



Plugging Abandoned Wells

Doing Your Part to Prevent
Groundwater Contamination

What Is An Abandoned Well?

An abandoned well is a well that is no longer in use or that is in such disrepair that groundwater can no longer be obtained from it. Wells that are contaminated and pose a health risk also meet Michigan's legal definition of an abandoned well.

No one knows exactly how many abandoned wells there are in Michigan, but experts estimate that there may be more than one million! Each year, many wells are abandoned when they are replaced with new wells or when homes are connected to community water systems. An abandoned well that is not plugged, or that is plugged improperly, is a hazard to the health and safety of the people living around it.

What Problems Do Abandoned Wells Present?

- They are a public safety hazard. People (especially children) and small animals may be injured or killed by falling into wells that are left open.
- They are a health hazard because they serve as potential routes for groundwater contamination. Many of these wells are poorly constructed or badly deteriorated, and can allow runoff water (carrying bacteria, sediment, fertilizer, pesticides and other chemicals and contaminants) to flow directly down into groundwater. This bypasses the natural filtering and degradation processes that normally takes place as these materials move through the soil.
- They may allow contaminated or poor quality water to move between aquifers. An abandoned well that connects two water bearing geologic formations (aquifers) of different quality may allow lower quality water to migrate into and degrade a higher quality aquifer.
- They may lead to unnecessary waste of water if the abandoned well is an artesian or flowing well.

Why Must Abandoned Wells Be Plugged?

Merely capping an abandoned well is not enough to prevent it from becoming a problem. In order to protect the health and safety of the people living near them, these wells must be properly plugged (or sealed) soon after abandonment.

State law requires you to have your unused well(s) properly plugged. This should be done soon after the well is taken out of use. Protecting the quality of our groundwater by having your old well(s) properly plugged is a wise investment.

You should also be aware that you may be held potentially liable under Michigan's Polluter Pay Law (Part 201 of Public Act 451 of 1994) if groundwater contamination is shown to have

been caused by your abandoned well. Thus spending a few dollars now to properly plug your abandoned well may prevent you from having to pay large sums of money for restoration and clean up costs in the future!

Can I Plug the Well Myself?

State laws state that a well can be plugged **only** by a licensed water well contractor or the well owner. In most cases, driven wells and large diameter dug wells can be successfully plugged by the well owner with a minimal amount of special equipment. Be aware, however, that a poor well plugging job is no better than an open well!

The use of improper materials or methods can lead to groundwater contamination. Also, once a well has been plugged improperly, it is quite costly to correct, since the defective plug must be drilled out. Thus, it is often wise to seek qualified help by contacting a Michigan licensed water well drilling contractor. They have the special tools, equipment and skills needed to properly plug wells. If you are going to attempt to plug the well yourself, a representative of the Macomb County Health Department **must** be onsite during the plugging process.

It is highly recommended that wells with one or more of the following characteristics be plugged by well drilling professionals only:

- Drilled wells which terminate in bedrock
- Flowing wells
- Wells greater than 100 feet deep
- Wells where water is seeping from around the casing
- Wells which produce methane gas
- Wells where pumping equipment is difficult to remove

How Much Will Plugging My Abandoned Well Cost?

Costs vary depending on the well depth, casing diameter, the amount of plugging material used, and other factors. A shallow driven well may be plugged for as little as \$25.00, whereas a deep municipal well may cost several thousand dollars to plug. Since an unplugged abandoned well can contaminate the groundwater supply, the cost of plugging is a worthwhile investment.

Are There Any Reporting Requirements?

Yes! You are required by state law to file a record of the well plugging with the local health department. This report should include the type of plugging material used and the method of placement. Forms for this purpose are available from the local health department. A copy of the plugging report should also be filed with the property deed.

How Can I Find Out If I Have An Abandoned Well On My Property?

A simple look around may help you identify an abandoned well.

- The most obvious evidence of an abandoned well is a pipe sticking out of the ground. Typically, a well casing will be a metal or plastic pipe that is 1 ¼ to 6 inches in diameter.
- A small concrete slab or a manhole cover may be a sign of a pit where an abandoned well is located.
- A ring of rocks, bricks or concrete 12 to 48 inches or more in diameter may be a sign of a dug well.

- Windmills are often located over abandoned wells and an old shed may be an old well house.
- A broken or inoperative hand pump may be connected to a well that should be plugged.
- Some abandoned wells may be more difficult to identify. Many are hidden among weeds or patches of brush. A depression in the ground may occur where an old well was buried. A wet area may indicate that a flowing well was never properly plugged.

To help you determine if you have an abandoned well on your property, you may wish to consult the following:

- Former property owners or neighbors who may remember where a well was located.
- Old photographs which may show windmills, sheds, houses or other locations where old wells might be found.
- Well drillers who may remember (or have records of) where they drilled a well that is no longer being used.
- Fire insurance plan drawings which may contain information about old wells.
- Your local health department, which may have records of wells located in your area.

Who Can I Contact For Information and Assistance?

- Macomb County Health Department Environmental Health Services Division at 586-469-5236
- Licensed well drilling contractors (Refer to the Yellow Pages under Water Well Drilling and Service)
- Michigan Well Drillers Association
- Your local Soil Conservation District office
- Michigan Department of Environmental Quality, Well Construction Unit at 517-335-9183

Information published in this brochure was obtained from Michigan State University Extension, Extension Bulletin WQ40.