

wellcare® information for you about

Determining the Depth of a Well

The quality and quantity of water from your well depends upon the geology and hydrology of the area in which it lies. Well water comes from underground aquifers, which exist throughout the ground at different depths.

Aquifers act as water storage spaces, containing different amounts of water. Determining how deep your water well contractor must drill to gain access to a sufficient supply of water is part science and part educated presumption.

Basic Well Construction

A bedrock well is one drilled into solid rock, tapping cracks in the rock that carry water. Typically, household wells are six inches in diameter, with a six-inch casing, or liner. The casing is the pipe that is installed down to the bedrock in order to keep surface water and sand out of the well. In many cases, a drive shoe or casing seal is attached to the bottom of the casing to create a seal in the bedrock.

In constructing the well, the casing should extend at least 12 inches or more above the surface of the ground. In most cases, it takes one day to drill a well and another day to install the well pump.

All private well construction is based on establishing the right location for the well, sizing the system correctly, and choosing the proper construction techniques. A professional water well contractor knows the hydrogeology in your area and all local codes and regulations for wells. They also have the modern equipment and expertise to make sure your well is properly constructed to meet the water needs of your family.

Estimating the Depth of the Well

The depth of a well is a determining factor in figuring the basic cost of drilling and the cost of pipe, since most water well contractors charge by the foot. Water well contractors will base estimates on what experience shows is an average depth for your area. If the water first tapped is adequate for your family, then drilling can stop. If not, then drilling may have to go deeper.

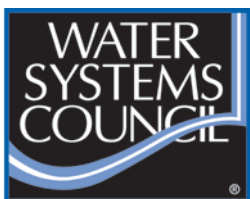
However, a water well contractor cannot tell you exactly how deep to go to get water or predict the exact quality of the water that will be tapped. What a contractor can do is make reasonable judgments about water quality and quantity based on previous experience.

Most household water wells range from 100 to 800 feet deep, but a few are over 1,000 feet deep.

Well yields can be increased by fracturing the bedrock immediately around the drill hole and intercepted rock faults. One technique to accomplish this fracturing is to pump high volumes of water into the drill hole at high pressure, up to 3,000 pounds per square inch (psi). This process is called hydrofracturing.

The quality of water is much more dependent on the geological formations and water bed surrounding your well than any specific depth. In general, the deeper the well, the greater the likelihood for increased minerals in the water, which may require a water softening unit for your well system.

FOR MORE INFORMATION to help you maintain your well and protect your water supply



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 the 43 million people nationwide who depend on household wells for their water supply.

This publication is one in a series of **wellcare®** information sheets. There are more than 90 information sheets available **FREE** at www.watersystemscouncil.org.

Well owners and others with questions about wells or groundwater can also contact the **FREE** wellcare® Hotline at 1-888-395-1033 or visit www.wellcarehotline.org.

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