

PROTECTING THE GROUNDWATER IS EVERYONE'S BUSINESS

What is an unused water well – and why is it a problem?

A well that is not in use – or sometimes referred to as an “abandoned” well – can be a potential threat to health, safety, and the environment. Wells that are no longer used may be buried or forgotten. Often they have not been sealed properly. Sealing is the process of cleaning of unused well of debris and filling the well with a special material called grout. The sealing must be done by a licensed contractor.

Unused wells that have not been properly sealed can be a source of groundwater contamination, potentially affecting nearby drinking water wells. They may threaten the quality of the water in city water wells, your neighbor's well, or even your own well. Groundwater is the main source of drinking water for three out of every four Minnesotans. Protecting groundwater is everybody's business.

As a well ages, the casing may rust, joints may leak, the pump may become stuck in the well, or the well may fill with debris. If the well is covered with loose boards or concrete, the cover may eventually decay or break open. Surface water runoff, debris, and other contaminants can then enter the well.

A well may be taken out of service for a variety of reasons. It may no longer provide enough water. It may not have been repaired when it needed to be. It may have become contaminated. A well may be “lost” or abandoned when property changes hands, or when use of the land changes from agricultural to industrial or residential. Old, unused wells are easily forgotten.

How do unused wells threaten the groundwater?

Groundwater is found in underground geologic formations called aquifers. Ordinarily the layers of rock and soil that lie between an aquifer and the surface, or between aquifers, act as a natural barrier against the spread of contamination. However, an unused, unsealed well can provide an open channel between the surface and an aquifer – or between a shallow aquifer and a deeper aquifer. An unused well can act as a drain – allowing surface water runoff, contaminated water, or improperly disposed waste to reach an uncontaminated aquifer.

Do unused wells pose any other problems?

If unsealed large-diameter wells are not covered or otherwise protected, the open well hole can be a safety hazard, especially for children and animals.

What does the law require?

By law, a well must be in use, be under a maintenance permit, or be sealed by a licensed contractor. A well must be sealed if:

- The well is not in use,
- The well is contaminated,
- The well has been improperly sealed in the past,
- The well threatens the quality of the groundwater, or
- The well otherwise poses a threat to health or safety.

If you have an unused well – and wish to keep the well for future use – you must apply for a special “maintenance permit” from the Minnesota Department of health (MDH). The permit requires an annual fee, and is only issued if the well meets minimum sanitary requirements.

How can I find out if I have a well on my property that is not in use and not sealed?

Whether you live in the country or in town, you could have one or more wells on your property which are not in use and not sealed. If you live in town, there may be one or more wells that were used before the city water became available, or a well that was used for watering lawns and gardens. If you live in the country, wells may have served current or former houses and barns. To locate old wells, it may help to:

- Find out when your home was built and when public water was first available in your area. If the house was built before public water was available, then there was likely a well on your property.
- Look for any physical evidence of a well on your property – a well casing, pipe, or water pump; water pipes which may indicate the presence of a well; a small room, often in the basement, that may have housed a well; a small building located away from the house; a windmill or water pump; or a depression in the yard.
- Consult former owners of your property, or people who have lived in the area for a long time. They may remember the locations of old wells.
- Ask well drillers about old wells that they may have constructed or repaired.
- Look at old photos of your property – they may show windmills, houses, barns, or outbuildings where a well may have been located.
- Consult city and county records of building and land use permits.
- Consult city and county historical documents – they may also provide information about development and land use.
- Look at the old fire insurance drawings often available at local historical societies – they may also record the location of wells.
- Consult the well disclosure certificate available from the MDH – required for all property transfers in Minnesota since November 1, 1990 – to obtain specific information about the location and status of wells on your property. Minnesota laws require any owner of the property which is sold or transferred to disclose to the buyer the status of all wells on the property.
- For more information, see Finding Lost Wells.

What does a well look like?

You can often see the casing of an unused well sticking up out of the ground. Look for a metal pipe typically from 1 ¼ inches to 6 inches in diameter. Wells that were dug rather than drilled may appear as a ring – made of concrete, tile, bricks, or rocks – in the ground or pit. The ring could be anywhere from 12 inches to 36 inches in diameter, or even larger. A windmill, an old shed that was used as a well house, or an old pump may mark the location of a well. A metal or concrete cover or manhole may mark the location of a well pit. A depression in the ground may indicate a buried well, and a wet area may be caused by a flowing well that hasn't been sealed.

If you had a well inside your home, a pipe sticking up out of the floor – possibly stuffed with rags, could be a well casing. Wells were often housed in a “basement offset” – a small room attached to the basement often located under exterior concrete steps. A glass block fitted into a step – or a concrete patch – could be another clue.

How are wells sealed?

State law requires that well sealing be done by a licensed well contractor. Don't try to do it yourself.

A licensed well contractor has the necessary equipment and expertise to seal your well properly. The contractor can also handle all of the necessary paperwork. To find a contractor, look in the Yellow Pages under “Well Drilling and Service.” The MDH also has a list of licensed contractors.

Before sealing the well, the contractor will remove any pumping equipment that may still be in place and remove any debris or other obstructions from the well. The well is then sealed by pumping a grout mixture into the well.

When the job is done, the contractor will submit a well and boring sealing record to the MDH. You will also get a copy of the well and boring sealing record from the licensed well contractor. Keep it in a safe place. It provides proof that the well has been properly sealed, and no longer poses a hazard.

How much does it cost?

The cost of sealing a well can vary considerably. For shallow, small diameter wells – like those found at some homes and many lake cabins – the cost typically ranges from \$300 to \$600. Deeper larger wells will cost more to seal. Things like access to the well, special geological conditions, debris in the well, and depth and diameter of the well will affect the cost of well sealing. Also, if a contractor is already on the site drilling a new well, the cost of sealing an old well will often be less because of special trip to the site is avoided. The same is true when people get together and arrange to have a number of old wells in a community sealed at same time. It is always a good idea to get several estimates on costs. For further information go to [cost share grants](#) and [low cost loans](#).

What if I have an old well on my property and I only use it for watering my yard or garden – do I have to seal it?

Minnesota laws do not require a well which is in use to be sealed unless it is causing, or has the potential to cause a health problem or contamination of groundwater. Your well is considered to be “in use” if you use it on a regular basis. If you sell or transfer the property, the well will have to be disclosed to the buyer at that time.

Where can I get more information?

If you have any questions about abandoned wells, well sealing, your well, or well water quality, or would like more information, contact your nearest Minnesota Department of Health office and ask to speak with a well specialist.

This article was written by Minnesota Department of Health. For questions, please contact the Environmental Health Division:
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