



Arsenic in Drinking Water

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In recent years, health-related studies have linked arsenic in drinking water to a variety of illnesses. These include several types of cancer as well as non-cancerous effects. As a result of these studies, the United States Environmental Protection Agency (EPA) has revised the drinking water standard for arsenic.

Arsenic is a naturally occurring element found in the earth's crust. As rocks, minerals and soil erode, arsenic can be released into water supplies. Arsenic can also be released into water supplies through human activities. The primary use of arsenic by industry is as a wood preservative. While arsenic can be found in our surface water bodies including lakes, streams and rivers, it is more commonly found in ground water.

Currently, public water systems are required to limit arsenic concentrations in water to 0.05 milligrams per liter (mg/L). Beginning in 2006, the standard (also known as a maximum contaminant level (MCL)) is being lowered to 0.01 mg/L. A five-year implementation period will allow public water systems to perform enhanced monitoring for arsenic and implement treatment processes to reduce the concentrations below the (MCL).

While the change in the rule represents a significant lowering of the MCL, the EPA does not believe that a large number of water systems will be affected. Estimates indicate that approximately 5% of the more than 54,000 community water systems in the country will have to take action to meet this new standard. A community public water system serves an average of 25 or more persons per day or 15 service connections. In addition to community water systems, the rule will also impact approximately 1,100 of the non-transient, non-community water systems in the U.S. These systems are not considered community water systems, but do supply water to at least 25 of the same people more than six months per year.

In Kentucky, the Division of Water does not expect the impact of this new rule to be widespread. Initial monitoring has found limited occurrence of arsenic above 0.01 mg/L in public water.

If you are a public water system customer, you may begin to receive information from your water system about arsenic in 2002. Each year, public water systems must develop and distribute a "Consumer Confidence Report". These reports provide customers with information about their drinking water supplies. If your water system detects arsenic between the current MCL level of 0.05 mg/L and the new level of 0.01 mg/L, the consumer confidence report will include information about arsenic and its potential health effects. In addition, water systems that detect arsenic between 0.005 mg/L and 0.01 mg/L will also include information about arsenic.

To learn more about your drinking water, watch for and read your consumer confidence report each year. If you do not receive a report by July 1st each year, contact your local water supplier to request a copy. While some systems are required to mail the reports, others publish the information in a local newspaper. If you'd like to learn more about arsenic and the new drinking water standard, the EPA can provide additional information. Contact the Safe Drinking Water Hotline at (800) 426-4791 or visit the EPA's Safewater website at <http://www.epa.gov/safewater/arsenic.html>.

References:

- U.S. Environmental Protection Agency. 2001. *Drinking Water Standard for Arsenic (EPA-815-F-00-015)*.
- Goodmann, Peter, et.al. 2001. "Arsenic in Kentucky's Ground Water and Public Water Supplies and the Impact of the New MCL of 10 ug/L." *2001 Water Resources Annual Symposium Proceedings*, University of Kentucky, Lexington, KY.