

You are responsible for the quality of your domestic well water



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A water well is an often-overlooked aspect of rural living. Buried in the ground, a well can be easily forgotten, but, as with other aspects of rural living, a well also requires regular inspection, maintenance, and quality testing.

Your responsibility

Wyoming has over 90,000 rural wells supplying 75 percent of Wyoming's residents with drinking water. While the Wyoming State Engineer's Office regulates permitting and construction requirements, no government agency regulates or regularly tests private well water quality. Homeowners are responsible for inspecting their wells regularly for damage and testing water quality.

Where to start

Begin by accessing the well information, including construction materials, depth, and the depth from which it can pull water. If new to the property or the information can't be found, obtain it online through the Wyoming State Engineer's Office e-Permit system. See <http://bit.ly/wyoepermit>. This information will help you understand proper maintenance needs. Contact a licensed well contractor if you have specific questions or concerns.

Protecting your well

Regular inspection can help detect many well issues, but there are steps that help prevent damage

or contamination. Septic systems should be pumped every three to five years to prevent overflows from seeping into the groundwater.

It's also important to prevent contamination from chemicals, such as pesticides or fertilizers. Persistence of the pesticide in the environment, soil type, vegetation, slope, and depth to groundwater can all affect the potential for groundwater contamination. When using any pesticide near a well, be sure to refer to the "Groundwater Advisory" on the label, under the "Environmental Hazards" section, which will specify the pesticide's likelihood to contaminate groundwater. Chemicals should be stored well

away from ponds, streams, and wells.

Fertilizers can also contaminate groundwater. Test your soil to apply only what is needed, avoiding problems with excess fertilizer leaching into groundwater. For more information on safe chemical use near water wells, see this publication from Virginia Cooperative Extension <http://bit.ly/safewaterwells>.

Testing your water

Regularly testing the water quality is important. While there is no federal or state regulation requiring testing of water quality from private wells, the Wyoming Department of Environmental Quality (DEQ) strongly encourages homeowners to annually



Maintaining access to the well area is important in case you need to get equipment in to replace a pump, etc.; however, wells with broad access holes need to be secured so children, pets, and wildlife can't fall into them and drown.

test drinking water from private wells, with spring being the best time.

Water quality should be tested when a new well is drilled, if there is no record of testing, or when buying a new home.

Water quality should also be tested if:

- There is an unexplained illness in the home,
- Someone in the home is pregnant or nursing,
- You note a change in water color, taste, odor, or clarity,
- There is a chemical or fuel spill nearby,
- After failure of a septic system,
- After a flood,
- Before installing a treatment system,
- Or your neighbors find a contaminant in their well water.

Common water quality concerns

There are many things that can be tested for, and the lab you choose to work with can help determine which tests should be run. The Wyoming DEQ has compiled a list of the most common contaminants in Wyoming:

- Bacteria: most common contaminant
- Nitrates: from septic system and fertilizers
- Lead: from household plumbing
- Arsenic: occurs naturally and was once a common ingredient in pesticides

Other contaminants may include uranium, methane, iron-reducing bacteria, pH, and radium 226+228. If the

well is near oil and gas development, the Wyoming DEQ has additional guidelines to consider when testing well water. More information is at knowyourwell.org.

Only allow grass to grow around the well, as the roots from other plants such as trees and shrubs can damage the well casing. During yard cleanup, avoid piling leaves or branches around the well. The same goes for snow in the winter. Consider placing a fiberglass marker to make finding the well easier in winter.

Heavy equipment or other vehicles can also damage a well or water lines. Keep them off your lawn and do not park them near the well.

If you experience a loss of power to your pump, do not reset the breaker, fuse, or pump without inspection. This could be an indication of a larger problem, as most circuit breakers or fuses trip for a reason. Have this problem inspected by a licensed professional to ensure your safety and to avoid any potential damage to well components.

Another issue you may experience is a loss of pressure or no water at all. Possible causes include:

- Low water levels in the well,
- Leak in system piping,
- Clogged filter or water line,
- Faulty electrical controls,
- Waterlogged pressure tank,
- Faulty or worn well pump.

Making a plan

March 13 is "Know your well day" and is a good time to remind yourself to test your water. Set a regular schedule for inspection and testing to keep your water running clean.



For more information on well maintenance and water testing

Wyoming Department of Environmental Quality (DEQ) knowyourwell.org

- Information on everything to know about owning and maintaining a rural well in Wyoming.
- Includes understanding your well maintenance, common contaminants, licensed contractors, and testing labs.

Wellcare hotline

wellcarehotline.org

- Large library of information sheets on wells and water related topics
- Help in finding licensed contractors and testing labs
- Free quarterly newsletter
- Free well owner's manual

Caleb Carter suggested in the summer edition ways to keep an irrigation system running smoothly. We don't know what water-related story he'll write about next. He is a University of Wyoming Extension educator serving southeast Wyoming and can be reached at (307) 532-2436 or at ccarte13@uwyo.edu. Check out his newsletter at www.uwyoextension.org/highplainscropsite.