TOMPKINS COUNTY HEALTH DEPARTMENT
Your Partner for a Healthy Community

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COLIFORM BACTERIA AND YOUR DRILLED WELL

A properly constructed and adequately cased drilled water well usually obtains its water at a depth where coliform bacteria are not present. All water in ponds, streams, and rainwater running over the ground surface contains harmful bacteria, viruses, and other organisms. These organisms die or are filtered out as water moves through the subsurface ground water environment. However, groundwater can be contaminated when there is insufficient filtration or travel time between the land surface and the ground water, such as inadequate separation distances from the well to sewage systems and other pollution sources. Some of the common ways in which bacteria can get into a well are as follows:

1. The pitless adapter can leak or the well casing can become cracked. Visually inspect the interior of the casing on a regular basis to make sure there are no cracks or leaks present.
2. Over time well casings may rust through, leaving holes near the ground surface where water can seep in and contaminate deeper ground water.
3. Surface water could enter the top of the well if the casing does not extend far enough above the ground. Consider extending the casing to at least 24" above the ground surface.
4. Bacteria can be introduced into a well when it is drilled, or when a pump is installed or serviced. Water wells should be sanitized after any service or installation work. Refer to the TCHD (Tompkins County Health Department) handout for directions on shock disinfecting wells.
5. Unsealed abandoned water wells can directly channel contaminated surface water into groundwater. Refer to the TCHD handout for more information regarding well abandonment.
6. Backflow can occur if water systems are not installed with properly functioning backflow prevention devices. Backflow prevention devices are essential to prevent any risk of bacteria being siphoned back into the well. For example, installation of an atmospheric vacuum breaker on each outside faucet will provide backflow protection if the end of a hose is accidentally submerged in material that could contaminate a well, such as lawn fertilizers, herbicides, swimming pools, or puddles.
7. Surface water and insects can easily enter the well through a poorly constructed or unsecured well cap. Several types of common well covers are not vermin proof. Look to make sure that the electrical conduit (where the wires enter the well) is sealed and the gasket around the well is tight and intact, so that when the cover is bolted down the gasket will be pushing into the well's casing. The well cover should include a downward facing screened vent that serves to prevent a vacuum forming within the well. Also make sure that bolts or screws are not missing from the well cover.

Homeowners should test their well water annually for coliform bacteria. Although most coliforms are harmless, they are an indication that disease-causing bacteria, viruses, or protozoa may be present in the drinking water. The TCHD maintains listings of certified testing laboratories.

If coliform bacteria are detected in your drinking water, the TCHD recommends making sure that the well is in good condition and shock disinfecting the well before collecting another water sample. Contact the TCHD for assistance and advice.

Inclusion Through Diversity