



10 TIPS for managing your private well water supply

Guidelines to help ensure the safety of your water supply and the health of your family.



1 Make sure your well is properly constructed.

Well casing should be at least 12" above ground, with a sanitary, sealed well cap or secure concrete cover to prevent contamination from insects and surface water. Unsure about your well construction? Contact a licensed well driller to have your well inspected.



2 The ground should slope away from your well.

This prevents surface water from pooling around the casing which can cause contamination and damage to your system.



3 Ensure your well is at least 100 feet away from contamination sources and have your septic system pumped regularly.

This includes chemical storage, oil tanks, and septic tanks. If you have a septic tank, have it pumped regularly.



4 Keep the area around your well clean and accessible.

Make sure the area is free of debris, paint, motor oil, pesticides and fertilizers. Do not dump waste near your well or near sinkholes, as this may contaminate your water supply.



5 Have your water tested every year for total coliform bacteria.

This will give an indication whether there is a likelihood of more dangerous microorganisms present that could potentially cause illness. Every 3 years test for lead, pH, nitrate, total dissolved solids (TDS), and other contaminants of local concern.

Tips continued on back →



What do my test results mean?

The results of your water quality test will tell you the level of each of the tested substances that were found in your water supply.

Comparing your results to federal EPA drinking water standards for public water systems will help you to determine if water problems are present. While the presence of some contaminants may be hazardous to your health, others may just be a nuisance.

For additional information on safe drinking water standards, specific contaminants, and caring for your well, please visit <https://www.wellwater.bse.vt.edu/resources.php> or <https://www.vdh.virginia.gov/environmental-health/private-well-program/>.



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6 Water tests should be conducted by an accredited lab.

After you receive the results, compare them to the drinking water standards for public systems by the EPA, which serve as good guidelines for private systems. For information on drinking water clinics and accredited labs, visit <https://www.wellwater.bse.vt.edu/events.php>.



7 Inspect your well annually for any cracks, holes, or corrosion.

Ensure your well cap is secure. Every three years, or if you suspect a problem, have your well inspected by a licensed well drilling contractor with a Water Well and Pump (WWP) classification. Contact the local health department for a list of local well contractors.



8 Keep careful records.

Make sure to keep records of your well installation, maintenance, information about treatment devices, and all water tests.



9 Have your well properly abandoned if it is no longer in use.

Have a licensed well contractor properly abandon wells no longer in use. Wells that are left unsealed or improperly abandoned can serve as a direct pathway for surface water to enter the groundwater supply causing contamination. Remember that groundwater is a shared resource!



10 If you have a spring instead of a well, make sure the spring box is sealed to prevent contamination, test regularly, and consider treatment.

Springs are very susceptible to contamination, so be sure to test your spring every year for coliform bacteria. Continuous treatment for bacteria is often required to ensure spring water is safe to drink.



Spring box



Drilled well with proper casing and secure sanitary well cap



Bored well with sealed concrete cover



Testing your well water

Conduct regular tests:

Every year	Total Coliform (TC) and E. coli bacteria
Every 3 years	pH, lead, other contaminants of concern

What to test for:

Basic indicators (potability):

This test gives a **general indication of water quality** providing results for some of the most common contaminants. These include alkalinity, arsenic, cadmium, chromium, bacteria, chloride, copper, fluoride, hardness, iron, lead, manganese, mercury, nitrite/nitrate, pH, sodium, sulfate, and total dissolved solids (TDS).

Most harmful contaminants:

Arsenic, coliform bacteria, copper, lead, nitrates, radon.

Tests for specific problems:

Symptom:	Test for:
Gastrointestinal illness	Coliform bacteria
Cloudy/colored water	Detergents
Orange/black stains	Iron, manganese
Soap has no lather/white residue	Hardness
Water tastes salty	Chloride, sodium, TDS
Odor of gas/fuel	Volatile organic compounds
Pin hole leaks/blue stains	pH, copper, lead
Corrosion	pH, copper, lead