

Well Records and Maintenance Guidelines

If you have a home well, you alone are responsible for maintaining the safety of our drinking water supply. When your well system is suitably located, correctly installed, properly maintained, and regularly tested, you will have few problems with water quality.

This folder provides a place for you to record and file information about your well. These records will be particularly useful if any problems should develop in your water supply and you need professional advice. It is recommended that this folder be kept with other important documents about your home and property, and passed on to future owners. Water testing may be required by lenders when selling or refinancing your home. Having this record can enhance your ability to sell your property.

Well Anatomy

Maryland has established guidelines for the construction of wells. All wells must be constructed by licensed well drillers in accordance with State regulations. The well must pass inspection and the water must be certified as potable (drinkable) by the county Health Department before the well can be used. The following components of a typical domestic well are illustrated on the accompanying figure.

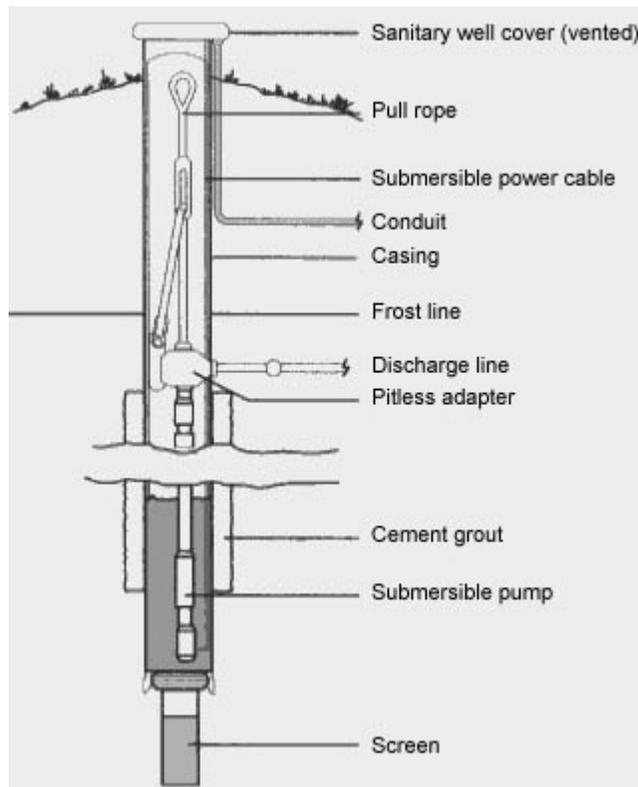


Figure 1.

CASING: A metal or plastic pipe used to line a portion of the bore hole. The minimum length (depth) of the casing is determined by State regulations based on the geology of the area. The casing must extend a minimum of 8 inches above the ground (24 inches in flood zones) to keep storm water runoff out of the well.

GROUT: Material used to create a watertight seal between the bore hole and the casing to prevent surface water and contaminants from running down the side of the well. Grout may be portland or quick-setting cement, or bentonite clay. The minimum depth or length of casing that must be grouted is also determined by State regulations.

WELL COVER: A cap that screws or clamps onto the top of the well casing to prevent contaminants from entering the well.

SCREEN: A pipe-like attachment at the bottom of the well. Well screens are usually not required when drilling in bedrock, but they may be necessary if loose sand or fragmented rock is encountered. The screen is sealed on the bottom and has openings along its length that allow water to enter the well, but keep out sand and sediment.

PUMP: Draws water from the bottom of the well and into the distribution system. Many types and sizes of pumps are available. The two most commonly used are submersible and jet pumps. Submersible pumps are installed in the well and can be removed relatively easily. Jet pumps have the motor located outside the well.

PITLESS ADAPTER: Provides a frostproof and sanitary hookup between the well and the household water distribution system. The pitless adapter must be located below the frost line.

Well Records

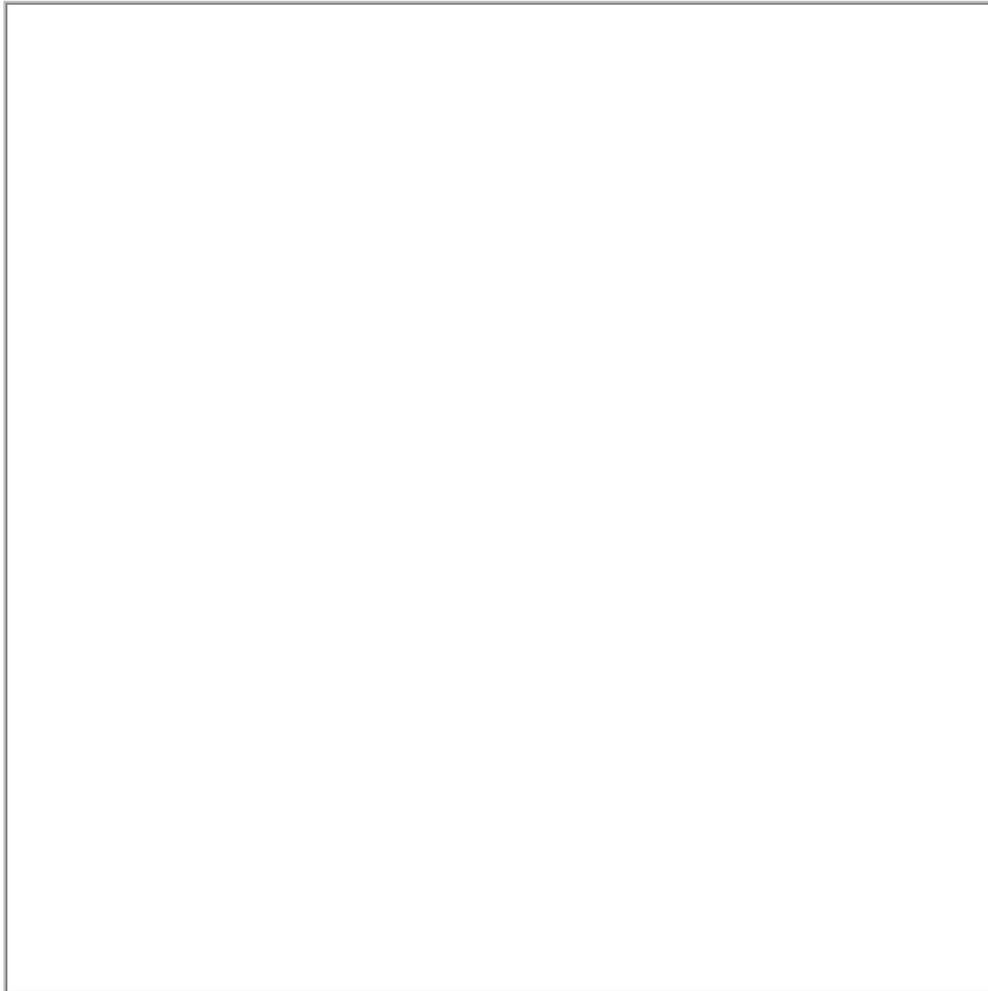
Well Construction Information

A well driller must file a well completion report with your local Health Department. Place a copy of your Well Completion Report in this folder. These reports provide construction information and describe the soil and geologic conditions around your well. If you do not have the information below, contact your county Health Department. They may be able to locate these records.

Well driller: _____
Driller's address: _____
Driller's telephone number: _____ Well tag number: _____
Construction date: _____ Grouted: (yes) _____ (no) _____
Depth: _____ Yield: _____
Casing diameter: _____ Length: _____
Pump type: _____ Model #: _____ Capacity: _____

Well Location

Using the adjacent box to represent your property, sketch the location of your well, your home, and other structures on your property in relation to your well. Include distances to your own and neighboring septic systems, garages, kennels, barnyards, abandoned wells, and fuel storage tanks. Indicate which way the land slopes and the general pattern of surface drainage. Consult this record when considering any construction or landscaping, or when interpreting the results of a water test.



Well and Plumbing Maintenance Record

(File any receipts)

Date	Work Performed	Company	Cost

Get Your Water Tested

Most residential wells withdraw groundwater that is replenished by rainfall entering the ground within a few miles of the well. For this reason, the way you, your neighbors, and even those outside your community use the landscape can be an important factor in the quality of your water supply. Be alert to possible sources of well contamination such as septic systems, leaking underground fuel tanks, landfills, industrial spills or discharges, animal wastes, fertilizers, and pesticides.

Detecting groundwater contamination requires regular testing. You should test your water supply once a year for bacteria and nitrate. Consider seasonal testing if one sample shows elevated levels of these contaminants. Prolonged periods of heavy rain can flush contaminants into groundwater supplies.

At the least, test your water any time you notice unusual odors, colors, or cloudiness, or if you note an interrupted supply, such as pumping air or sediment. Contact your Health Department (listed in the blue pages in the "county government" section of the telephone book) for a water test, or for a listing of state-certified labs serving your county (some counties no longer test wells.)

Keep all copies of water analysis reports in this file and record results from each test on the table below. Annual testing for bacteria and nitrate is the most important step you can take to protect your family's health. These tests will tell you when maintenance activities or water treatment devices are needed. Also, annual tests establish a baseline of information and show water quality trends.

Water Test Results Summary

Date	Bacteria	Nitrate	Other Tests	Reasons for Sampling	Laboratory

Water Treatment Devices Installed

(Include maintenance or warranty information)

Treatment Device	Brand/Model #	Date of Purchase	Cost

Protect Your Water Supply

- Keep surface water runoff from puddling around the well. Grade your lot so that water drains away from your well casing. A well should not be drilled on a "low" part of your property.
- Prevent surface water from seeping down the sides of your well. Make sure your well cap is not cracked and is tightly secured. If water tests show contamination, it is recommended that a well driller check the grout.
- If your well is more than 30 years old, have it inspected by a county Health Department sanitarian or a qualified well driller to make sure that the casing is not cracked or corroded.
- Install antibackflow devices on all faucets with hose connections, or maintain an air space between hose or faucet outlets and the water level in the container you are filling. Otherwise, you risk sucking contaminated water from laundry tubs, swimming pools, etc., back through the plumbing and into your well.
- Have your fuel oil tank tested for leaks, especially if it is installed underground. Contact your fuel supplier for assistance.
- Do not use gasoline, automotive products, solvents, pesticides, or excessive amounts of fertilizers near your well.
- Do not tie pets to the well casing. Animal waste deposited close to the well could result in contamination. Also, a large dog may break or crack the casing.
- Be careful never to hit the casing with a lawn mower or vehicle, or strike it with any force.
- Maintain your septic system. Improperly functioning septic systems are a major cause of well contamination.
- Your well should be disinfected with a chlorine solution any time work is done on the well or pump. Directions for shock chlorinating your well are available from your county Health Department.
- If there are unused or abandoned wells on your property, make sure they have been properly sealed to prevent direct contamination of groundwater by surface contaminants.

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For additional information on water and environmental topics, check out:

<http://www.agnr.umd.edu/water>

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