



www.nhwaterwell.com

Information: New Hampshire Water Well Association

Information in this document is provided in good faith to inform the public about groundwater and water wells. Well owners should ensure that their well contractor has obtained permits (if required) and has referred to local codes, rules, regulations and laws for site selection, construction, maintenance and operation of water wells and water system equipment.

HOW TO SAFELY SEAL OLD WELLS

It is common for properties to have had many owners throughout the years. Water wells may have been constructed by drilling, auguring, jetting or even by digging a hole or excavating around a spring or seepage. Out-of-service wells of any type could pose potential safety hazards and/or threats to groundwater quality if not correctly maintained or abandoned (decommissioned). There may also be liability issues to consider if an old well on your property is proven to be a conduit for contaminants that reach neighboring groundwater. The biggest problem is that old wells can be forgotten. Casings may deteriorate and rust and new owners or property developers can build over or unknowingly create a hazardous land use. For example, wastes associated with stables, chicken houses, dumps etc., which are right over an out-of-service old well hole, may flow straight down to the aquifer.

In a situation where wells penetrate more than one water-bearing layer, contaminants may reach the groundwater zone of the old well and then travel on to other portions of the aquifer where the contaminant could threaten operating wells and water supply sources. Abandoned shallow dug wells do not typically lead to contamination risk for deep aquifers, but their wide diameter, usually 3 to 5 feet, creates a physical safety hazard for construction equipment in addition to the danger to people and animals that may be injured falling into the well. At the time of a proposed property transfer it is advisable for the location and condition of any old or out-of-service wells to be established.

Clues to the location of these wells could be:

- A pipe sticking out of the ground
- A small building that might originally have been a well house.
- Depressions in the ground near the house
- The presence of concrete vaults or pits (perhaps covered by lumber or metal plates)
- Out-of-use windmills (wind pumps) are likely to be located near an old well

Other clues and information can be obtained from:

- Old maps, plans and property title documents
- Information from neighbors
- In the past, wells were commonly constructed in basements or under porches to keep the water pumps from freezing and to ease access in the winter
- Water utility history: Is your home older than the piped utility supply? If so, there could be an abandoned well on the property that was the source of water for your home before utility water was available.

State law requires that the decommissioning of abandoned wells be performed by a licensed New Hampshire water well contractor. The contractor will know the code requirements. Wells should be sealed from the bottom up and well contractors have the right equipment to do this. Any pumps or pipes or blockage should first be removed from the well. Abandoned drilled wells should be sealed by grouting the entire length of the well. If it is known that the old well is contaminated then it must be sealed by the pressure grout method using a Portland cement mixed with 2 percent to 10 percent high solids bentonite clay. If the well to be sealed is an old monitoring well (rather than a production well) there are different abandonment requirements.

If your current water source is a dug well, spring or stream now may be a good time to consider a drilled well. A drilled well with protective casing is much more likely to be a more reliable source and will not have any of the potential contamination risks of dug wells and springs where animals and insects may be the cause of bacteria or protozoa health risks. A drilled well adds asset value to your property!

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