

ALABAMA A&M AND AUBURN UNIVERSITIES

# Water Testing Should You Have Your Water Tested?

ANR-790-2.2.1

The question of whether or not to have your water tested is a serious matter that concerns the health of you and your family. Water that is contaminated with bacteria or chemicals can cause both immediate and long-term health problems. In addition to illness, a variety of less serious problems such as taste, color, odor, and staining of clothes or fixtures are symptoms of water quality problems.

Whether or not to have your water tested also depends on the supplier and the source of your water. Many people get water simply by turning on the faucet and making a monthly payment to a municipal water system. Others provide their own water. Your water supply is either public (supplied by a municipality) or a private system. Public water systems draw water from rivers, reservoirs, springs, or groundwater wells. Most private drinking water comes from wells, though springs and ponds are sometimes used.

## Testing Your Water: Public Water Systems

If your water comes from a public system, federal and state standards require regular testing for contaminants such as pathogens, radioactive elements, and certain toxic chemicals. Individuals using public water supplies pay for water testing and treatment as part of their water bill.

If your public water system fails to meet Primary Drinking Water Standards, you must be notified. The kind of contamination and what effects it might have on your health will determine the type of notification. Usual means of notification include newspapers, letters, radio, or television.

Even though federal and state water testing is thorough, some contamination of drinking water can still occur. Some public water supplies have quality problems caused by inadequate municipal treatment facilities or distribution systems. Main lines in old systems may have cracks that allow untreated water to be drawn in under certain conditions. Also, some rural water supply districts do not have enough money to hire trained specialists or to immediately comply with expanding government requirements. In addition, corrosive water or deteriorating plumbing in the house can add contaminants after water enters your home.

Even if your water comes from a public supply, it should be tested for total coliform bacteria when major changes are made in the plumbing of your home or the water treatment system. Changes or additions to plumbing or water treatment systems could introduce contaminants.

### **Testing Your Water: Private Water Supplies**

More than 720,000 Alabama citizens, or 17 percent of the state population, depend on their own wells, springs, or cisterns for drinking water. Individual water supplies of this sort are considered private. The owner has sole responsibility for assuring the safety of the water source for drinking. For this reason, routine testing for a few of the most common contaminants is highly recommended.

Private wells should be tested yearly for coliform bacteria, nitrate, hardness (total dissolved solids), and pH. A big change in either of these parameters from one year to the next indicates potential contamination. Tests for iron, sulfate, and chloride should be done every 3 to 5 years.

- If you are expecting a baby in your home, you should test for nitrate at the beginning of the pregnancy. Depending on the test result, you may wish to test again before bringing the baby home and during the baby's first 6 months.
- If your wellhead becomes flooded or submerged, test for bacteria.
- If a chemical spill or leak occurs within 500 feet of your well, test your water for possible contamination. Also test your water supply if your neighbors have found contamination.

• If you are buying a new house with a private water supply, have the water tested for bacteria and nitrate to insure its quality. Lending agencies often require the bacteria test before approving a loan.

Given the high cost of housing, it is also prudent to test for radon and mineral radioactivity.

If you have a well that contains soft or acidic water (pH below 7.0), this water may be leaching metals from your plumbing. If you have corrosive water, test the water coming from your faucet for copper and lead. This is especially important for a new well that uses a brass, submersible pump.

If you have an old or shallow well, it is especially important to test your water regularly. Older methods of well construction and the well's location in relation to septic or livestock facilities on many farms make older and shallow wells prone to contamination.

The testing frequencies suggested here are general guidelines. Test more often if you suspect there is a problem with the quality of your drinking water.

#### **Summary**

You should have your water tested if you suspect or observe a water quality problem. Not all residents need to test their water, and it is imprac-

tical, unnecessary, and very expensive to test for all possible contaminants. Testing, however, is the only sure way to confirm that certain problems exist so that appropriate treatment can be recommended.

#### References

Mengel, David B., and Cheri L. Janssen. 1990. Why Test Your Water? WQ 4. Indiana Cooperative Extension Service. Purdue University. West Lafayette, IN.

Population Served By Public Water Systems. 1991. Alabama Rural Water Association Inc. Montgomery, AL.

Powell, G. Morgan. 1990. Suggested Water Tests For Private Systems. Engineering 4-5 (Water Quality). Kansas Cooperative Extension Service. Kansas State University. Manhattan, KS.

Stewart, Judith C., Ann T. LemIey, Sharon I. Hogan, and Richard A. Weismiller. 1990. Home Water Testing. Water Quality Fact Sheet 4. USDA Extension Service. Washington, DC.



ANR-790-2.2.1

This publication, supported in part by a grant from the Alabama Department of Environmental Management and the Tennessee Valley Authority, was prepared by James E. Hairston, *Extension Water Quality Scientist*, assisted by Leigh Stribling, *Technical Writer*.

**For more information,** call your county Extension office. Look in your telephone directory under your county's name to find the number.

Issued in furtherance of Cooperative Extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, and other related acts, in cooperation with the U.S. Department of Agriculture. The Alabama Cooperative Extension System (Alabama A&M University and Auburn University) offers educational programs, materials, and equal opportunity employment to all people without regard to race, color, national origin, religion, sex, age, veteran status, or disability.

UPS, New June 1995, Water Quality 2.2.1