ARIZONA COOPERATIVE EXTENSION
THE UNIVERSITY OF ARIZONA
College of Agriculture and Life Sciences
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AZ1486e
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Private Well Protection

Adapted with permission from *Private Well Protection Begins at Home. Water on the Move.* University of Connecticut Cooperative Extension. 2007.

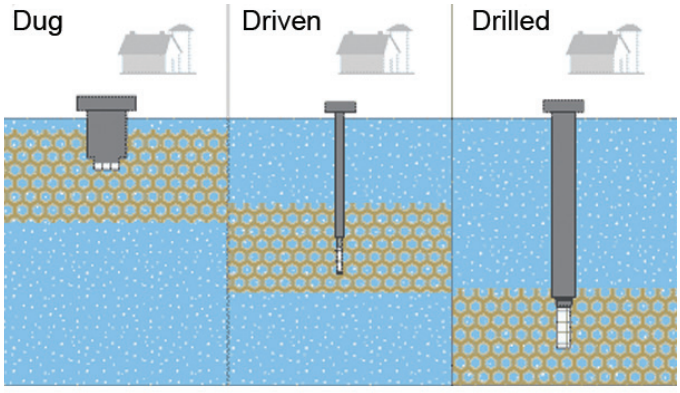
Private well owners are responsible for making sure their well water is safe to drink. Private drinking water wells are not required to be tested on a routine basis unlike public water supplies. Many substances that can be found in well water and that can affect drinking water quality have no taste, color, or odor. The only way to know if they are present is to have the water tested each year.

Know what kind of well you have and its location on your property

Knowing the type of well that you have (drilled, driven, or dug) can help you understand its potential risk for exposure to contaminants. (Note: driven wells have not been legal since the passage of the Arizona 1980 Groundwater Protection Act.) Location is important and is dictated by state and local regulations. A key factor in this decision is proximity to any potential source of contamination. As a homeowner, you can help protect your drinking water by reducing exposure to harmful practices near your well.

Have your well water tested annually

Remember that a private well is not monitored or tested by any public entity. It is the responsibility of the homeowner to test the water to ensure that it is safe to use. Annual testing for certain parameters will help assess the overall quality of your water and will help you monitor changes that may occur over time. This will enable you to identify and correct problems or potential problems more quickly. In addition, you should have the water tested any time that you notice a change in the taste, odor, or color of the water or if you become aware of a potential exposure to a contaminant. Refer to the Extension publication *Well Water Testing and Understanding the Results* (az1486f) for more information on when to test your private water well.



Remove debris and brush from around your well

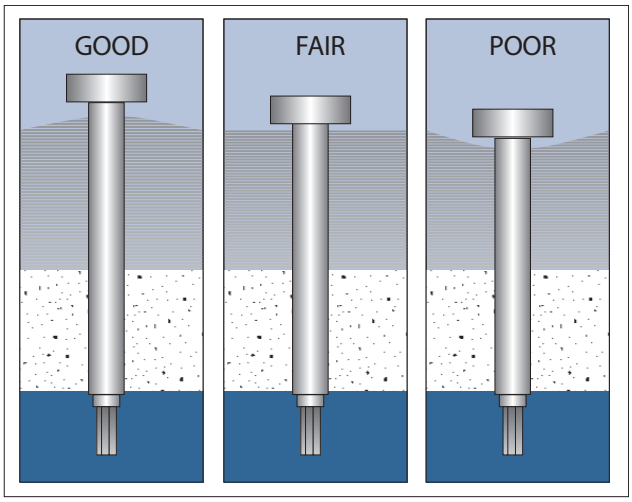
Debris and brush around the wellhead can attract rodents or other animals. These animals may burrow in or around the well and cause problems with contamination. In addition, these animals may be vectors that transmit potential contaminants. You want to keep the area around your wellhead free from debris, brush, or any structures that may attract insects or animals.

Repair cracks in the casing or cap immediately

Keep the well in good repair. A faulty well can allow surface water to reach groundwater without filtering through the soil. Casings or caps can be damaged by contact from machinery (lawn mowers), tools, etc. or through acts of nature (tree branches hitting well cap, frost heaves, etc.) Periodically check the condition of the cap and casing to protect the quality of your well water.

Maintain your septic system and have it inspected and pumped regularly

A faulty or failing septic system can result in the introduction of pathogens (disease-causing organisms) and nutrients into groundwater. This groundwater may be the water that provides you and your neighbors with your drinking water. Therefore, a well-maintained septic system can protect the water that you drink. By Arizona law, domestic wells must be sited at *least* 100 feet away from any part of a septic system (whether the septic system or domestic well is on your property OR the neighbor's property). The septic tank should be inspected every year or two and pumped as necessary. See the Arizona Cooperative Extension Onsite Wastewater Education program web site for more information: **http://ag.arizona.edu/waterquality/onsite.**



EPA, Drinking Water From Household Wells, January 2002

Prevent water from pooling around the well

Divert water away from the well to prevent pooling around the wellhead. The diagram above shows good, fair, and poor landscaping around a well. Surface waters have the potential for harboring contaminants which could enter your well if the well casing is cracked or compromised or if the well cap is not properly sealed. Water pooling around the wellhead can also lead to flooding of the well, which can cause problems with bacterial contamination and turbidity (cloudiness).

Keep pet waste and dog runs away from the well

Pet waste can introduce pathogens and nutrients to surface water (which can enter a compromised well from the cap or casing) and groundwater. Regularly pick up and dispose of pet waste and do not kennel a dog or any other pet over or near the well.

Don't fill equipment with or store fuel near the well

Fuel contains harmful chemicals which can pollute groundwater. If spilled or leaking, fuel can leach into groundwater and enter drinking water wells. You can taste and smell gasoline at concentrations of 1 part per million (one gallon of gasoline can contaminate a million gallons of water).

Do not apply fertilizers and pesticides near the well

Use care when applying pesticides and fertilizers to lawns and gardens, particularly near the well (better yet, avoid use entirely if possible). These products contain chemicals and/or nutrients that can contaminate well water and threaten human health.

Abandoned wells should be sealed

An unsealed, unused well can be a prime entryway for contaminants. If not in use, a well should be sealed by a licensed or certified well contractor.

Properly dispose of household hazardous waste

Many products used in the home (cleaning, polishing, etc.) and in the yard (gardening and auto care products) contain chemicals that can be harmful to your health. If they enter the groundwater, through improper use or disposal, they then could have a direct route to your body through the water that you drink. The best ways to prevent this are to be informed about the products you purchase (buy non- or less-toxic products and buy only what you need) or dispose of excess product through Household Hazardous Waste collection days or sites (for more information on household hazardous waste collection, go to the Arizona Department of Environmental Quality website: **http://www.azrecycles.gov/**).

Underground storage tanks

Underground storage tanks used to store gasoline, home heating fuel, or other products are a potential contamination source to groundwater. If these tanks leak, products can move through the soil and eventually get into the groundwater. Often a leak is not detected until the groundwater is already contaminated. If you have an underground storage tank on your property, it is safest to remove that tank and install an above-ground tank so that you can detect and properly control leaks.

Arizona well siting and construction regulations contain setback distances that wells should be from potential sources of pollution. Check with the Arizona Departments of Environmental Quality and Water Resources regarding these regulations and setback distances (see the Web Resources for links to these agencies).

Web Resources

Arizona Cooperative Extension Onsite Wastewater Education Program: **http://cals.arizona.edu/waterquality/onsite**

Arizona Department of Environmental Quality, Recycling: **http://www.azrecycles.gov/**

Arizona Department of Water Resources: **http://www.AzWater.gov/AzDWR**

For Additional Information

Arizona Well Owner's Guide to Water Supply (AZ1485)

Arizona Cooperative Extension (ACE) bulletins contain a variety of information about water, water quality, safe drinking water, and private wells. They are available through your county Extension office or from CALSmart Distribution Center, located in Tucson, at 4101 N. Campbell

Avenue; (877) 763-531; (520) 795-8508 FAX; or visit **http://ag.arizona.edu/pubs/**

Source

University of Connecticut. Private well protection begins at home. Water On The Move. Available at: **http://www.healthyhome.uconn.edu/pages/privatewellprotection.html.** Accessed 27 June 2008.

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THE UNIVERSITY OF ARIZONA • COLLEGE OF AGRICULTURE AND LIFE SCIENCES

The University of Arizona
College of Agriculture and Life Sciences
Tucson, Arizona 85721

Adapted for Arizona by

Kitt Farrell-Poe, PhD
Water Quality Specialist

Susan Pater
Cochise County Director & 4-H Youth Development Agent

Contact:
Kitt Farrell-Poe
kittfp@ag.arizona.edu

This information has been reviewed by University faculty.
cals.arizona.edu/pubs/water/az1486e.pdf

Other titles from Arizona Cooperative Extension can be found at: cals.arizona.edu/pubs