



Agricultural Engineering Update



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AEU-38

WHAT IS YOUR FARM'S POTENTIAL TO POLLUTE YOUR DRINKING WATER SUPPLY

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The following list of questions are a useful guide to assess whether farm and/or home activities or the type of well contribute to polluting your private drinking water well. If you answer "yes" for one or more of the questions than you should begin a program of annual well testing. It is recommended that a coliform bacteria test and nitrate test be performed annually. The annual cost for these tests performed by a testing laboratory is \$26.00. There is an additional test that is available that determines if there is the presence of organic halides (chlorinated or brominated organics) called a TOX test. This acronym is not to be confused with toxic. Organic halides include tihalomethanes (THM's), PCB's, pesticides, herbicides and other halogenated organics (such as some solvents). The TOX test is recommended for initially testing a new drinking water source. It is also recommended to be periodically performed, annually if it is financially possible. This is an expensive test and costs approximately \$75.00. Remember it is the responsibility of the private water source owner to assure the safety of the drinking water.

ADDITIONAL REFERENCE MATERIAL

(Available from the Agricultural Engineering Department)

- Water Supply Quality and Testing, AEN-55
- Certified Water Testing Laboratories (Update - 1988), AEU-4
- Acceptable Paints, Coating, Sealants, and Liners for Potable Water Systems (Update - 1988), AEU-28
- Drinking Water Analysis Costs, AEU-37
- Lead in Your Drinking Water, AEU-39

CHECK LIST

- Do you have limestone bedrock fairly close to the surface?
(Cracks and sinkholes provide fast movement of runoff and pollutants to groundwater and wells many miles away.)
- Do you have groundwater tables within 30 feet of the surface?
(This is the water most easily contaminated.)
- Do you have a hand dug well less than 50 feet deep?
(These are generally old, not properly cased or grouted. Easily contaminated by bacteria, rodents, and surface water runoff.)
- Do you have a well pit?
(Easily contaminated by surface runoff, flooding and rodents.)
- Do you have a buried well head?
(Easily contaminated.)
- Do you have an older submersible well pump?
(Many older pumps contain lubricating oil with highly toxic PCB's which could contaminate your whole water system.)
- Do you have water pipes or pipe joints soldered with lead?
(Lead is highly poisonous and could leach into drinking water, especially if the water is acidic or very soft.)
- Do you use your well for both livestock and household use?
(Potential for cross contamination exists.)
- Do you have livestock or poultry on a feedlot, a manure lagoon or manure holding facility within 100 feet of a well?
(Bacteria, nitrates and disease may reach your well water.)
- Do you have a septic tank or field within 100 feet of a well?
(Bacteria, nitrates and disease may reach your well.)
- Do you have a farm dump?
(Improperly disposed household and farm chemicals and animals.)
- Do you have an underground fuel storage tank?
(Average life of steel tanks is 40 years or less.)
- Do you dump or spread used oil to control road dust?
(EPA considers this a hazardous waste, better recycle it.)
- Do you mix, wash, and/or empty pesticide/herbicide application machinery or storage tanks near your well?
(These chemicals can leach into the groundwater.)

[These questions were adopted from "Groundwater and Environmental Pollution, Self-Help Checklist for Farmstead and Farm Fields", American Farm Bureau Federation, Park Ridge, IL.]