MDA PESTICIDE INFORMATION SHEET

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No. 16

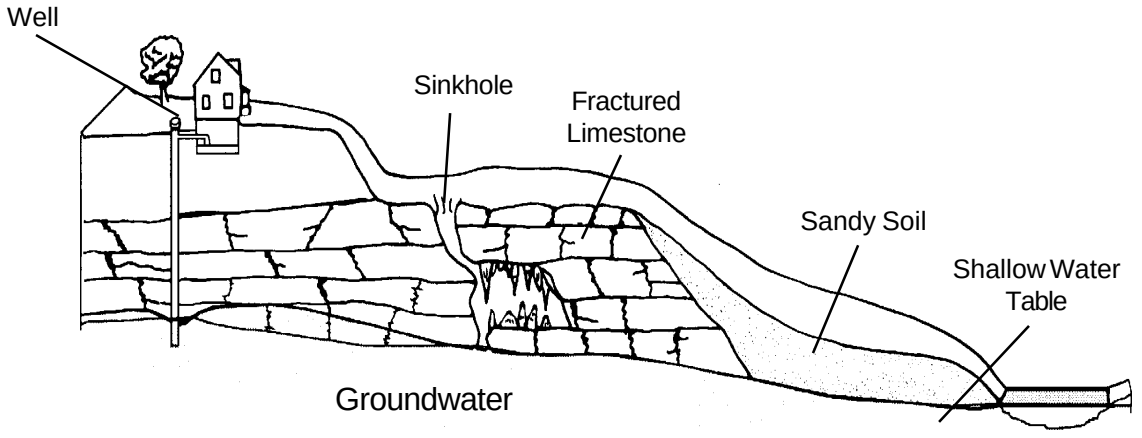
PESTICIDE BEST MANAGEMENT PRACTICES (BMP's)

The protection of the nation's surface water and groundwater resources has become one of the primary environmental issues facing pesticide applicators. This is especially true in Maryland with the on-going efforts to restore the Chesapeake Bay. Maryland is also comprised of a diverse geological makeup that ranges from the sandy soil and shallow water tables of the Eastern Shore to the fractured limestone areas of Central and Western Maryland.

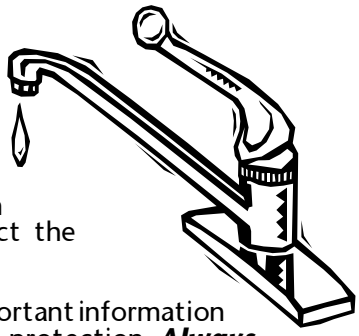
Pesticides can reach surface water by running off the application site following a heavy rainfall and into neighboring streams and rivers or sink holes. Pesticides can also leach through the soil profile into the groundwater. Contamination resulting from either of these sources is classified as *"non-point source"* contamination. Water contamination can also be the result of a direct or specific source, such as a spills or backsiphoning during filling of pesticide application equipment. This type of contamination is referred to as *"point source"* contamination.

It is the responsibility of ***all*** pesticide applicators to ensure that they are using every means available to prevent pesticides from contaminating Maryland's surface water and groundwater resources. Pesticide applicators can greatly reduce the risk of either point or non-point source contamination from pesticides by utilizing Best Management Practices (BMP's). BMP's are effective, common sense practices that emphasize proper mixing, loading and application of pesticides and also include methods that should be used before, during and after application.

Identify The Vulnerability Of The Area



When these recommended Best Management Practices are followed the potential to cause an adverse effect on the environment will greatly be reduced.



- ***Know The Application Site -*** Scout the area to evaluate the extent of the pest problem in order to select the appropriate control method. Identify environmentally sensitive areas and learn how the soil types and the layout of each application site affect the movement of water, both through and across soil.

- ***Read And Follow Label Directions -*** Pesticide labels contain important information about applicator and environmental safety, including water quality protection. ***Always follow label directions.***

- ***Match Application Rates To The Pest Problem -*** Every pesticide label specifies application rates. Carefully consider all aspects of the pest problem, such as the pest or pests, level of infestation, location, and environmental considerations (i.e., soil type, organic matter).

- ***Do Not Mix And Load Near Water -*** Pesticides can reach groundwater and surface water as a result of discharges or spills that occur during mixing and loading operations. Mixing and loading should be done as far as possible (at least 50 feet) from wells, lakes, streams, rivers and storm drains. When possible, mix and load the pesticides at the site of application. Applicators should also consider the use of a liquid-tight mixing and loading pad. Be sure all containers being transported are secured.

- ***Prevent Backsiphoning -*** When filling any pesticide spray tank from a well or other water source, be sure the end of the hose stays above the spray solution in the tank. Backsiphoning can occur when the end of the fill hose or pipe falls below the level of the solution in the tank and there is a drop in water pressure. Use an approved anti-backsiphoning device or an air break in the water system.

- ***Calibrate Application Equipment Properly -*** Frequently check and maintain spray nozzles, hoses, gauges and tanks. Proper calibration is the key to applying accurate rates of pesticides. Improper calibration can result in too much or too little product applied, irregular distribution and poor pest control. Inaccurate tank volumes and pressure gauges or worn nozzles also may cause improper application. Inspect application equipment before every use.

- ***Delay Pesticide Applications If Heavy Rain Is Forecast -*** Pesticides are most susceptible to runoff from heavy rains during the first several hours after application.

- ***Avoid Overspray And Drift -*** Check the pesticide label for application precautions or restrictions during windy conditions. Wind speed, temperature and humidity all affect pesticide spray drift. Drift can be reduced by lowering boom heights and using nozzles that produce large droplet sizes.

- ***Store Pesticides In A Safe Place -*** Pesticides need to be stored in a secure place and should be stored in their original containers with the labels clearly visible. Pesticides must be stored at least 50 feet from any well unless they are stored in secondary containment.

- ***Properly Dispose Of Pesticide Containers -*** Information about container disposal is on the pesticide label. Containers should be triple or pressured-rinsed thoroughly after use, punctured and disposed of in accordance with label directions or offered for recycling as part of the Maryland Department of Agriculture's program. Sprayers should be cleaned at the application site whenever possible and at a safe distance from wells, lakes, streams and storm drains. The rinsate should be sprayed on a site that is listed on the pesticide label or used as makeup water in the next tank mix. Be sure label rates are not exceeded.

- ***Develop An Emergency Response Plan -*** Anyone who stores, handles or uses pesticides should have an emergency response plan in case an accident occurs.

For further information on BMP's, contact the Maryland Department of Agriculture, Pesticide Regulation Section, 50 Harry S. Truman Parkway, Annapolis, Maryland 21401.