

# FAYETTE COUNTY GROUNDWATER NEWS

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## SOURCE WATER CONTAMINATION: HOW TO PREVENT IT FROM HAPPENING

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### OUR MISSION:

To provide for the conservation, preservation, protection, recharge, and prevention of waste of groundwater and of groundwater reservoirs for the people of Fayette County.

Fayette County Groundwater News is a quarterly publication of the Fayette County Groundwater Conservation District. Subscriptions are free upon request.

The District offers free brochures and information sheets concerning many aspects of water conservation and protection. Just drop by the office during regular office hours.

### Protect Your Water- Register Your Well!

The Fayette County Groundwater Conservation District is conducting a well inventory throughout Fayette County. You can help by registering your water well. This will assist the District in estimating how much water the people of Fayette County need now and for projected growth. Forms can be found on the District's website or by contacting us at (979) 968-3135.

Source water is untreated water from streams, rivers, lakes, or underground aquifers which is used to supply private wells and public drinking water. Most public and some private well drinking water is treated before it enters our homes. While some treatment is usually necessary, the costs of treatment and risks to public health can be reduced by ensuring that source water is protected from contamination.

Most source water is defined as surface or ground water. If you live in a large metropolitan area, the majority of your drinking water probably originates from a surface source such as a lake, stream, river or reservoir. The land area that can have an impact on these water bodies is called an aquifer recharge area, and can be delineated on a map.

If you live in a smaller community, like Fayette County, or have a private well, it is more likely that your water originates from underground and is pumped to the surface through a well. Ground water comes from natural underground layers, often of sand or gravel, that contain water. These formations are called aquifers. The land area that can have an impact on the quality of this underground water is called the watershed.

### What are the Threats to Source Water?

There is no such thing as naturally pure water. In nature, all water contains some impurities. There are many contaminants that may be present in source water before it is treated. These include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can occur naturally or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides**, which may

come from a variety of sources such as agriculture, storm water runoff, and residential uses.

- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

### What contaminants may be found in drinking water?

There is no such thing as naturally pure water. In nature, all water contains some impurities. As water flows in streams, sits in lakes, and filters through layers of soil and rock in the ground, it dissolves or absorbs the substances that it touches. Some of these substances are harmless. In fact,



Photo courtesy of U.S. Environmental Protection Agency ©2007

some people prefer mineral water precisely because minerals give it an appealing taste. However, at certain levels minerals, just like man-made chemicals, are considered contaminants that can make water unpalatable or even unsafe.

Some contaminants come from erosion of natural rock formations. Other contaminants are substances discharged from factories, applied to farmlands, or used by consumers in their homes and yards. Sources of contaminants might be in your neighborhood or might be many miles away. Your local water quality report tells which contaminants are in your drinking water, the levels at which they were found, and the actual or likely source of each contaminant.

### Private wells

There are three types of private drinking water wells: dug, driven, and drilled.

Proper well construction and continued maintenance are keys to the safety of your water supply. The well should be located so rainwater flows away from it. Rainwater can pick up harmful bacteria and chemicals on the land's surface. If this water pools near your well, it can seep into it, potentially causing health problems. Water-well drillers and pump-well installers can be found in

the phone directory or by calling the District office. The contractor should be bonded and insured. Make certain your ground water contractor is registered or licensed with the State.

**What you can do**

To keep your well safe, you must be sure possible sources of contamination are not close by. Fayette County Groundwater Conservation District Rules require the following distances:

- Septic Tanks, 50 feet
- Livestock yards and Septic Leach Fields, 100 feet
- The well casing must extend 24" above the 100 year flood plain elevation
- Sewage Plants, Solid Waste disposal sites and land irrigated by sewage effluent, 500 feet.
- Sewage wet well, lift station or drainage ditch carrying industrial waste discharge, 300 feet

Many homeowners tend to forget the value of good maintenance until problems reach crisis levels. That can be expensive. It's better to maintain your well, find problems early, and correct them to protect your well's performance. Keep up-to-date records of well installation and repairs plus pumping and water tests. Such records can help spot changes and possible problems

with your water system. If you have problems, ask a local expert to check your well construction and maintenance records. He or she can see if your system is okay or needs work.

Protect your own well area. Be careful about storage and disposal of household and lawn care chemicals and wastes. Good

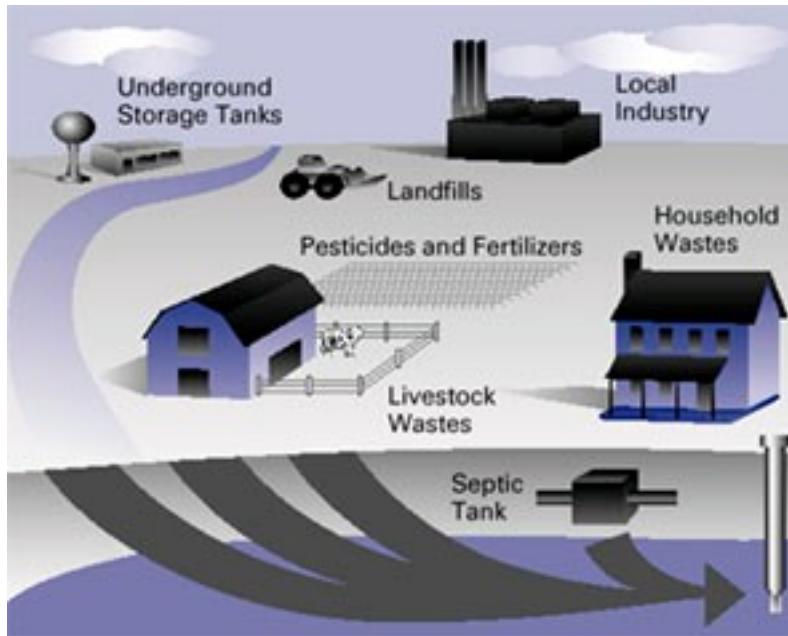


Diagram courtesy of U.S. Environmental Protection Agency © 2007

farmers and gardeners minimize the use of fertilizers and pesticides. Take steps to reduce erosion and prevent surface water runoff. Make sure your well is protected from the wastes of livestock, pets, and wildlife. Have your water tested periodically. It is recommended that water be tested every year for total coliform bacteria, nitrates, total dissolved solids, and pH levels. If you suspect other contaminants, test for those. Always use a state certified laboratory that conducts drinking water tests. Since these can be expensive, spend some time identifying potential problems. Be aware of your surroundings. As you drive around the area, take note of new

construction. Check the area paper for announcements about hearings or zoning appeals on development. (Information courtesy of U.S. Environmental Protection Agency, The Groundwater Foundation and Source Water Collaborative.)

**DISTRICT SEEKS PARTICIPANTS FOR WELL MONITORING PROGRAM**

The District is currently seeking volunteer participants for our well monitoring program. There's no fee involved and each volunteer well will have its water depth checked once a year. It's the desire of the District to have a network that encompasses the whole county and has multiple monitoring locations within each of the seven aquifers underlying Fayette County. If you're interested in participating in the program or if you'd like additional information, please call us at (979)968-3135 or come by the District offices located in the Agricultural Bldg, 254 N. Jefferson, Rm. 600 in La Grange.

**NEWSLETTER AVAILABLE VIA EMAIL**

The Fayette County Groundwater News is available via email. If you, or someone you know, would like to receive our quarterly publication via email rather than via the US Mail, please contact our office at (979)968-3135 or drop us an email at fcgcd@verizon.net.

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