

Van Wert County Private Water System Program Update

Van Wert County Health Department

September 27, 2005

Submitting Documentation to the Health Department

All registered private water system contractors are probably aware that they are required to submit forms to the local health department to document work performed on private water wells. These forms include the well log, private water system completion form, and water well sealing report. Please keep in mind that Ohio Private Water System Rules require that a copy of the well log and a private water system completion form be submitted to the Health Department **within 30 days of the completion of the well**. When the installation of a replacement well involves the abandonment of an existing well, a copy of the water well sealing report must be submitted along with the other required forms listed above. All required documentation should be sent to the Health Department at the address indicated at the conclusion of this newsletter.

Alteration Permits

In addition to requiring installation permits for construction of new wells, the Ohio Private Water System Rules require that a permit be obtained prior to performing any alteration on an existing well. By definition, an alteration is a major change in the type of construction or configuration of a private water system. **This includes but is not limited to such changes as conversion of a buried seal well to a well with a pitless adapter installation, extending a casing above ground, drilling an existing well deeper, or changing the type of pumping**

equipment when the change requires making new holes or sealing existing holes in the casing of a well.

Any private water system contractor who receives a request to perform an alteration on an existing well should verify that the homeowner has obtained an alteration permit from the Health Department prior to performing the alteration.

Well Abandonment

When a homeowner applies for a permit for a replacement well, he or she is notified of the need to seal the old well if there is no longer a use for the well. This is necessary for the protection of the aquifer that supplies water to the new well. Over the past few months it has come to the attention of the Health Department that there are a wide variety of methods being used for well abandonment in Van Wert County, and that some of these methods will not adequately protect ground water from contamination.

The most highly recommended method of well sealing is pressure grouting the interior of the well in the same manner in which the annular space of a newly constructed well is sealed. This method requires use of a bentonite or cement-based grout and a grout pump, and can be performed by the well driller when the new well is drilled.

Another well sealing method that may be utilized by private water system contractors who may not have access to a grout pump is the dry pour method. This method requires use of a coarse grade or pelletized bentonite product such as hole plug. When pouring

such a product into the well, care must be taken to exclude fine particles and to keep the product from bridging when it encounters standing water in the well, as bentonite swells rapidly upon contact with water. This can be accomplished by pouring the material across a mesh screen.

The two methods mentioned above are very basic explanations of acceptable ways to seal abandoned wells. Under no circumstances will an adequate seal be formed by pouring other materials such as concrete, stone or soil down a well. In order to provide area private water system contractors with detailed information on all aspects of proper well abandonment, the State of Ohio Technical Guidance for Sealing Unused Wells has been included along with this program update.

Protection of New Wells from All Sources of Contamination



Well cap installed without conduit.

When performing a pump and pitless adapter installation on a new or existing well, it is important to take every possible measure to protect the well from contamination. A tight-fitting well cap with screened vents should be used, and conduit should always be used to protect the electrical line extending from the cap to below the ground surface. The conduit should be glued into the cap to prevent entry of airborne contaminants such as dust and insects. Also, the bottom end of the conduit should be sealed with plumber's putty or a similar material to prevent entry of insects or other sources of contamination from below.

Too often, final inspections of new wells show that one or more of these items are being ignored at the time of pump installation. One example is the well pictured on the left side of this page. There is no conduit protecting the wiring, and as a result, contaminants can easily enter the well through the open hole in the well cap where the conduit would normally be. Another example is shown in the picture below, where black plastic water line is used in place of PVC conduit. When this is done, the "conduit" can not be glued into the cap, because it fits loosely in the conduit receptacle. This often leads to a gap between the cap and conduit after the soil around the well settles.



Well cap installed with incorrect conduit material

The picture below illustrates the use of the proper cap and conduit on a new well installation. When the installation is done in this manner, the well stands a better chance of consistently producing safe water for a greater period of time.



Correct cap and conduit installation

Well Disinfection

Ohio Private Water System Rules require that a new well be disinfected **after it is drilled, and after the pump is installed in the well**. The rules assign the responsibility for this task to the contractor who constructs or performs work on the well. Where existing wells are concerned, a thorough disinfection should be performed each time the well or any portion of the water system is opened up and potentially exposed to contamination. Examples of situations when disinfection is necessary include pump replacement or replacement of water lines or treatment components in the home. After the well is disinfected, it should be tested for coliform bacteria to determine whether the disinfection was successful. Completing the disinfection procedure properly can be the difference between a safe water sample and a phone call from a frustrated homeowner asking for you to come back and disinfect their well again because the sample tested positive for coliform bacteria. In order to encourage proper well disinfection, and hopefully, to decrease the number of unsafe sample results following pump installations, two informational documents are being mailed with this program update. The first document is entitled "Water Well Disinfection Procedure for Homeowners". This is a set of do-it-yourself instructions for disinfection of a well, utilizing materials that are readily available to the average consumer. The second document is entitled "Disinfection Fact Sheet for Drinking Water Wells". This fact sheet, which is produced by Ohio Department of Health's Bureau of Environmental Health, takes a more technical look at proper well disinfection. Both of these resources should prove valuable to contractors who perform well disinfection on a routine basis.

The Van Wert County Health Department collects samples from wells on a weekly basis. Samples are collected on Wednesday afternoons, and results are normally available on the Monday after the sample was collected.

Anyone in need of information regarding private water systems is encouraged to contact the Van Wert County Health Department's Environmental Health Division.

Also, check out the Health Department website at:

www.vanwertcountyhealth.org.

The Environmental Division page includes a section on private water systems that will be updated periodically as new information becomes available.

Contact Information

If you have any questions or comments regarding the contents of this newsletter, or Health Department requirements pertaining to private water systems, please feel free to contact:

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For More Information...

