

# Decommissioning Abandoned Wells

Barney Whatley  
Source Water Protection Specialist

Wells that are no longer being used, but that have not been properly decommissioned can pose a direct threat to groundwater sources. Open wells can act as a “drain” for runoff water, and insecticides, fertilizers and other pollutants present on the surface of the ground can be washed into the well. Older hand-dug wells are especially bad, as the casing is usually non-



**Figure 1**

existent or made of bricks or other similar materials. Wells that are no longer being used are often covered with tree limbs and other materials. They are also used as garbage cans in many instances, and the trash that is thrown into them can leach into the groundwater. It is not unusual for chemical containers to be disposed of in abandoned wells, and hikers, campers and other people who stumble across the well are apt to discard their trash as well. This practice is generally not malicious in nature or an attempt to pollute the groundwater, but is done accidentally by people who do not recognize the abandoned well for what it is. **Figure 1** is a picture of an abandoned well that is no

longer being used and is located within the state. This well is located within a Source Water Protection Area, and as such has been selected as a high priority for decommissioning. The removal of this threat of contamination is deemed to be essential to the water system where it is located.

**Figure 2** Shows the inside of this well. While the well is not particularly deep, and the bottom does not appear to reach groundwater, this is somewhat deceptive. The well has been partially filled in with debris, including leaves, sticks and pieces of bark. The hand pump is still located in the well and it is evident that the piping extends below the visible bottom of this well. Since the debris in the well is not compacted, rainwater and runoff that enters the well will drain directly into the groundwater. You can also tell by this picture that the casing was constructed of rocks placed in a circular formation within the well. There is no evidence that any mortar was used in the construction, and this would result in the casing being extremely porous. And contamination that seeps into the ground around this well will pass right through the casing and end up in the well.



**Figure 2**

Water system personnel happened to know that this well existed, or it may not have been located and tagged for decommissioning. **Figure 3** and **Figure 4** show this well from a distance, and it is evident that this well would be hard to locate if you did not know it was here. There are probably hundreds or thousands of wells just like this one spread out around the state. It is in the



**Figure 3**



**Figure 4**

best interest of the public to locate these wells and have them decommissioned as soon as possible. Public education can be a valuable tool for this purpose. Hunters, campers and hikers who know what to look for can recognize old wells and report them to local authorities. It is not intended that the owner of the property on which these wells are located get into trouble, but merely that they become aware of the problem and the solutions that are available.

Most of the Natural Resource Districts (NRDs) within the state have programs to assist well owners in covering the cost of decommissioning abandoned wells. These programs offer up to 75% of the cost of decommissioning a well. In the past, the Nebraska Department of Environmental Quality (NDEQ) has had funding to cover the remaining amount, and they have applied for funding for this program again this year. Some communities also might be willing to assist in the cost of removing the source of potential contamination if it is located within the wellhead protection area, or is close enough to a system well. I recommend any owner of an old well they no longer intend to use to contact the NRD in their area to determine the amount of assistance they can provide. The local water system owner might also be contacted to see if they would be willing to assist the owner in decommissioning the well, especially if the well is located near the system's well field.