

WELL SEALING AND ABANDONMENT PROCEDURE GREENE COUNTY COMBINED HEALTH DISTRICT

According to Section 3701-28-17 of the State of Ohio Private Water System Rules, all private water systems (i.e. water wells) that are permanently removed from service must be sealed and properly abandoned to prevent contamination of ground water. In addition, all dry holes or wells which no longer produce water must be sealed.

Section 3701-28-03 of the Private Water System Rules states: "no person shall construct, alter or seal a private water system unless a valid permit has been issued."

Section 3701-28-09 of the Private Water System Rules describes the materials approved for sealing wells, dug wells, dry holes and other types of private water systems. **Bentonite and Cement Grout are most commonly used.** The Private Water System Rules are available on the Ohio Department of Health website; www.odh.ohio.gov – **Water System (Private) Program.**

The purpose of sealing or abandoning a well is to seal off the lower water producing aquifer from surface or upper aquifer contamination. An "aquifer" is an area of the ground that lies beneath the ground surface that produces water. It is extremely important to seal off old wells, otherwise contaminants from the surface zone can enter the lower, safer aquifer by means of a conduit or tube such as a well casing. For this reason, all wells permanently removed from service must be sealed and properly abandoned.

Proper sealing or abandonment involves sealing the well hole with material that truly seals and does not permit the movement of water. It would be very easy to bring in a small load of gravel and put it down the well. However, gravel is the worst material one could use to seal a well, so it may not be used. This is why grout is specified.

Grout is a material that is accessible to the homeowner. Coarse grade Bentonite, which is granular or pelletized clay, is the best material because it expands when it gets wet to seal the well hole and prevent the movement of water.

A simplified procedure to seal or properly abandon a typical drilled well includes the following steps. **A private water system sealing permit must be obtained from the Health District before sealing or abandoning the well.**

1. Obtain information about the depth of the well and the size of the well casing.
2. Determine the amount and volume of material required to seal the well.
3. Remove the well cap, pump, drop pipe, pitless adaptor and all items inside the well casing.
4. Cut the well casing off so that it is a minimum of 2 feet below existing grade.
5. Pour the bentonite or cement grout slowly into the well to prevent bridging within the well casing. Screen the bentonite before use to remove the fine bentonite powder.
6. Fill the well casing completely with grout from the bottom to the top.
7. Observe the well for at least 12 hours to make sure no settling occurs. Add additional grout to the well casing if settling occurs to completely fill the well casing.
8. Complete the water well sealing report and submit the report to the Health District when requesting an inspection of the sealed well.
9. Fill the hole over the well casing with clean soil material after the inspection.

A more detailed description of the sealing and abandonment procedure is available in section 3701-28-17 of the Private Water System Rules. The section contains information about sealing dug wells, cisterns, and other types of drilled wells with more complicated sealing procedures.

If you have any questions about sealing a well contact the Environmental Division of the Health District at 937-374-5606 or 1-866-858-3588. The Health District website is <http://www.gcchd.org>.