



*A Message from the Department of Environmental Quality's  
Drinking Water Protection Team*



## **Best Management Practices for Irrigation Wells and Farmers Using the Local Potable Water Supply**

Take precautions around a well. Do not mix or apply chemicals near your well. When loading and mixing pesticides, use a long hose to fill the tank **at least 100 ft from the well**. Pesticide mixing and loading increase the chances for spills. Be very careful when mixing chemicals or applying them uphill from your own or your neighbor's well, or a public supply well.

- **Avoid cross-connections.** A cross-connection is any temporary or permanent connection between a public water system or consumer's potable (i.e., drinking) water system and any source or system containing non-potable water or other substances. An example is the piping between a public water system or consumer's potable water system and an auxiliary water system, cooling system, or irrigation system. Cross-connection can lead to backflow. Backflow is the undesirable reversal of flow of nonpotable water or other substances through a cross-connection and into the piping of a public water system or consumer's potable water system.
- **Avoid back-siphoning.** A hose placed into the pesticide mixture could back-siphon directly into your well if the pump is turned off or if it quits due to power failure. If you are using the local public supply as your water source and a line break occurs, the mixture will back-siphon directly into and contaminate the public water supply. Always keep the end of the hose above the fluid level in the tank. Backflow prevention devices must be installed on sink faucets and water lines to prevent pesticides from being siphoned into the water system. The device should be installed on the downstream side of any shut-off valve and above the level to which an outside water hose may be elevated.

### **Common devices to prevent backflow are:**

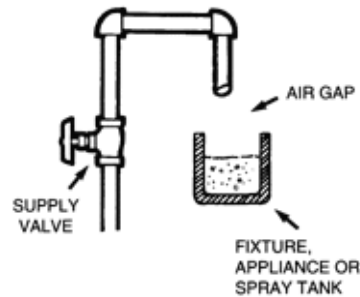
1. Air gap.
2. Atmospheric vacuum breakers (AVB), including hose connection vacuum breakers.
3. Pressure-type vacuum breakers (PVB).
4. Double-check valves (various arrangements).
5. Reduced pressure zone assembly.



***"Protect Your Water One Drop At A Time"***

This is the first printing of this public document and was published at a total cost of \$205.00 for 500 copies by the Louisiana Department of Environmental Quality, P.O. Box 4314, Baton Rouge, Louisiana 70821-4314 to provide the public with environmental information under the authority of La. R.S. 30:2011. The material was printed in accordance with the standards for printing by state agencies established pursuant to R.S. 43:31 of the Revised Louisiana Statutes.

An **air gap** is considered the maximum protection available against backpressure backflow or back-siphonage. An air gap is a vertical, **physical** separation between the end of a water supply outlet and the flood-level rim of a receiving vessel. This separation must be at least twice the diameter of the water supply outlet and never less than one inch.



Avoid locating loading and mixing areas near wells, high runoff areas or surface water bodies, and use an impervious surface such as concrete for these activities.

For more information, contact your local county agent at the LSU Ag Center Research and Extension Service at 318-253-7526.

**References:**

Department of Water Supply  
County of Maui  
200 South High Street  
Wailuku, HI 96793-2155  
Telephone (808) 270-7199  
Fax (808) 270-7833  
<http://mauiwater.org/BMPfarm.html>

State of Florida  
Dept. Of Environmental Protection  
Division of Water Facilities  
Bureau of Water Facilities Regulation  
Drinking Water Section (MS 3520)  
2600 Blair Stone Road  
Twin Towers Office Building  
Tallahassee, FL 32399-2400  
(850) 487-1762  
<http://www.dep.state.fl.us/water/wf/dw/>

Cooperative Extension Service  
Michigan State University  
East Lansing, MI 48824  
Extension Bulletin E-2349, February 1993  
[http://www.ag.uiuc.edu/~vista/html\\_pubs/back/back.htm](http://www.ag.uiuc.edu/~vista/html_pubs/back/back.htm)

Virginia Polytechnic Institute and State University  
Blacksburg, VA 24061  
Best Management Practices for Irrigation  
Publication Number 442-901, posted February 2000  
<http://www.ext.vt.edu/pubs/farmasyst/442-901a/442-901a>