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# CONSUMER CONFIDENCE REPORT FOR 2009

Fort Leonard Wood, Missouri



"Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

Translation: This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it."

June 2010

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**EXECUTIVE SUMMARY**



## EXECUTIVE SUMMARY

### 2009 Consumer Confidence Report Fort Leonard Wood, Missouri

In 1998, the U.S. Environmental Protection Agency (EPA) published a Safe Drinking Water Act rule requiring community water systems to annually provide information on the quality of drinking water they provide to the consuming public. This information is contained in the Consumer Confidence Report (CCR). Fort Leonard Wood's CCR is titled, Annual Drinking Water Quality Report for 2009.

The quality of drinking water at this installation continues to be excellent. In 2009, over 11,000 tests were performed to assess the presence or absence of 115 distinct substances or physical characteristics of Fort Leonard Wood's drinking water. In the past eleven years of reporting, water quality has met or surpassed all required standards of quality established by EPA and the Missouri Department of Natural Resources.

This report represents the eleventh annual CCR for Fort Leonard Wood. It includes the following elements:

- Supplier name and name and contact information;
- Sources of water;
- Table showing detected contaminants, their concentration, prescribed safe levels, potential contaminant sources; and
- Health information using specified language contained in the rule.

The regulatory deadline for distributing the 2009 CCR to consumers is July 1, 2010. Prior to this deadline, the CCR will be disseminated to consumers by publishing the complete report in the Fort Leonard Wood Guidon (Guidon), and by posting a copy of it on the Fort Leonard Wood Environmental Home Page at:

<http://www.wood.army.mil/DPWENV/>

Following publication of the report in the Guidon, a statement certifying distribution of the 2009 CCR to consumers will be sent to the Missouri Department of Natural Resources.



**Annual Drinking Water Quality Report for 2009  
Fort Leonard Wood, Missouri**



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## Annual Drinking Water Quality Report for 2009 Fort Leonard Wood, Missouri

### 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 2009.

### 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:** includes volatile and synthetic chemicals that are by-products of industrial processes or petroleum production. They can also come from gas stations, urban storm water 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 at 1-800-426-4791.

- ***Haloacetic Acids (HAA)***  
Some people who drink water containing haloacetic acids in excess of the Maximum Contaminant Level (MCL) over many years, may have an increased risk of getting cancer.
- ***Total Trihalomethanes (TTHM)***  
Some people who drink water containing trihalomethanes in excess of the MCL over many years, may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

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- **Lead**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Fort Leonard Wood is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

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 Environmental Division Chief at (573) 596-0882 or visit the Division's website at: <http://www.wood.army.mil/DPWENV/>

### **Source and Treatment**

Fort Leonard Wood's drinking water sources are from both river and well water. Over 97% of the water is from the Big Piney River. Before being distributed, this water is treated to comply with drinking water quality standards at the Fort Leonard Wood water treatment plant. At the plant, the river 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 and fluoridated to help prevent tooth decay; and disinfected with chlorine. The remaining water is pumped from over 1,000 feet underground from the Potosi Dolomite aquifer. Due to its purity, this water is not treated to remove suspended solids, as with the river water.

In addition, Fort Leonard Wood currently has 7 active permitted wells that serve individual remote areas: Building 1420, Ammunition Supply Point; Building 5259, Babb Airfield; Building 12800, Military Operations and Urban Terrain (MOUT) Training Facility; Building 10221, Golf Course; Building 10321, Rock Quarry; Building 10380, Training Area 61; and Building 10224, Golf Course Maintenance.

The monitoring results for all sources of drinking water at Fort Leonard Wood are included in this report.

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## **Monitoring Results**

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations that limit the amount of certain contaminants. Fort Leonard Wood routinely monitors for these potential contaminants to demonstrate drinking water safety. Over the past year, more than 11,000 tests were completed to assess water quality. Testing included monitoring of both regulated and unregulated contaminants, and physical characteristics.

Regulated contaminants are those which have safe levels assigned to them by the U.S. EPA or Missouri Department of Natural Resources. Unregulated contaminants do not have prescribed safety levels, but are monitored to ensure that treatment is effective and responds to ever changing environmental conditions. Testing targeted:

- Two types of microbes;
- Thirty-one metals;
- Eight pesticides and herbicides; and
- Fifty-nine volatile organic compounds.
- Turbidity; and
- Total Organic Carbon.

A summary of the highest positive results from contaminant testing is included in the following table:



Fort Leonard Wood Detected Contaminants 2009*						
<b>REGULATED CONTAMINANTS</b>						
<b>Radionuclides</b>	<b>Peak</b>	<b>Range</b>	<b>Units</b>	<b>MCL</b>	<b>MCLG</b>	<b>Typical Source</b>
Gross Alpha Particle Activity	3.3	3.3	pCi/l	15	—	Erosion of natural deposits
<b>Disinfection By Products</b>	<b>MCL</b>	<b>MCLG</b>	<b>RAA</b>	<b>Range</b>	<b>Violation</b>	<b>Typical Source</b>
HAA (ppb)	60	—	49.02836	12.9-75	No	Disinfection by-product
TTHM (ppb)	80	—	46.27493	12.6-108	No	Disinfection by-product
<b>Physical Property</b>	<b>MCL</b>	<b>Peak</b>	<b>Month Occurred</b>	<b>Measurements below MCL (%)</b>	<b>Violation</b>	<b>Typical Source</b>
Turbidity (NTU)	3	0.27	May	100	No	Soil runoff
<b>Inorganic</b>	<b>MCL</b>	<b>MCLG</b>	<b>Peak</b>	<b>Violation</b>	<b>Typical Source</b>	
Barium (ppm)	2	2	0.114	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	
Fluoride (ppm)	4	4	0.84	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories	
Nitrate + Nitrite (ppm)	10	10	3.27	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits	
<b>HOUSEHOLD SAMPLING</b>						
<b>Inorganic</b>	<b>MCL</b>	<b>MCLG</b>	<b>90th Percentile</b>	<b>Range</b>	<b>Violation</b>	<b>Typical Source</b>
Copper (2008-2010) (ppm)	1.3	1.3	0.0792	0.00147 - 0.119	No	natural deposits; and leaching from wood preservatives
Lead (2008-2010) (ppb)	15	0	2.64	1.61 - 2.62	No	natural deposits
<b>OPTIONAL MONITORING (not required by EPA)</b>						
<b>Inorganic</b>	<b>SS</b>	<b>Peak</b>	<b>Range</b>	<b>Violation</b>		
Alkalinity, CaCO <sub>3</sub> Stability (ppm)	—	192	192	NA		
Chloride (ppm)	250	6.67	6.67	NA	—	
Dissolved Solids (ppm)	500	195	195	NA	—	
Manganese (ppb)	50	0.00376	0.00376	NA	—	
Sulfate (ppm)	250	11.6	11.6	NA	—	
Zinc (ppm)	5	0.112	0.112	NA	—	
Calcium (ppm)	—	34.3	34.3	NA	—	
Hardness as CaCO <sub>3</sub> (ppm)	—	170	170	NA	—	
Magnesium (ppm)	—	20.5	20.5	NA	—	
Potassium (ppm)	—	1.16	116	NA	—	
Sodium (ppm)	—	2.37	2.37	NA	—	
pH	8.5	7.45	7.45	NA	—	
Total Alkalinity (ppm)	—	176	115 - 176	NA	—	
*If monitored less than annually, year that monitoring was completed is included in parenthesis, ie (2007).						
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.					
PPB:	Parts per billion (UG/L)					
PPM:	Parts per million (MG/L)					
RAA:	Running Annual Average, or the average of sample analytical results for samples taken during the previous four calendar quarters.					
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.					

Fort Leonard Wood has not had a drinking water violation during the past 11 years of publishing this report, including 2009. Fort Leonard Wood's drinking water meets or surpasses all standards of safety and quality established by the U.S. EPA and the Missouri Department of Natural Resources.

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**Appendix A**  
CCR Certification



**Appendix B**  
CCR Brochure

