

**WEST VIRGINIA DEPARTMENT OF HEALTH  
AND HUMAN RESOURCES  
BUREAU FOR PUBLIC HEALTH  
OFFICE OF ENVIRONMENTAL HEALTH SERVICES  
FACT SHEET**

**Private Water Well Owners –  
What to Do Before Drilling the Well**

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**How do I find a reliable driller or pump installer?**

The names of certified drilling and pump installer contractors may be obtained from the Bureau for Public Health, local health departments, telephone directory, or neighbors who own wells. Even though water well drillers and pump installers are certified by the state, homeowners should check the driller's and pump installer's reputation and reliability for their particular needs.

Water well drillers and pump installers must be certified by the state and meet minimum standards in order to drill water wells in West Virginia. These standards include having liability insurance, bonding, and experience requirements. They are issued a certification card by the Bureau for Public Health and well drillers are required to display their certification number on their drilling rig.

**Do I need to complete any paperwork?**

A permit application needs to be completed and submitted to the local health department by a certified master well driller. A permit must be obtained before construction begins. After the well is completed and pump installed, the well completion and pump installation forms are submitted by the contractor to the local health department within 30 days. If the owner installs the pump, an installation form is still required to be submitted.

**How much water will I need to supply my household?**

Estimates vary, but the average household uses approximately fifty (50) gallons to one hundred (100) gallons of water a day per person. For more specific information on water needs, contact your local health department or well drilling contractor. When determining your water needs, consider all present and potential water use such as: a dishwasher, a washing machine, bathrooms, a swimming pool, lawn or garden irrigation, fire protection, and food preparation. In areas where groundwater availability may be limited (low yield areas), contact a certified water professional about methods for ensuring an adequate supply of water to meet your daily needs.

**Where should my well be located?**

Your water well contractor will be familiar with the standards for well locations. The minimum distances a well may be located from sources of contamination are found in the West Virginia Legislative Rule, 64 CSR 46, Water Well Design Standards.

**How deep will the well have to be?**

It is almost impossible to determine in advance how deep you will have to drill to find a sufficient water supply. A water well drilling contractor may give a reasonable estimate.

**How much casing should be used in my well?**

West Virginia regulations require that a minimum of twenty (20) feet of casing be used with a minimum of five (5) in consolidated rock. Under no circumstances should less than twenty (20) feet of casing be used in any well. The regulations specify the types of casing that must be installed. Local geologic conditions may require much more casing than the required minimum specified in the regulations. Some wells require hundreds of feet of casing. Properly installed and sealed casing is the best protection against contaminated water entering your well from the surface or from less desirable aquifers.

### **Should the well casing be visible above the ground?**

Yes. Cutting off the casing below ground surface leaves the well vulnerable to many sources of contamination. **Buried casing** is probably the **leading cause** of well contamination in the state. West Virginia regulation requires that at least twelve (12) inches of casing extend above the ground.

### **Access to the well casing is important to:**

1. inspect and maintain the pump and well casing,
2. measure the water and well depth,
3. disinfect the well,
4. allow a water sample to be taken from the well if needed, and
5. prevent surface water from entering the well.

The use of modern pitless adapters has eliminated the need to bury well casings or construct wells in frost or well pits. By following this important regulation, ground water quality throughout the state will be greatly improved.

### **How can I be sure that my well won't be contaminated?**

There are no guarantees that a particular well will not suffer problems at some point in the future, but proper location, casing, capping with an approved well cap and sealing of the well in accordance with West Virginia Legislative Rule, 64 CSR 46, Water Well Design Standards will go a long way toward preventing contamination. Disinfecting your well once a year will also help. If a change in your water quality or quantity occurs, contact your well driller and ask him to inspect your well and water supply system. If you live in an area where seasonal flooding is common, it is a good idea to have your well tested for bacteria immediately after a flood.

Surface activities may also affect groundwater. Pesticides, degreasers, or other toxic chemicals may find their way into the surface and groundwater because of improper handling and disposal. You and your neighbors may want to survey the surrounding area to determine whether there are any practices occurring, which could affect your groundwater. It is much easier to prevent groundwater contamination than to clean it up.

### **Where to get information on water testing private wells in West Virginia:**

Local Health Departments

<http://www.wvdhhr.org/phs/LHD.pdf>

State - Certified Laboratories

<http://www.wvdhhr.org/labservices/shared/docs/EnvMicro/waterqualitylabs.pdf>

State - Office of Environmental Health Services (OEHS) – Private Water Information

<http://www.wvdhhr.org/phs/water/index.asp>

### **Why should an improperly maintained well be abandoned?**

Improperly abandoned water wells could allow contaminated surface water and groundwater to mix and contaminate aquifers. The pollution spreads throughout the aquifer and causes contamination of good wells nearby. It is important that all water wells be properly capped and maintained to prevent contamination or to be properly abandoned. For information on properly abandoning a well, contact your local health department.

#### **For additional information contact the:**

West Virginia Department of Health and Human Resources

Bureau For Public Health

Office of Environmental Health Services

Environmental Engineering Division

Capitol and Washington Streets

1 Davis Square, Suite 200

Charleston, West Virginia 25301-1798

Phone 304-558-2981

Website @ <http://www.wvdhhr.org/oehs/>

#### **For additional Local Health Department information, please contact:**