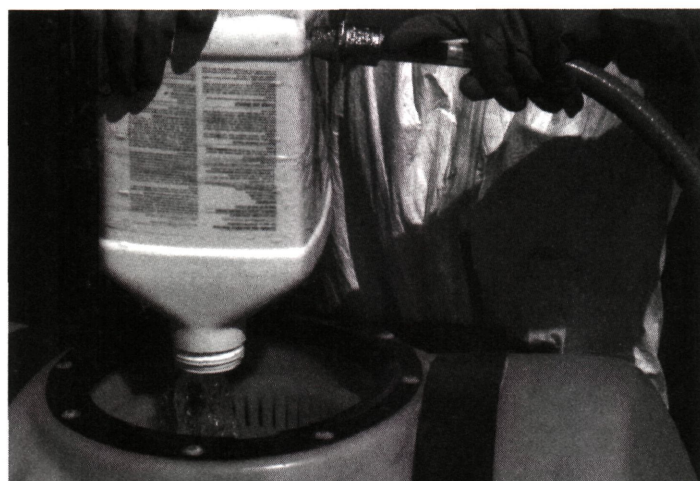
utes it takes to properly rinse empty pesticide containers is time well spent. Here are some rinsing guidelines:

Unless the container is rinsed immediately, the remaining residue may dry and become difficult to remove. An unrinsed pesticide container is typically considered hazardous waste, but once rinsed, the same container is usually considered solid waste. Rinsing containers also removes a potential source of pesticide exposure to people, pets, livestock, wildlife, and the environment.

The rinse solution (rinsate) should be added directly into the sprayer tank. This action eliminates the need to store and later dispose of the rinsate.

Proper Rinsing

Two commonly used procedures are effective for properly rinsing nonrefillable liquid pesticide containers: pressure-rinsing and triple-rinsing.



Pressure-rinsing a pesticide container.

Pressure-rinsing

Pressure-rinsing is usually faster and easier than triple-rinsing. A special nozzle, generally available from your pesticide supplier, is attached to the end of a pressure hose and used to wash the remaining pesticide from the container. The hydrant or water source should have an anti-siphon valve or a back-flow protection device attached.

1. Remove cap from the pesticide container. Empty pesticide into the spray tank and allow the container to drain for 30 seconds.
2. Insert the pressure-rinser nozzle by puncturing through the lower side (not the bottom) of the pesticide container.
3. Hold the pesticide container upside down over the spray tank opening so rinsate will run into the spray tank.
4. Rinse for length of time recommended by the manufacturer (usually 30 seconds or more). Rotate the nozzle to rinse all inside surfaces.
5. Rinse caps in a bucket of water for at least one minute and pour this rinse water into the spray tank.
6. Return container to supplier or pesticide container recycling site or dispose of the pesticide container according to label directions. Plastic caps and containers are usually made from different materials, and often are recycled separately. For more information on pesticide container recycling sites, contact your local Michigan State University Extension office.

Triple-rinsing

Triple-rinsing can be done as follows:

1. Remove cap from the pesticide container. Empty all remaining pesticide into the spray tank, allowing the container to drain for 30 seconds.
2. Fill the container 20% full of water or rinse solution (i.e., fertilizer solution).
3. Secure the pesticide container cap.
4. Swirl the liquid within the container to rinse all inside surfaces.
5. Remove the cap from the container. Add the rinsate from the pesticide container to spray tank and allow to drain for 30 seconds or more.
6. Repeat steps 2 through 5 **two more times**.
7. Return container to supplier or pesticide container recycling site or dispose of the pesticide container according to label directions. Plastic caps and containers are usually made from different materials and usually are recycled separately. For more information on pesticide container recycling sites, contact your local Michigan State University Extension office.

When Rinsing is not Possible

It is not possible in certain situations to triple- or pressure-rinse pesticide containers. Thorough removal of the pesticide material packaged in bags or pressurized cans may be done as follows:

Bags

1. Empty bag contents into spray tank.
2. Shake the bag to remove as much product as possible.
3. Cut the sides and folds of the bag to allow it to fully open; add remaining product to the tank.
4. Dispose of the empty bag in a sanitary landfill if allowed by state and local laws/regulations. Some labels may allow alternate disposal methods.

Pressurized cans

1. Spray any remaining contents according to label instructions. Be sure to use it on the proper site and to use it at the correct rate, as listed on the label.
2. Dispose of the empty container according to label directions in a sanitary landfill or recycle the container following state and local laws and regulations.

Excess Pesticide Waste Disposal

The best way to dispose of small amounts of pesticide is to apply it to a label-permitted site (specific plant, animal, structure) for which the product is registered. Always double check the product label to be certain that the site is listed and that the maximum application rate will not be exceeded.

Large quantities of stored excess pesticides may be hazardous. When disposing of large quantities of such materials, contact the Michigan Clean Sweep Program at (517) 355-6529 for specific disposal instructions.

The Michigan Department of Agriculture occasionally sponsors disposal programs for excess or unwanted pesticides.

Preventing accidental poisonings and damage to the environment requires pesticides to be transported, stored, and disposed of in a safe manner. Read and follow the label carefully. It tells you how to use pesticides, provides information about special hazards and gives proper storage and disposal methods.



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Vehicle Maintenance Checklist

Cab Interior

- Clean cab—no food wrappers or trash
- Extra change of clothes
- Post emergency phone numbers:
 - Poison Center — 800-222-1222
(for aid in human poisonings)
 - MDA Agriculture Pollution
Emergency Hotline — 800-405-0101
(for help involving spills, leaks and fires)
 - Michigan State Patrol — 517-336-6605
(to report vehicle accidents)
- Record of on-board pesticides
- Label and MSDS available
- First aid kit
- Pesticides NOT stored in cab
- Pesticide application equipment NOT present

On-board Pesticide Containers

- Lockable pesticide storage compartment
- Containers properly sealed and secured
- Legible labels on all containers
- Keep pesticides in original containers
- Adequate amount of pesticides for day's use
- Empty containers properly rinsed and positioned for removal at end of day. **Never reuse pesticide containers!**

Spill Control

- Absorbent materials and rags on board
- Shovel, broom, plastic bags on board
- Hazardous materials spill kit

Equipment Check

- Sprayers NOT pressurized
- Supplies in moisture-proof containers
- Lids fit securely on pesticide tanks
- Spray hoses and fittings in good condition
- Pressure gauges operable
- All application equipment cleaned
- Water containers labeled

Personal Protective Equipment

- Goggles or other eye protection
- Chemical resistant gloves
- Boots, apron, hat—if required by label
- Respirator—stored in sealed plastic bag
- Other—as directed by the label

Tires

- Proper pressure
- Tread wear acceptable
- No cuts and cracks
- Spare tire inflated properly

Lights

- High beam headlights
- Low beam headlights
- Turn signals
- Running lights
- Emergency flashers
- Tail lights
- Brake lights
- Backup lights

Wipers

- Wiper blades in good condition
- Washer fluid dispenser filled
- Washer fluid pump in working order

General Vehicle Maintenance

- Horn in good working order
- Seat belts in good working order
- Brakes in good working order
- Windshield free of obstructions
- Truck bed free of debris

Vehicle ID _____	Notes _____
Inspected by _____	_____
Date _____	_____

Pesticide Storage Checklist

Safety is the key in proper pesticide storage. If you answer “no” to any of the statements below, you should correct your storage facility immediately.

Enter date of each inspection: _____

	Yes	No	Yes	No	Yes	No
General Information						
Clean, neat pesticide storage site	_____	_____	_____	_____	_____	_____
Current, on-site pesticide inventory	_____	_____	_____	_____	_____	_____
Emergency phone numbers posted	_____	_____	_____	_____	_____	_____
Labels and MSDS available	_____	_____	_____	_____	_____	_____
Accurate storage inspection log maintained	_____	_____	_____	_____	_____	_____
Pesticide Containers						
Containers marked with purchase date	_____	_____	_____	_____	_____	_____
Insecticides, herbicides, and fungicides segregated	_____	_____	_____	_____	_____	_____
Pesticides stored in original containers	_____	_____	_____	_____	_____	_____
Dry formulations stored on pallets	_____	_____	_____	_____	_____	_____
Feeds stored separately from pesticides	_____	_____	_____	_____	_____	_____
Used containers rinsed and drained	_____	_____	_____	_____	_____	_____
Rinsed and unrinsed containers separated	_____	_____	_____	_____	_____	_____
Liquid formulations stored below dry formulations	_____	_____	_____	_____	_____	_____
Spills and Disposal						
Storage area free of spills or leaks	_____	_____	_____	_____	_____	_____
Shovel and absorbent materials available	_____	_____	_____	_____	_____	_____
Sealed Floors	_____	_____	_____	_____	_____	_____
Floor drains closed off (if present)	_____	_____	_____	_____	_____	_____
Curb or secondary containment	_____	_____	_____	_____	_____	_____
Safety Information						
No smoking signs posted	_____	_____	_____	_____	_____	_____
Personal protective equipment available	_____	_____	_____	_____	_____	_____
Fire extinguisher in good working order	_____	_____	_____	_____	_____	_____
Storage room locked, limited access to keys	_____	_____	_____	_____	_____	_____
Storage room posted: <i>Pesticides — Keep Out!</i>	_____	_____	_____	_____	_____	_____
Storage site well lit and ventilated	_____	_____	_____	_____	_____	_____

Adapted from *Pesticides and Commercial Vehicle Maintenance*, Purdue University.

Mapping Your Farmstead

Complete two maps for each site (farmstead site and aerial)

1. Map the farmstead site (or other part of the farm where chemicals are stored) and label all of the following:

◆ Buildings/structures location

Barns, houses, shops, outbuildings, silos, grain bins, manure storage/pits, etc. Indicate sizes and locations of doors.

◆ Land features

Roads and crossroads, driveways and lanes, fences and gates. Wells and/or municipal water supply, hydrants, ponds, streams, rivers, lakes, and wetlands.

Septic tanks, wastewater systems, cisterns. Drainage ditches, culverts, surface drains. Slope of land (drainage direction).

◆ Chemical/fertilizer storage

Identify where chemicals and fertilizers are stored.

◆ Fire concerns

Use these symbols to show location for each building, also.

G Main gas shutoff

E Main electrical shutoff

AST Aboveground fuel storage tank

UST Underground fuel storage tank

LP Liquid propane

CG Compressed gas (oxygen, acetylene)

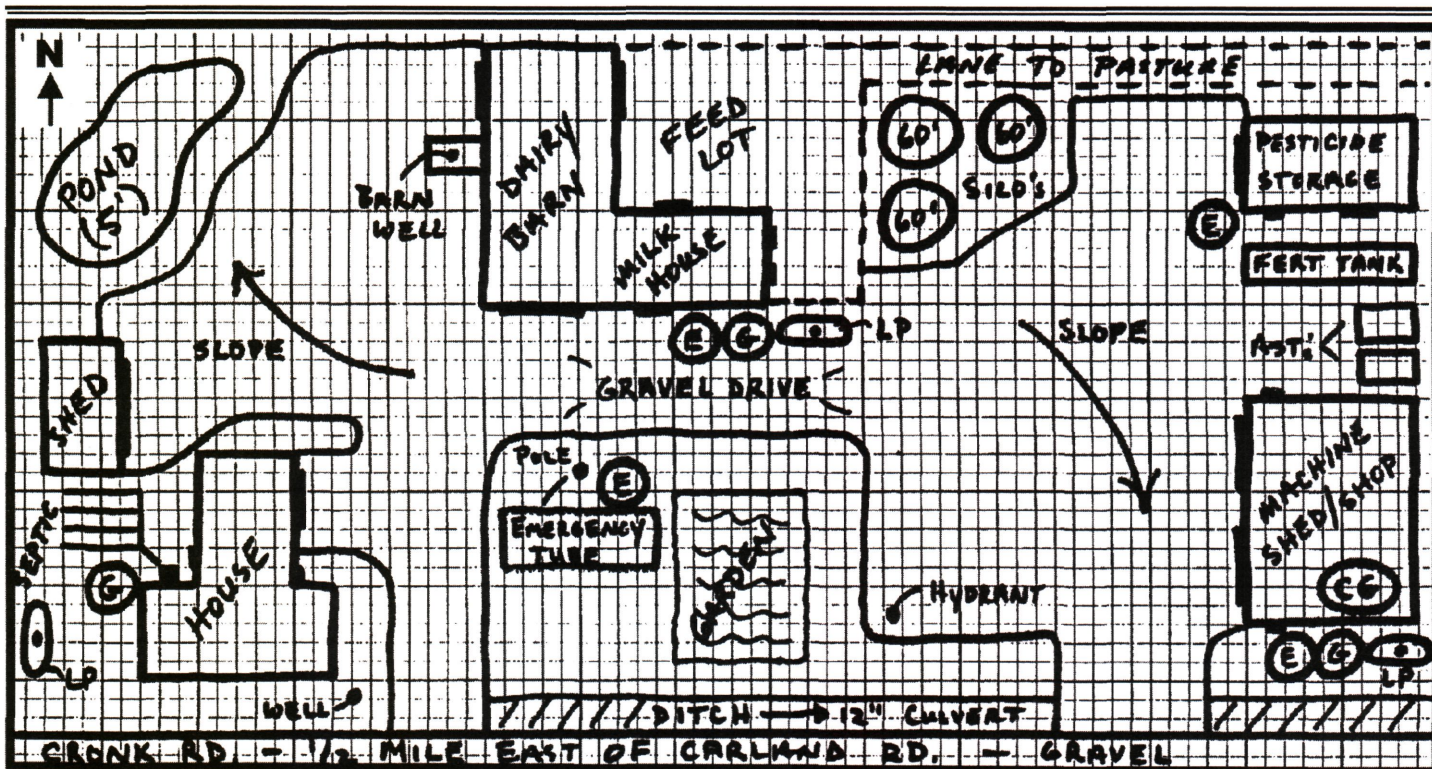
◆ Livestock or special concerns

◆ Michigan Emergency Tube site

2. Aerial view map

Identify nearby off-property buildings, land uses and sensitive areas (e.g., churches, parks, day cares, etc).

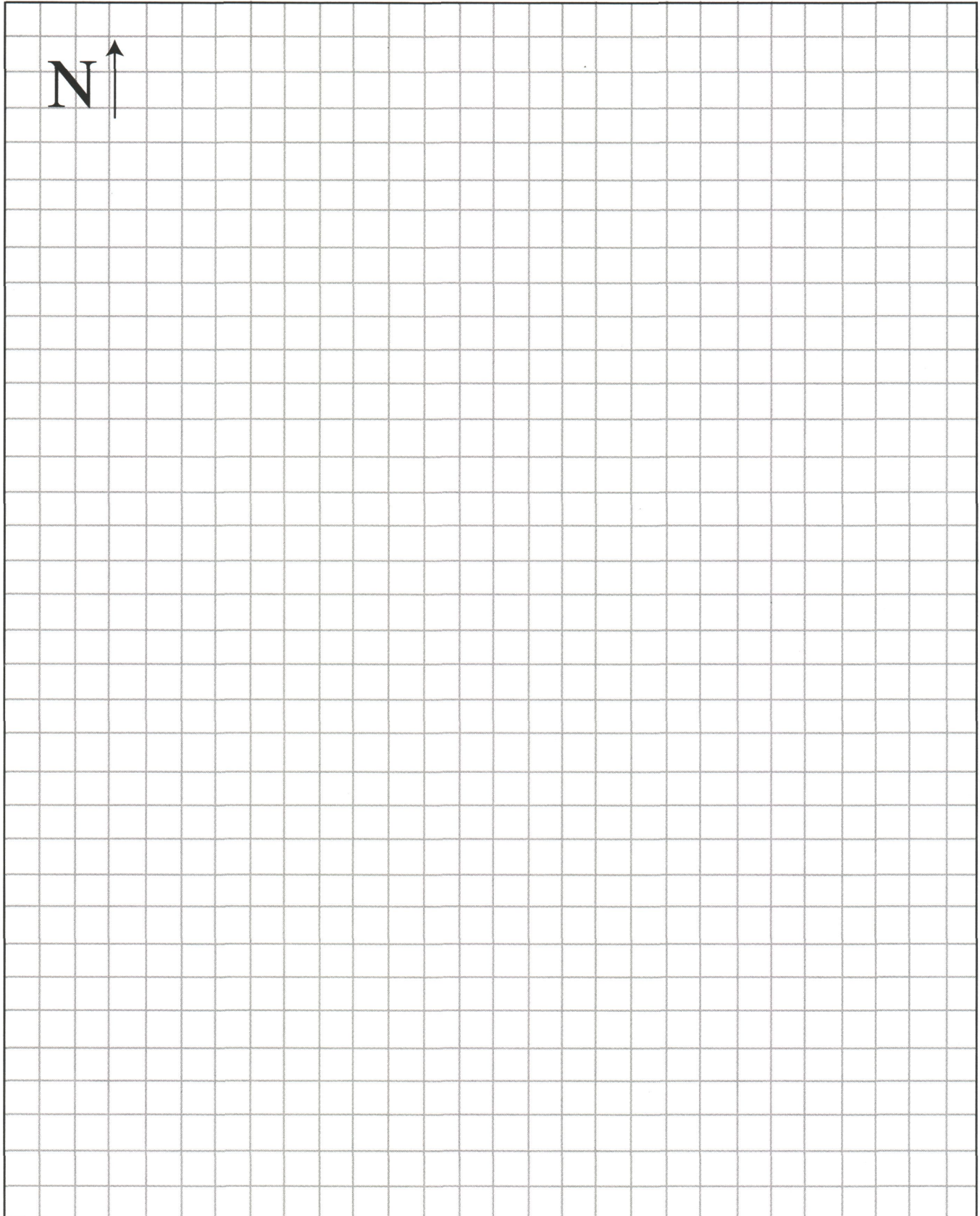
Farmstead site example:



Farmstead site map

Date: _____

Site address: _____





PESTICIDE EMERGENCY INFORMATION

For any type of an emergency involving a pesticide, immediately contact the following emergency information centers for assistance.
Current as of February 2002



Human Pesticide Poisoning

P O I S O N C O N T R O L
From anywhere in the United States, call

1 - 8 0 0 - 2 2 2 - 1 2 2 2

Special Pesticide Emergencies

Animal Poisoning

Your veterinarian:

Phone No. _____

or

Animal Health Diagnostic
Laboratory (Toxicology)
Michigan State University:
Michigan State University:

(517) 355-0281

Phone No. _____

and

Fire Marshal Division,
Michigan State Police:
M - F: 8-12, 1-5

(517) 322-1924

* **Telephone Number Operated 24 Hours**

Pesticide Fire

Local fire department:

Traffic Accident

Local police department or
sheriff's department:

Phone No. _____

and

Operations Division,
Michigan State Police:

*** (517) 336-6605**

Environmental Pollution

District Michigan
Department of
Environmental Quality
(MDEQ) Office Phone No.

Phone No. _____

and

MDEQ Pollution
Emergency Alerting
System (PEAS):

*** 1-800-292-4706**

also

*** 1-800-405-0101**

Michigan Department of
Agriculture Spill Response

Pesticide Disposal Information

Michigan Clean Sweep, Michigan
Department of Agriculture Environmental
Stewardship Division.

Monday - Friday: 8 a.m.-5 p.m.

(517) 335-6529

National Pesticide Information Center

Provides advice on recognizing
and managing pesticide poisoning,
toxicology, general pesticide
information and emergency response
assistance. Funded by EPA, based at
Oregon State University

7 days a week; excluding holidays

6:30 a.m. - 4:30 p.m. Pacific Time Zone

1-800-858-7378

FAX: 1-541-737-0761