

# **wellcare<sup>®</sup> information for**

## **Sanitarians**

# **Closing A Well**

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A critical part of the ground water protection services provided by state and local sanitarians is the identification and closing of old and abandoned wells. Until out-of-service wells are properly closed and sealed, they pose a substantial threat to ground water quality and a potential safety hazard.

This **wellcare<sup>®</sup>** information sheet offers sanitarians basic guidance to give homeowners with concerns about abandoned wells.

### **Risks of Abandoned Wells**

Normally, ground water flows through soil and bedrock formations, known as aquifers, which filter unhealthy organisms, minerals and other substances. Water that enters an abandoned well bypasses this purifying action. The unsealed well gives contaminants an avenue into the aquifer and then into drinking water from working wells served by this source.

Contaminants usually enter an abandoned well through the casing pipe. It may not extend high enough above the ground to prevent runoff from washing into the pipe and then the well. Or the well cap could be broken or in poor condition.

In the past, large-diameter hand-dug or bored wells were located very close to the foundation of a house. Today, if the house foundation is treated for insects, such as termites, one of these abandoned wells may provide a direct path for pesticides into the water supply.

Finally, abandoned large-diameter open wells also pose a real threat to children and animals. There have been numerous reports of children being trapped and even drowned in these types of old wells.

### **Finding Lost Wells**

Some states require disclosure of old wells whenever a property is sold. But in thousands of cases, the old wells are forgotten. The well may be covered by a parking area or a building. Or the only evidence might be a depression or an old well casing in the yard close to the house.

Consider this checklist (adapted from the Minnesota Department of Health) for potential abandoned well sites in older houses or on rural properties:

### Physical Evidence of Old Wells:

- Well casing visible above the ground, concrete slab or basement floor
- Circular ring in cement, a patch in the floor or concrete curbing under a porch or deck
- Building additions, such as a basement offset, small room off the basement, porch or steps, under which old wells were often located
- Glass block or patch in a step or concrete, which once provided access to the old well below
- Windmill, typically located directly over a well on a farm or ranch
- Pit in the yard or basement, which may be covered with wood, concrete or steel, could be the sign of a dug well
- Waterline or patched hole through the basement floor or wall
- Old water system components, such as a pressure tank or pump, or shadow lines on the basement floor or wall, indicating where such components once rested
- Electrical components, such as wiring through the basement floor and wall or a control box
- Low spot in the yard, a circular depression that may be damp
- Old outbuilding that may once have been a well house
- Additions, false walls or paneling
- Slender vent or pipe, that could indicate an old drilled well with no cap

Check with individuals familiar with the property to determine where old wells were located and if they were sealed. These include: the previous property owners, neighbors, contractors (such as well drillers, pump installers, plumbers or remodelers) who have worked on the property, other inspectors (well, plumbing, building and septic system) and/or current or former employees and maintenance staff.

Finally, a well professional can use simple tools – shovels or a backhoe – or high-tech ones to locate an abandoned well. The latter include: metal detector, tape measure or other tool to follow pipes, and ground-penetrating radar to locate buried structures.

## Sealing the Well

The only way to safely deal with an abandoned well, new or old, is to seal it properly. Well sealing is a process of permanently and completely filling the well with an approved material, called grout. Some states require that a licensed well contractor conduct the well sealing and file a report with the local or state sanitarian once the work is complete.

The process starts with removal of the pump, the inner pipe to the pump and any material or obstructions in the well. A grout pipe is installed to the bottom of the well's borehole. The grout is pumped to fill the well from the bottom up. The grout usually consists of a special cement, such as clay or bentonite. In some cases, the contractor may have to remove or perforate the well casing before pumping the grout, to ensure a proper seal.

Different types of wells require different procedures and even special kinds of grout. A well professional can advise homeowners on the right steps to safely seal the well. Some states assist landowners with the cost of safely sealing an abandoned well. Contact the state department of health or department of natural resources or ask a well contractor.

## For more information on closing an abandoned well

Minnesota Department of Health:  
[www.health.state.mn.us/divs/eh/wells/disclosures/index.html](http://www.health.state.mn.us/divs/eh/wells/disclosures/index.html)

Oregon Water Resources Department:  
<http://powder.wrd.state.or.us/publication/wellcon98/index.shtml#abandoning>

Wisconsin Department of Natural Resources:  
[www.dnr.state.wi.us/org/water/dwg/abandon.htm](http://www.dnr.state.wi.us/org/water/dwg/abandon.htm)

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## For more information on your drinking water

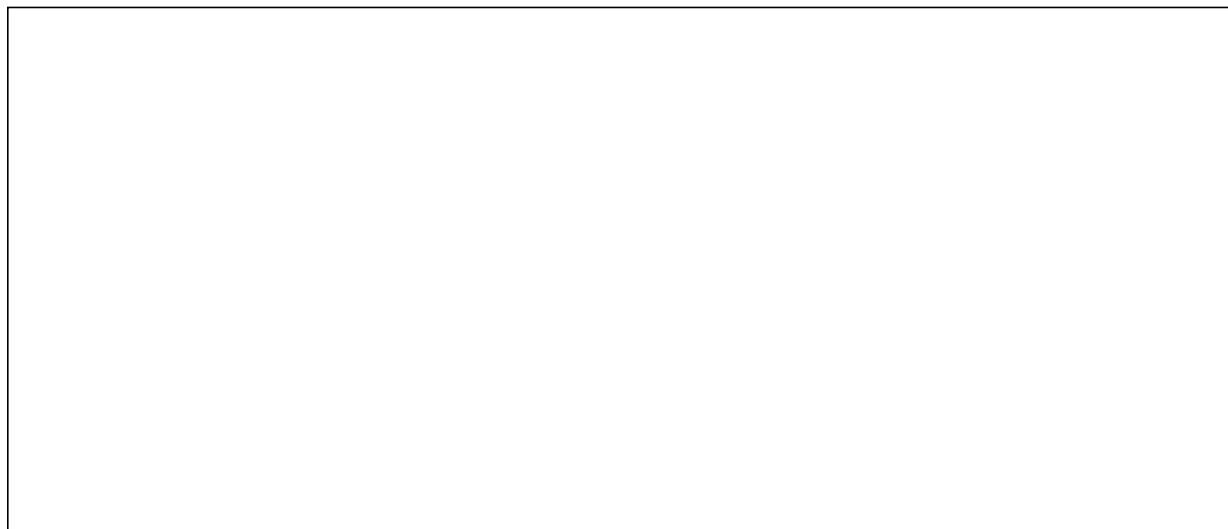
The following sites provide up-to-date information on efforts to protect drinking water supplies and steps you can take as a private well owner:

**Water Quality Association**     [www.wqa.org](http://www.wqa.org)

**NSF International**             [www.nsf.org](http://www.nsf.org)

**For more information about wells and other wellcare® publications**

wellcare® is a program of the **Water Systems Council (WSC)**. WSC is a national nonprofit organization dedicated to promoting the wider use of wells as modern and affordable safe drinking water systems and to protecting ground water resources nationwide. Well owners and others with questions about wells or well water can now call the **wellcare®** hotline at **888-395-1033** or visit **www.watersystemscouncil.org**



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