

wellcare® information for
Environmental Health Specialists
Sealing a Well

A critical part of the groundwater protection services provided by state and local Environmental Health Specialists is the identification and sealing of irreparably damaged, contaminated, or abandoned wells. Until wells no longer in use are properly sealed, they are a safety hazard and pose a significant threat to groundwater quality.

This wellcare® information sheet includes information to help Environmental Health Specialists provide basic guidance to homeowners with concerns about abandoned wells.

Risks of Abandoned Wells

Surface water can be filtered naturally as it travels down through soil and solid bedrock, replenishing our groundwater supplies. This natural filtration process removes minerals, organisms, and contaminants that can pose serious health risks. An unsealed or abandoned well can allow contaminants to travel directly into the groundwater, bypassing the natural filtration process and carrying potentially harmful contaminants directly into a drinking water supply.

Contaminants can enter an abandoned well through the opening of an unsealed well, through a damaged casing or well cap, or an open annulus of a well (the gap between the ground and outside of the casing) if the casing was not grouted or the grout has been damaged over time.

In the past, wells were constructed near the home. Today, if the foundation of a house is treated for insects, such as termites, a nearby abandoned well may provide a direct path for pesticides into the water supply.

Finally, abandoned wells pose a physical and environmental threat. Children and animals have been seriously injured or drowned in abandoned wells, even if the well is as small as 8 inches in diameter. Some have found it convenient to dispose of garbage and chemicals in old abandoned wells, unaware of the environmental and health hazard this creates.

Locating an Old Well

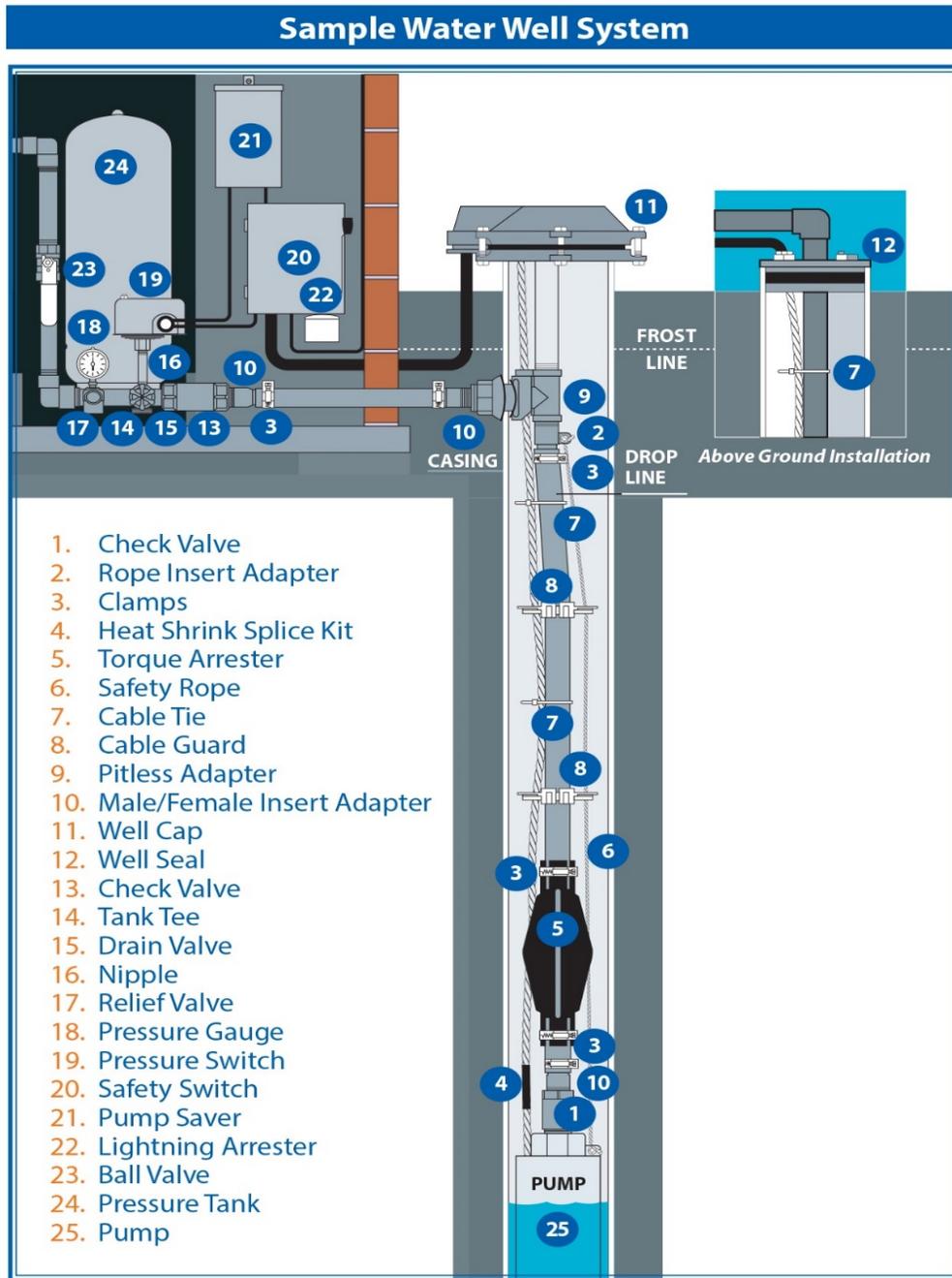
Some states require disclosure of old wells when a property is sold, but often the old wells have been long forgotten. An abandoned well may have been covered over with the construction of a parking area or a building, or simply hidden by overgrowth. Sometimes the only evidence of an old well is a depression in the ground or an old well casing in the yard near the house.

Physical Evidence of an Old Well:

- 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 underneath which old wells were often located, such as a basement offset, porch or steps
- Glass block or patch in a step or concrete, which once provided access to the old well below
- Windmill located directly over a well on a farm or ranch
- Pit in the yard or basement that may be covered with wood, concrete or steel
- 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 these components once rested
- Electrical components, such as wiring through the basement floor or wall, a control box, or disconnected power pole
- Low spot in the yard, a circular depression that may often be damp
- Old outbuilding that may once have been a well house
- False walls or paneling
- Slender vent or pipe that could indicate an old drilled well with no cap
- *(List adapted from the Minnesota Department of Health)*

Using a metal detector, follow an old water line from where it exits the home, or dig down and follow it to the well. Take caution and “Call Before You Dig” to have utility lines marked in the area as required by Law. To find your local resource call 811 or visit: <http://call811.com/best-practices/best-practices-guide/516-federal-and-state-regulations>. Generally, older buried well casings are located 4 to 5 feet below ground and within 25 feet of the home. A well contractor can help locate an old well using simple tools, like a shovel or backhoe, or high-tech tools including metal detectors and ground-penetrating radar.

Finally, check with individuals familiar with the property to determine where old wells were located and if they were sealed. Individuals that may be helpful include the previous property owners, neighbors, well contractors, pump installers, plumbers, septic system professionals, current or former employees, and house or lawn maintenance staff. You can also check old records including well records, property records, and old aerial photographs in which old windmills or well houses may be visible.



This image is intended to represent some of the components that can be included in a septic system and is not intended as an installation guide. Check local codes for actual requirements and restrictions.

Sealing a Well

The only way to safely address threats posed by an abandoned well is to have it properly sealed. Sealing a well involves more than simply filling the well with material. State regulations provide information on approved materials and sealing methods to ensure a proper seal.

Find state regulations on well abandonment at:

<https://www.watersystemscouncil.org/state-well-codes/>

In some states, well owners can seal their own wells, while others allow only licensed well contractors to seal a well. Well contractors are often familiar with local geology and well conditions that help determine the appropriate materials and methods to avoid future problems, like a collapsing borehole. Regulations can also require the removal of old well equipment, which can be very difficult to do and may require specialized equipment. Check with the local health department, state water agency, or licensed well contractor for information on sealing an abandoned well.

Search for local licensed well contractors at:

<https://www.watersystemscouncil.org/water-well-help/water-testing-by-state/>.

For More Information on Sealing an Abandoned Well

Illinois Department of Public Health. Abandoned Wells.

<http://www.dph.illinois.gov/topics-services/environmental-health-protection/private-water/abandoned-wells>.

Michigan Department of Environmental Quality. Abandoned Water Wells.

http://www.michigan.gov/deq/0,4561,7-135-3313_3675_3689---,00.html.

Minnesota Department of Health. Well Disclosure/Property Transfer.

<http://www.health.state.mn.us/divs/eh/wells/disclosures/index.html>.

Purdue University Cooperative Extension Service. Plugging Abandoned Water Wells: A Landowner's Guide. <https://www.extension.purdue.edu/extmedia/WQ/WQ-21.pdf>.

Texas A&M University. Plugging Abandoned Water Wells.

<http://srwqis.tamu.edu/media/2544/pluggingwells.pdf>.

FOR MORE INFORMATION to help maintain and protect your water well system:

wellcare® is a program of the **Water Systems Council (WSC)**. **WSC** is the only national organization solely focused on protecting the health and water supply of more than 13 million households nationwide who depend on private wells.

This publication is one of more than 100 **wellcare®** information sheets available **FREE** at www.watersystemscouncil.org.

Well owners and others with questions about wells and well water can contact the **wellcare®** Hotline at 1-888-395-1033 or visit www.wellcarehotline.org to fill out a contact form or chat with us live!

JOIN THE WELLCARE® WELL OWNERS NETWORK!

By joining the **FREE wellcare®** Well Owners Network, you will receive regular information on how to maintain your well and protect your well water.

Contact us at 1-888-395-1033 or visit www.wellcarehotline.org to join!



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