



**Annual Drinking Water Quality Report for 2003
Fort Leonard Wood, Missouri**

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Introduction

Under the Consumer Confidence Reporting Rule of the Safe Drinking Water Act, community water systems are required to annually report water quality information to the public. This report provides information on the sources of drinking water and presents results of water quality monitoring performed in 2003.

Information About Drinking Water

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals. It can also pick up substances resulting from animal or human activity. Classes of contaminants that could be present include:

- **Microbial:** Such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic:** Such as salts and metals that can be naturally-occurring or the result of stormwater runoff, industrial or domestic wastewater discharges, oil or gas production, mining, or farming. Some naturally occurring salts and metals could be radioactive.
- **Organic:** Include volatile and synthetic chemicals that are by-products of industrial processes or petroleum production. They can also come from gas stations, urban stormwater runoff, and septic systems.

Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency's (U.S. EPA's) Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek

advice about drinking water from their health care providers. Guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants in drinking water are available from the EPA's Safe Drinking Water Hotline and the Center for Disease Control (CDC).

For more information on Fort Leonard Wood's drinking water, contact the Chief of Environment, Energy and Natural Resources at (573) 596-0882 or by visiting the Environmental Division's website at: <http://www.wood.army.mil/DPWENV/>

Source and Treatment

Fort Leonard Wood's drinking water is a blend of water from the Big Piney River and a deep well on the installation. Over 97-percent of our drinking water is pumped from the Big Piney River at an inlet upstream of the Fort's golf course. This water is treated to comply with drinking water quality standards at the Fort's water treatment plant. Water is first treated by chemical coagulation and sedimentation to lower the concentration of suspended solids and naturally occurring metals. The water is then filtered, fluoridated to help prevention of tooth decay, and disinfected by adding chlorine.

Less than 3-percent of our drinking water is pumped from Potosi Dolomite aquifer. The well is 1,010-foot deep and has the capacity to draw up to 576,000 gallons of water per day. The water is clear and requires no chemical and/or filtration treatment to remove suspended solids. However, this water is chlorinated before it is blended with treated drinking water from the Big Piney River.

Following treatment, water is pumped into the distribution system and stored in one of three elevated storage tanks prior to use.

Monitoring Results

In order to ensure that tap water is safe to drink, the U.S. EPA prescribes regulations that limit the amount of contaminants.

To guard against the possibility of contamination, Fort Leonard Wood routinely monitors for constituents according to Federal and state laws. Over the past year, more than 11,500 tests were completed to assess water quality, including tests for:

- 2 microbial contaminants;
- 31 inorganic contaminants;
- 8 pesticides and herbicides; and
- 59 different volatile organic compounds.

The monitoring data reviewed for this report included results from tests conducted in 2003 for regulated and unregulated (optional) contaminants. Regulated contaminants are those which have safe levels assigned to them by the U.S. EPA or Missouri Department of Natural Resources (MDNR).

Unregulated contaminants do not have prescribed safety levels, but are included in monitoring to expand water quality evaluations for improved safe drinking water.

The table below lists regulated and unregulated contaminants that were detected in drinking water. Fort Leonard Wood has had no drinking water violations during the past 6 years of publishing this report, including 2003. Your drinking water meets or surpasses all standards of quality established by the U.S. EPA and the MDNR.

Interested parties are invited to visit Fort Leonard Wood's Environmental Division Internet web page where the 2003 drinking water quality report has been posted, see the "Safe Drinking Water Reports" link.

FORT LEONARD WOOD DETECTED CONTAMINANTS 2003*

Inorganic	MCL	MCLG	Peak	Range	Violation	Typical Source
Alpha Emitters (2002)	15	0	1.0	1.0	No	Decay of natural and man-made deposits.
Barium	2	2	0.04	0.03 - 0.04	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride	4	4	0.77	0.69 - 0.82	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.
Volatile Organic	MCL	MCLG	Average	Range	Violation	Typical Source
HAA	60	---	37	13 - 52	No	Disinfection by-product.
TTHM	80	---	45	11 - 66	No	Disinfection by-product.
Physical Property	MCL	MCLG	Peak	Measurements below MCL (%)	Violation	Typical Source
Turbidity	3	3	1.3	100	No	Soil erosion can cause water in the Big Piney to become cloudy. Monitoring ensures the effectiveness of filtration.
Inorganic	MCL	MCGL	Average	Sample Number	Violation	Typical Source
Lead (2001)	15	0	< 4.0	30	No	Corrosion of household plumbing systems; erosion of natural deposits.
Copper (2001)	1.3	1.3	0.04	30	No	Corrosion of household plumbing systems; Erosion of natural deposits; and leaching from wood preservatives.
Inorganic	SS		Peak			Typical Source
Sulfate	2		0.11			Natural dissolution from minerals in bedrock; industrial and agricultural activities.
Aluminum	5		11			Natural dissolution from minerals in bedrock; water treatment; industrial and agricultural activities.

* If monitored less than annually, year that monitoring was completed is included in parenthesis, i.e. (2002).

HAA: **Haloacetic acids**, chlorinated and/or brominated organic compounds resulting as by-products of disinfecting treatment.

MCL: **Maximum Contaminant Level**, the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: **Maximum Contaminant Level Goal**, the level below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

SS: **Secondary Standard**, contaminant levels below which would not affect the taste, odor, color, staining of water, and/or scale-forming tendencies of the water.

TTHM: **Total Trihalomethanes**, chlorinated methane (organic) compounds resulting as by-products of disinfecting treatment.