

Water Testing and Treatment

What You Need to Know

Testing the water is one of a well owner's most important responsibilities. Some prudent questions include:

- What should I test for?
- How often should I test?
- How do I interpret results?
- What if there is a health concern?

Following are some guidelines on testing your water from the National Ground Water Association (NGWA).

Step #1—Is your water well system clean?

First, determine if your well is clean. A dirty well, for instance one with accumulated sediment or debris at the bottom, can create an environment suitable to bacterial growth and impair effective disinfection.

A qualified water well system contractor can determine if your water well system needs cleaning by conducting an anaerobic bacteria test, a coliform test, or other tests that can indicate an accumulation of debris in the well. If test results indicate the presence of anaerobic bacteria and/or coliform bacteria—or if you are experiencing cloudy water, low water flow, or taste and odor problems—a well cleaning by the contractor may be in order.

Step #2—How often should I test?

Next, well owners should test annually for bacteria, nitrates, and anything of local concern. The water should be tested more frequently if there is:

- Any change in the water's taste, odor, or appearance
- A problem such as a broken well cap or a new contamination source
- A family member or houseguest who has recurrent incidents of gastrointestinal illness
- A pregnant woman or infant living in the home
- A dangerous contaminant that shows up in your neighbors' water
- A need to monitor the efficiency and performance of home water treatment equipment.

Contaminants of local concern can come from sources such as landfills, industrial sites, hazardous substance spills, or improperly discarded hazardous household wastes. Some naturally

occurring contaminants, such as arsenic and radon, are area specific.

To determine what might be of local concern, ask a qualified local water well system contractor or water treatment company, a certified water testing laboratory, or local health or environmental health officials.

Step #3—How can I get my water tested?

To find a qualified water testing lab, contact your state or local health department, or check the "Water Quality" section of NGWA's Web site, www.wellowner.org. Then click on "Water Testing." If local labs do not test for substances you wish to check, there are national water testing labs that may be able to help such as National Testing Laboratories (www.ntllabs.com) and Underwriters Laboratories (www.ul.com).

Upon receiving water test results, ask the lab if there are any contaminants that present a health risk—or check with the appropriate state or local agency involved in public health or water regulation. You also can check your test results against the U.S. EPA's maximum contaminant levels on its Web site: www.epa.gov/safewater/contaminants/index.html.

Step #4—Is a water treatment device necessary?

Should any contaminants above levels of health concern remain after proper maintenance, talk to a qualified water well system contractor about options such as installing a new well, rehabilitating the well, or installing a water treatment technology to address the specific water quality issues. The professional can advise you on how to proceed.

When considering a water treatment device, make sure its specifications match up to the substances and concentrations you wish to treat. Also, there are performance testing programs for treatment systems, such as those of the Water Quality Association and NSF International. A contractor should evaluate if the technology being provided to the customer has been voluntarily submitted for performance testing.

It is important that water treatment equipment be serviced according to the manufacturer's recommendations.

For more information about water wells and groundwater, visit the Web site for well owners at www.wellowner.org.