



ASSESSING YOUR PESTICIDE STORAGE & HANDLING PRACTICES

WHY SHOULD YOU BE CONCERNED?

Pesticides play an important role in gardens and on farms, eliminating unwanted weeds and insects.

However, pesticides must be stored and handled safely to protect both people and water quality. Two areas of concern related to pesticides are (1) storage practices and (2) handling practices, including mixing, loading, application, and disposal.

Pesticides work by interfering with the life processes of weeds and insects. Some pesticides can also interfere with human life processes (be toxic to humans).

Pesticides are usually not present in water supplies in concentrations high enough to cause acute health effects such as chemical burns, nausea and convulsions. Instead, they typically occur in very

small amounts, but can cause chronic health problems (such as cancer, birth defects, etc.) from prolonged exposure.

WHAT CAN YOU DO?

Use this worksheet to address questions you have answered **Yes** to or **do not know** the answer to in the **Assessing Your Pesticide Storage and Handling Practices** section of your **Home and Farm Water Quality Assessment**. This worksheet will help you develop an Action Plan to establish practices that reduce the risks of contamination to your drinking water supply.

PROTECTING YOUR WATER QUALITY THROUGH A HOME & FARM ASSESSMENT



A PARTNERSHIP PROGRAM FOR VOLUNTARY POLLUTION PREVENTION

UVI Cooperative Extension Service

VI Resource Conservation and Development Council, Inc.

USDA Natural Resources Conservation Service



ASSESSING YOUR PESTICIDE STORAGE AND HANDLING PRACTICES

YES	NO		
☐	☐	1.	Do you use or store pesticides (including weed and/or bug killer) on your property?
☐	☐	2.	Do you mix, apply or store pesticides without reading the label first?
☐	☐	3.	Are your pesticides stored on wood, gravel, soil, or on a concrete pad without a curb?
☐	☐	4.	Do you have pesticide containers that are damaged, leaking, and/or rusting?
☐	☐	5.	Do you mix, apply or store pesticides within 150 feet of any water supply system (well or cistern) or water body?
☐	☐	6.	Do you fill your sprayer container or tank directly from a drinking water supply system (well or cistern)?
☐	☐	7.	Do you fill your sprayer container or tank with a hose that does not have a check valve or put the hose in the tank so that it is below the water line during filling?
☐	☐	8.	Do you leave your sprayer container or tank unattended while filling?
☐	☐	9.	Do you rinse out your sprayer container or tank near your water supply system (well or cistern) or surface water body?
☐	☐	10.	Do you apply pesticides without recalibrating your sprayer?
☐	☐	11.	Has it been longer than five (5) years since you attended a pesticide applicator training course or workshop?

If you have answered **Yes** or **do not know** the answer to any of these questions, refer to this factsheet for valuable information that will help you develop an Action Plan to reduce the risk of contamination to your drinking water supply and surrounding surface waters.

1. DO YOU USE OR STORE PESTICIDES ON YOUR PROPERTY?

Before you make a decision about storing pesticides, you need to balance cost, expected use, and risks associated with storing pesticides. Risks associated with storing pesticides include leaking containers, inadequately protected storage sites, and disposal of unwanted or unusable pesticides. You can safely store pesticides in small quantities (such as weed-killer, bug spray, flea and tick removal products, etc.) by keeping them in their original container in a dry, secure area, out of reach of children and pets.

Even in large quantities, pesticides can be stored without threat to water quality. On the other hand, relatively small amounts of chemicals may pose a significant hazard to surface and ground waters if stored in an inadequate facility or location.

The storage facility should be located downhill from your water supply and other sensitive areas. If you store pesticides on a regular basis, you should consider building a properly designed storage system with a concrete floor, secondary containment, and a temperature and humidity-controlled environment. In all cases, make sure your pesticides are protected from vandalism and secured from children and animals.



2. DO YOU MIX, APPLY, OR STORE PESTICIDES WITHOUT READING THE LABEL FIRST?

Before buying, storing, or applying any kind of pesticide, read the label to make sure the product will do what you want it to do. Be sure it can be applied safely and that you have all the necessary safety equipment.

Always follow the instructions on the label for proper use and storage of the product. The label also provides additional information such as the re-entry period (how long you must keep people and animals out of the building, yard, or field), first aid, and other hazards.



3. ARE YOUR PESTICIDES STORED ON WOOD, GRAVEL, SOIL, OR ON A CONCRETE PAD WITHOUT A CURB?

Containment is very important in the event of an accidental spill, especially if you store large quantities of pesticides for landscaping or farming use.

Small quantities of pesticides should be stored in a dry area, inside a second container such as a metal or heavy-duty plastic bucket or tub that can hold the quantity of pesticide stored should the original container leak. Pesticides should be stored in an area secure from children and pets.

For large quantities of stored pesticides, they should be kept in a separate shed from the home. The floor of the pesticide storage site should be made of sealed concrete or some other easily cleaned, non-permeable material and should hold a minimum of 125% of total stored volume. Carpeting, wood, soil, and other absorbent floors should not be used because they are difficult or impossible to decontaminate in the case of a leak or spill.



For easier clean-up, shelving and pallets should be made of non-absorbent material such as plastic or metal. If wood or fiberboard materials are used, they should be coated or covered with plastic, polyurethane or epoxy paint.

4. DO YOU HAVE PESTICIDE CONTAINERS THAT ARE DAMAGED, LEAKING AND/OR RUSTING?

A major concern about the condition of pesticide containers is the potential for leaks and spills. If you have containers that are rusting or have holes or tears, the pesticide should be used or disposed of immediately. You should monitor your pesticide storage area for leaks.

Be careful to keep all pesticides in their original containers with their proper labels. Information on the pesticide label is invaluable for proper cleanup, disposal, and emergency action if the pesticide is spilled or leaked. Information about pesticide disposal programs for old and unused pesticides can be obtained from the UVI Cooperative Extension Service, VI Department of Agriculture, DPW Division of Environmental Services, or DPNR Division of Environmental Protection.



5. DO YOU MIX, APPLY OR STORE PESTICIDES WITHIN 150 FEET OF ANY WATER SUPPLY SYSTEM (WELL OR CISTERN) OR SURFACE WATER?

Mixing, loading, storing, or applying pesticides near or directly uphill from your water supply system is not recommended. Use a secondary water source on a properly constructed mixing and loading pad; or field mix and load with a nurse tank to reduce risks. Pesticides should always be stored in a secured, spill-proof area or facility away from your water supply's pump room, or for large quantities, downhill from your water supply.



Pesticides should also be mixed, applied and stored away from surface waters to prevent contamination from spills or leaks.

6. DO YOU FILL YOUR SPRAYER CONTAINER OR TANK DIRECTLY FROM A DRINKING WATER SUPPLY SYSTEM?

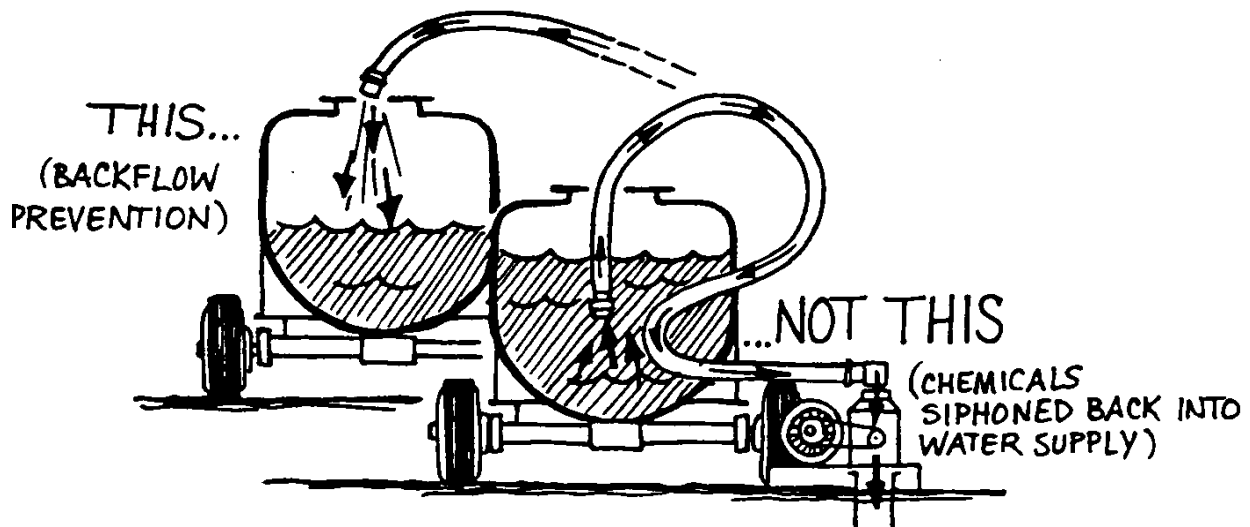
Filling your sprayer directly from your drinking water supply system is not recommended. Your drinking water supply has a greatly increased chance of being contaminated if you fill your sprayer directly from it. Using a secondary water source such as a holding or nurse tank will eliminate this risk.

When filling directly from your water supply, the mixing and loading area should be at least 150 feet downslope from your drinking water supply.

Although this will reduce risks from spills, it will not prevent back-siphoning. Back-siphoning happens when the flow of water is reversed, possibly taking some of the pesticide back into the well.

7. DO YOU FILL YOUR SPRAYER CONTAINER OR TANK WITH A HOSE THAT DOES NOT HAVE A CHECK VALVE OR PUT THE HOSE IN THE TANK SO THAT IT IS BELOW THE WATER LINE DURING FILLING?

Always keep your water hose or pipe raised **ABOVE** the level of the pesticide mixture. This will prevent water and pesticides from being drawn back into your water supply if the pump fails or is shut off. A back-siphoning device or check valve should always be used when filling with a pesticide tank. These can be found at a farm supply store, hardware store, or irrigation supply outlet. They are relatively inexpensive and reduce the risk of contamination to your drinking water supply.



8. DO YOU LEAVE YOUR
SPRAYER CONTAINER OR TANK
UNATTENDED WHILE FILLING?

You are responsible for the proper mixing and loading of all the pesticides you use. When a sprayer tank is left unattended, the risk of contamination from spills or over filling increases. Repeated pesticide spills due to tank overflow allows pesticides to concentrate in the soil and increases their potential to move into surface or ground waters. There is also a risk of back-siphoning pesticides directly into the water source if the pump should stop while filling the tank. Careful loading and mixing of pesticides will reduce the risks to water quality and human health.

9. DO YOU RINSE OUT YOUR
SPRAYER CONTAINER OR TANK
NEAR YOUR WATER SUPPLY SYSTEM
(WELL OR CISTERN) OR A WATER
BODY?

After pesticide applications, clean all equipment used. Cleaning should be done away from your drinking water supply system and surface water bodies (guts, ponds, coastal waters). The rinse water should be used in the next spray mix or it should be applied to the field you just finished spraying. A clean water tank or nurse tank on the sprayer is a convenient way to have clean water in the field to wash out your sprayer.



10. DO YOU APPLY PESTICIDES WITHOUT RECALIBRATING YOUR SPRAYER?

The use of calibrated equipment can be as important as the selection of the pesticide you are applying. Calibrating your equipment will reduce problems such as drift, non-uniform coverage, failure of the pesticide to reach a targeted organism, and exposure to non-target organisms.

Before calibrating your sprayer, make sure your equipment can apply the product according to the label rate. Each spray nozzle should handle within 5 percent of volumes required. Proper calibration of appropriate equipment ensures that pesticides are applied uniformly according to label rates.

11. HAS IT BEEN LONGER THAN FIVE YEARS SINCE YOU ATTENDED A PESTICIDE APPLICATOR TRAINING COURSE OR WORKSHOP?

The Virgin Islands has regulations requiring an applicator to be trained and licensed in order to apply restricted use pesticides. **ALL** commercial pesticide applicators **must** be certified. Private individuals applying **restricted use** pesticides must also be certified. Certifications (both commercial and private) are only valid for 4 years, then applicators must become re-certified.

However, if you are applying **any** pesticides, you should consider taking an applicator training course and obtaining your certification. Contact your local Cooperative Extension Service for information on classes to become a certified pesticide applicator.

FOR MORE INFORMATION

This assessment does not cover all potential risks on your property that could impact the quality of your drinking water. It is designed to: create an awareness of potential risks to water quality on your property; provide voluntary solutions to reduce pollution risks; and develop an action plan to protect your drinking water supply. Individual areas and states may vary in requirements on minimum standards for water supply protection. Always check with your local offices listed in the reference section of each worksheet before making changes to your water supply system. There are other, more detailed, Farm*A*Syst/Home*A*Syst programs available. If you have specific questions about protecting your drinking water, contact your local Extension Service Office, local USDA Natural Resources Conservation Service Office, or your local Soil and Water Conservation District Office. You may also contact the National Farm*A*Syst/Home*A*Syst Office at B142 Steenbock Library, 550 Babcock Drive, Madison, Wisconsin 53706-1293, Phone (608) 262-0024.

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If You Answered "Yes" to the Following Questions	What to Do	Who to Call	Other References	What You Did
Question 1	Always read the label.	VI Department of Agriculture (DOA), UVI Cooperative Extension Service (CES), or crop consultant.		
Question 2	Assess type and quantity of pesticide to be stored.			
Questions 3,4	Develop a pesticide storage and handling plan. Dispose of unused products according to label instructions.	UVI-CES, DOA, USDA-NRCS, or Conservation District office (VICD).		
Questions 5,6,7,8,9	Try not to fill pesticide sprayer directly from drinking water supply (well or cistern). Use a hydrant (located at least 150 feet from water supply), or a water holding tank.			
Question 10	Make sure your fill hose has a backflow device and is not below the water tank level.	UVI-CES or private crop consultant for calibration training.		
	Get pesticide applicator training and become certified. Always read pesticide label.			
	Spread rinse water on crop field or lawn.	UVI-CES.		
	Check your equipment on a regular basis. Always calibrate sprayer prior to applying pesticides. Never leave spray tank unattended.			

PHONE NUMBERS:

DOA: 778-0997 (St. Croix); 774-5182 (St. Thomas - St. John)

UVI-CES: 692-4080 (St. Croix); 693-1080 (St. Thomas - St. John)

USDA-NRCS: 692-9662, x. 106

VICD: 692-9632, x. 101