

Flooding May Pose Problem for Water Well Owners

By Ed Specht, Director, SCHD Environmental Health Division

One of the many services offered by the Stephenson County Health Department's Environmental Health Division is the testing of private wells. As floodwaters rise, private wells can become contaminated, especially if they are located in a pit, recessed area, or floodway. Surface water may contain a host of soluble or particle contaminants, and may collect around and over the well casing, potentially allowing it to run down and/or around the casing. As water is pumped from the well, this surface water is rapidly drawn into the drinking water supply.

Many well pits are not watertight, and thus act as funnels for surface water. If you notice a change in the taste, smell, or clarity of your well water, we recommend switching your drinking water supply to a different tested source and then testing your home well water supply. The Stephenson County Health Department has test kits available to private well owners for \$35 (which includes \$10 for the kit: two bottles, boxes, labels, forms, and instructions for the laboratory tests for coliform bacteria and nitrate, plus a \$25 shipping charge to the Springfield, IL Laboratory). Coliform bacteria and nitrate are the two most prevalent contaminants of groundwater in Northern Illinois. Once the water has been collected and tested, the Stephenson County Health Department will send the results to you, along with an explanation and recommendations. If the test indicates coliform bacterial contamination, disinfecting with chlorine is recommended.

For most drilled wells, one to two cups of granulated chlorine should be sufficient to disinfect a well. Deep wells may need a little more. Shallow driven wells should use no more than one cup of granular chlorine. If granular chlorine is not available, two to four gallons of liquid bleach can be used, or tablet chlorine can be used, if available. **NEVER USE TIME-RELEASED CHLORINE!**

Open the well cap and pour the chlorine into the well. Next you will circulate the water in the well. Using a garden hose serviced by the well, wash down the inside of the well casing until chlorine can be smelled coming out of the garden hose. At this point, chlorine is available in the water supply. If a hose is not available, buckets of water poured down the casing will help agitate the water.

Shut off the garden hose and turn on every faucet that is served by the well until chlorine can be smelled in the water. It is very important that all plumbing is supplied with chlorinated water, so be sure to run every faucet. You should also put your water softener (if applicable) on bypass.

Let the water sit in the plumbing with **minimal** water usage for 12 to 24 hours.

After the recommended standing time, take a garden hose and let the water run away from the area of your septic system for three to four hours, or until all of the chlorine smell is gone. This can be done by taste, smell, or both.

Go into your house and run each faucet until all chlorine is gone. This should take about three to five minutes.

If you have followed the above directions, at this point the water supply should be disinfected. Sometimes more than one chlorination may be needed to disinfect the water supply completely. It is recommended that the water supply be in use for at least ten days before retesting for bacteria. **However, do not drink the water again until the retest comes back negative for bacteria. (Or you may drink the water after boiling for two minutes)**

Infants and pregnant woman should not drink water with 10 or more milligrams per liter nitrate (as nitrogen). For most children over six months of age and adults, levels of 10 to 20 milligrams per liter do not pose a problem. Reverse osmosis treatment will reduce nitrate levels.

You can reduce risk of contamination by standing water in and around the by filling recessed areas around the well with soil. In the case of a well pit, extend the casing to at least eight inches above the ground surface or 24 inches above the high water level where flooding occurs, install a pitless adapter, collapse the pit, and fill with soil. Before filling, make sure the pit does not hold water. A licensed well driller must be contracted to extend the well casing.

Old abandoned wells in close proximity (200 feet) to newer wells can also be a hazard. Please take the time and resources to seal abandoned wells. Contact this office for information regarding sealing of abandoned wells.

The key to derailing future problems is to take time to prevent them in the first place.

For water well test kits, help sealing abandoned wells, or other information about private wells, call the Stephenson County Health Department's Environmental Health Division at 295 W. Lamm Road, in Freeport, at (815) 599-0344.