

Water Supply and Quality Fact Sheet

The following information is compiled from sources including the U.S. Environmental Protection Agency, American Water Works Association, National Groundwater Association, U.S. Department of Health and Human Services, U.S. Department of Energy, Argonne National Laboratory Environmental Assessment Division, Argonne National Library, and the Agency for Toxic Substances and Disease Registry.

National Water Supply

- Groundwater is the main source of drinking water for approximately 147,000 water systems nationwide.ⁱ
- Approximately 25 percent of rainfall in the United States becomes ground water.ⁱⁱⁱ
- Around 54,000 community water systems provide about 90 percent of Americans with drinking water. Eighty percent are municipally owned.ⁱⁱⁱ
- Americans use an estimated 90 gallons of water a day in the home, totaling about 107,000 gallons per household each year.ⁱ

Water Contaminants

- Water contamination is a result of both natural and human activity.
- Naturally occurring sources of contamination include:ⁱ
 - Heavy metals from underground rocks containing arsenic, cadmium, chromium, lead and selenium
 - Fluoride
 - Microorganisms in wildlife and soil
 - Nitrogen compounds in soil

Children, infants, pregnant women and the elderly may be more vulnerable to contaminants in drinking water than the general population.ⁱ

RADIUM

- Radium is a naturally occurring radioactive material that forms when uranium decays in the environment.^{iv} It is in soil, rocks, water, plants, and animals in generally low concentrations.^v
- Drinking water provides the greatest potential for human exposure to radium.^{iv} In 2003, the U.S. Environmental Protection Agency (EPA) set the maximum contaminant level for radium in drinking water supplies as 5 picocuries* per liter (pCi/L).
- Higher levels of radium have been detected in some areas of the United States, including states in the Midwest and along the East Coast.
- Drinking high amounts of radium over a long period of time can lead to an increased risk of cancer and other serious health problems like anemia.





URANIUM

- Uranium is a naturally occurring radioactive material that exists in soil, rock and water. It has been mined in the United States, Canada, Australia, Europe, the former Soviet Union, Africa and elsewhere. Uranium is a natural energy source.^{vi}
- Higher levels of uranium are present in areas with natural uranium ores, such as the southwestern United States.^{vi} Human exposures generally occur through food consumption or drinking water, where levels can be in excess of 100 parts per billion (ppb).^{vii}
- The EPA's guidelines for drinking water allow for a maximum uranium presence of only 30 ppb.
- Drinking high amounts of uranium over a long period of time can cause toxic effects to the kidneys and increase the risk of cancer.

OTHER CONTAMINANTS

- Arsenic, chromium, barium and ammonia are often present at high levels in drinking water sources

Regulation

- The U.S. Environmental Protection Agency (EPA) regulates drinking water quality by issuing laws cities must obey.
 - For more than thirty years, the Safe Drinking Water Act has regulated the nation's public drinking water supply through federal and state collaboration.
 - As a result, communities across the country are able to provide safer and cleaner water to residents.
- Water utilities must monitor for more than 100 contaminants in drinking water and comply with nearly 90 regulations for water safety and quality.^{viii}
- Water utilities treat almost 34 billion gallons of water daily,ⁱⁱ and 94 percent are in full compliance with federal regulations.ⁱⁱⁱ
 - Annually, utilities are required to provide customers with detailed information about the quality of their drinking water, any contaminants found, and the treatment strategies that have been put in place to ensure the water is safe to consume.ⁱⁱⁱ

ⁱ U.S. Environmental Protection Agency, "Water On Tap: What You Need To Know." 2003. <http://www.epa.gov/safewater/wot/>
Sources and for more information:

ⁱⁱ National Ground Water Association, "Ground Water Facts." Available at; www.ngwa.org.

ⁱⁱⁱ American Water Works Association, "Your Water Utility." <http://www.drinktap.org/consumerdnn/Home/YourWaterUtility/tabid/62/Default.aspx>

^{iv} Agency for Toxic Substances and Disease Registry (ATSDR). Toxicological Profile for Radium. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. 1990.

^v U.S. Department of Energy and Argonne National Laboratory Environmental Assessment Division. Summary Fact Sheets for Selected Environmental Contaminants to Support Health Risk Analyses. July 2002.

^{vi} Argonne National Library, "Human Health Fact Sheet." 2003.

^{vii} Agency for Toxic Substances and Disease Registry (ATSDR). Toxicological Profile for Radium. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. 1990.

^{viii} American Water Works Association, "Only Tap Water Delivers."
<http://www.drinktap.org/consumerdnn/Portals/0/Consumer%20Sheet%20-%20Public%20Health.pdf>

* A picocurie (pCi) is a unit of measurement for radionuclides that measures the number of disintegrations per second.

For more information contact Ron Dollar, VP Sales and Marketing,
303-424-5355, rdollar@wrtnet.com, or visit www.wrtnet.com.