

Protecting Groundwater from Pesticides

Pesticides used to control weeds, insects and plant diseases have the potential to contaminate groundwater which is used as a drinking water source. Improper disposal, accidental spills, excessive or inappropriate use, misapplication, overuse and poor storage practices are all ways in which pesticides can contaminate groundwater supplies. Proper use of pesticides on your property is an important step toward preventing groundwater contamination.



Pesticides are used almost everywhere and include:

- ▶ Herbicides such as weed killers, weed and feed products and cut stump treatments.
- ▶ Insecticides such as garden dusts and ant killers.
- ▶ Fungicides such as rose and flower sprays and anti-mildew paints.
- ▶ Rodenticides such as rat poison.
- ▶ Disinfectants such as swimming pool cleaners, bleach, ammonia, pool chemicals, toilet bowl cleaners, flea collars and flying insect sprays.

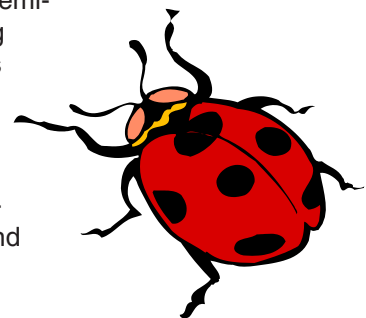
You can prevent contamination of groundwater by observing the following practices when you buy and apply pesticides:

Pesticides are not always necessary to control pests. Try non-chemical control methods. Remove pest habitats by cleaning up garbage and removing leaf piles, standing water and food scraps. Encourage beneficial insects such as spiders, ladybugs and lacewings which eat pests. Remove weeds by hand.

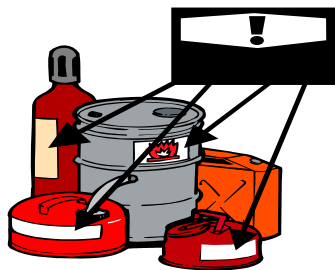
Learn to identify pests correctly so that you use the proper control techniques. Pests are listed on the label instructions. Do not confuse pests with insects which are beneficial such as the Big Eyed Bug, Ground Beetles and Ladybugs.

Before purchasing a pesticide learn as much as you can about the product and its potential hazards by reading the label. The label contains information concerning directions for use, application site and rate, storage and disposal, active ingredients, protective equipment needs and the types of pests controlled.

Buy only the amount of pesticides that you need for immediate use. The safest approach is to limit the amounts and types of pesticides stored. Keep products in their original containers with the label intact



Store pesticides out of the reach of children in a secured area such as a locked cabinet. Pesticides should not be stored over soil that is coarse or sandy or over surfaces that drain easily, such as gravel, because the pesticide can then easily move through the soil into the ground water. Storing pesticides in their original containers in a tray or tub offers an additional safeguard against leaks or spills.



Apply pesticides according to label instructions. Apply the minimum amount of pesticide directly to the crop or pest rather than to the soil. Using more is not better. Use pre-mixed pesticides or ready-to use pesticides, instead of ones you have to mix yourself.

Pesticides should not be applied within the Zone I protective radius of a public drinking water supply.

Apply chemicals based upon an understanding of the physical features of your property. Pesticides will drain to groundwater more easily in sandy soils than in clay soils. Pesticides should not be applied within the Zone I protective radius of a public drinking water supply. Most pesticides should not be applied if rain is forecast within 24 hours of application, unless label directions state otherwise.

If a spill occurs, the contaminated area should not be hosed down. This will cause the pesticide to spread and infiltrate into groundwater. Absorbent material such as vermiculite, clay, pet litter or activated charcoal should be on hand along with a garbage can and shovel to quickly contain and clean up any spills.



Dispose of pesticides properly. Take unused, unwanted and waste pesticides, pesticide containers and partially full aerosols to a local hazardous waste collection event. Do not dispose of them in the trash.

Any questions or concerns about pesticide use should be directed to:

The Pesticide Bureau at the Massachusetts Department of Food and Agriculture (DFA),
251 Causeway Street, Boston, MA 02114. Telephone: 617- 626-1700. Website: www.massdfa.org

Pesticide Bureau publications include “An Environmentally Sound Approach to Lawncare”, “IPM: A Kit for Building Managers” and “Guidelines for Storage, Mixing and Loading of Pesticides”. All publications are available from DFA or are downloadable from the Pesticide Bureau website: www.massdfa.org/pesticide.htm

For information concerning drinking water protection, contact:

The Bureau of Resource Protection at the Department of Environmental Protection (DEP).
Telephone: 617-292-5770. Website www.state.ma.us/dep

To dispose of unwanted pesticides:

Check for local household hazardous waste events with the Bureau of Waste Prevention at the Department of Environmental Protection (DEP). Telephone: 1-800-343-3420. For immediate assistance in the event of a pesticide poisoning incident, contact DEP at 1-800-682-9211.