

Water Wells

People who have their own wells for drinking water need to be especially aware of pollution sources because their water is not tested for contaminants as is city water. This is called “wellhead protection” and involves careful attention to the activities near your well to be sure the water from that well remains safe. However, everyone is responsible for protecting drinking water supplies, whether it is their own or their neighbors

The well casing extends above the ground to prevent storm water runoff from entering the well directly. The well code requires that at least 12 inches of casing pipe extend above the ground after the final grading of the surrounding land. The wellhead should be surrounded 2 feet in all directions by a concrete pad, which should slope away from the well. The concrete pad stabilizes the casing and the soil around it, and the slope of the pad keeps storm water runoff from entering the well.

The age of your well is an important factor in predicting whether your water might be polluted. If you have a well older than 15 years, you might wish to have it examined by a county health department representative, Division of Waster Quality (DWQ) regional groundwater specialist, or a certified well driller.

Backflow occurs when water (and possibly pollution) flows backwards through pipes from the house to the well. There should be anti-backflow devices, known as check valves, on all faucets with hose connections, or there should always be air gaps between hoses or faucets and the water level. Without check valves, you risk having polluted water in laundry tubs, sinks, washing machines, pressure washers, outside hydrants, or swimming pools flow back through the plumbing into your well water.

If unused wells are not properly filled and sealed, they can provide a direct route into the groundwater for storm water runoff carrying pollutants. A well that has been permanently closed by approved methods is considered an abandoned well. As a well owner, you can abandon your own well without a license but you must meet the minimum well code requirements for abandonment. Use of unacceptable materials and methods can lead to well settling, well collapse, and groundwater pollution.

North Carolina regulations include the following requirements of well abandonment.

- If the well owner contracts someone else to abandon the well, it must be done by a certified well driller.
- The pump, piping, and any other obstructions must be removed from the well. Casings and screens should be removed if doing so will not cause or contribute to groundwater pollution.
- Any casing that is not already properly grouted must either be removed or properly grouted.
- The well must be chlorinated to disinfect it before it is sealed.
- The entire depth of the well must be filled with cement, grout or clay. Specific requirements vary according to well type and local geological characteristics.

Well water should be tested once a year. You can have your water tested by either a public or a private laboratory. A list of certified labs is available from the North Carolina Cooperative Extension. If you take the samples yourself, you must carefully follow the instructions that come with the collection bottle. Water should be tested for bacteria and nitrate, which can cause health problems. If your water has high bacteria or nitrate levels, talk to a county health specialist. There may be a problem with the location or construction of your well.

You should contact the county health department before beginning any well construction or repairs. Your regional DENR Groundwater Section office, county health department or local Cooperative Extension Center can be a valuable source of information on the following topics:

- New well construction and site selection.
- Well inspection and maintenance.
- Certified well drillers.
- Unused well abandonment.
- Construction records for existing wells.
- Well water testing.

Your local Cooperative Extension Center can also provide information on:

- Backflow prevention.
- Water pollution and health risks.

- Water treatment devices.
- Groundwater (or call DENR DWQ Groundwater Section regional office nearest you, listed as follows).

Washington Regional Office

934 Washington Square Mall

Washington, NC 27889

252-946-6481

For additional information contact Craven County Cooperative Extension Service at 252-633-1477 or River Bend Water Resource Dept. at 252-638-3540.