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# CONSUMER CONFIDENCE REPORT FOR 2012

Fort Leonard Wood, Missouri

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"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 2013

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# 2012 Consumer Confidence Report

## Fort Leonard Wood, Missouri

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## **EXECUTIVE SUMMARY**

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## **EXECUTIVE SUMMARY**

### **2012 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 2012.

The quality of drinking water at this installation continues to be excellent. In 2012, 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 13 years of reporting, water quality has met or surpassed all required standards of quality established by the EPA and the Missouri Department of Natural Resources.

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

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

The regulatory deadline for distributing the 2012 CCR to consumers is July 1, 2013. 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 2012 CCR to consumers will be sent to the Missouri Department of Natural Resources.

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**ANNUAL DRINKING WATER QUALITY REPORT FOR 2012  
FORT LEONARD WOOD, MISSOURI**

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# Annual Drinking Water Quality Report for 2012

## 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 2012.

### 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 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 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. Under the authority of the Safe Drinking Water Act, the Environmental Protection Agency (EPA) set the Action Level for lead in drinking water at 15 parts per billion (ppb). This means utilities must ensure that water from the customer's tap does not exceed this level in at least 90 percent of the homes sampled (90<sup>th</sup> percentile value). The Action Level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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 [www.epa.gov/safewater/lead](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 8 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, TA 61; Building 10224, Golf Course Maintenance, and Building 5247, TA-224. The monitoring results for all sources of drinking water at Fort Leonard Wood are included in this report.

<b>Water Sources For Fort Leonard Wood</b>		
<b>Source Name</b>	<b>Building</b>	<b>Type</b>
Big Piney River		Surface Water
Ammunition Supply Point Building	1420	Ground water
Babb Airfield Building	5259	Ground water
MOUT Training Facility Building	12800	Ground water
Golf Course– Building	10221	Ground water
Rock Quarry- Building	10321	Ground water
TA 61 Building	10380	Ground water
Golf Course Maintenance	10224	Ground water
TA-224 Bldg	5247	Ground water

## **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 the 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
- Fifty-nine volatile organic compounds
- Turbidity
- Total Organic Carbon

Fort Leonard Wood has not had a drinking water violation during the past 13 years of publishing this report, including 2012. 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.

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

## Fort Leonard Wood Detected Contaminants- 2012

Regulated Contaminants							
Compound	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Arsenic	1/24/2012	1.26	1.26	ppb	10	0	Erosion of natural deposits
Barium	1/24/2012	0.0385	0.0385	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	1/24/2012	2.5	2.5	ppm	4	4	Natural deposits; Water additive which promotes strong teeth
Nitrate-Nitrite	3/6/2012	3.1	0 – 3.1	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Disinfection Byproducts							
Byproduct	Monitoring Period	RAA	Range	Unit	MCL	MCLG	Typical Source
Total Haloacetic acids-HAAs	2012	27	12.8 – 63.3	ppb	60	0	Byproduct of drinking water disinfection
TTHM	2012	39	15.2 – 57.2	ppb	80	0	Byproduct of drinking water disinfection
TOC							
Total Organic Carbon	Collection Date	Highest Value	Range	Unit	TT	MCLG	Typical Source
Carbon, Total	3/19/2012	0.85	0.53 – 0.85	mg/L	0	0	Naturally present in the environment
Lead and Copper							
Lead and Copper	Date	90 <sup>th</sup> Percentile	Range	Unit	AL	Sites over AL	Typical Source
Copper	2010 - 2012	0.0657	0.00142 – 0.257	ppm	1.3	0	Corrosion of household plumbing systems
Lead	2010 - 2012	0	0 - 1.53	ppb	15	0	Corrosion of household plumbing systems
Microbiological							
Microbiological organisms	Result	MCL	MCLG	Typical Source			
No detected results were found in calendar year of 2012							
Turbidity							
Turbidity is a measure of cloudiness of water. We monitor turbidity because it is a good indicator of the effectiveness of the filtration system.							
Percentage of samples in compliance with standard		Months Occurred	Violations	Typical Source			
100		12	No				
Violations and Health Effects Information							
No violations occurred in the calendar year 2012							
Optional Monitoring (not required by EPA)							
Secondary Contaminants	Collection Date	Highest value	Range	Units	MCL	MCLG	
Alkalinity, CaCO <sub>3</sub> Stability	1/24/2012	302	302	mg/L			
Alkalinity, Total	12/10/2012	190	150 - 190	mg/L			
Aluminum	1/24/2012	0.0127	0.0127	mg/L	0.05		
Calcium	1/24/2012	35.7	35.7	mg/L			
Chloride	1/24/2012	10.2	10.2	mg/L	250		
Hardness, Carbonate	1/24/2012	178	178	mg/L			
Iron	1/24/2012	0.002	0.002	mg/L	0.3		
Magnesium	1/24/2012	21.6	21.6	mg/L			
Manganese	1/12/2011	0.0803	0 - 0.0803	mg/L	0.05		
pH	1/24/2012	7.4	7.4	pH	8.5		
Potassium	1/24/2012	1.18	1.18	mg/L			
Sodium	1/24/2012	2.52	2.52	mg/L		20	
Sulfate	1/24/2012	6.08	6.08	mg/L	250		
Total Dissolved Solids	1/24/2012	187	187	mg/L	500		

**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: Part per billion** (ug/L)

**ppm: Part 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.



## Consumer Confidence Report Certification

**PWS Name: Fort Leonard Wood**

**PWS I.D. Number: MO3079500**

The community public water system (PWS) indicated above confirms their 2012 Consumer Confidence Report has been distributed to their customers and the appropriate notices of availability have been given. Further, this system certifies that the information contained in their Report is correct and consistent with the compliance monitoring data previously submitted to the Missouri Department of Natural Resources.

### Certified by:

**Name:** Carl Stenger      **Signature:** \_\_\_\_\_  
**Title:** Physical Scientist  
**Phone:** (573) 596-0131 ext. 63723      **Date:** \_\_\_\_\_

You are not required by EPA rules to report the following information, but you may want to provide it to Missouri Department of Natural Resources. Check all items that apply:

- CCR distributed by mail or other direct delivery. Specify other direct delivery methods:
- "Good faith" efforts were used to reach non-billing consumers. Those efforts included the following as recommended by the primacy agency.
  - Posting on the Internet at:  

<http://www.wood.army.mil/DPWENV/>
  - Mailing the CCR to postal patrons within the service area. (Attach zip codes used)
  - Advertising the availability of the CCR in news media (attach copy of announcement)
  - Publication of CCR in local newspaper (attach copy)
  - Posting the CCR in public places (attach list of locations)
  - Delivery of multiple copies to a single bill address serving several persons such as: apartments, businesses, and large private employers.
  - Delivery to community organizations (attach list)
- (For systems serving at least 10,000 persons) Posted CCR on a publicly-accessible Internet site at the address:  

<http://www.wood.army.mil/DPWENV/>
- Delivered the CCR to other agencies as required by the primacy agency (attach list):  

**Missouri Department of Natural Resources**  
**Public Drinking Water Program**  
**P.O. Box 176**  
**Jefferson City, MO 65102**



# Annual Drinking Water Quality Report for 2012

## Fort Leonard Wood, Missouri

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# FORT LEONARD WOOD DRINKING WATER QUALITY REPORT 2012

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 2012.



Produced by  
**Fort Leonard Wood**  
Directorate of Public Works  
June 2013

## Fort Leonard Wood Detected Contaminants- 2012

### Regulated Contaminants

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### Disinfection Byproducts

Byproduct	Monitoring Period	RAA	Range	Unit	MCL	MCLG	Typical Source
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### Microbiological

Microbiological organisms	Result	MCL	MCLG	Typical Source
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No detected results were found in calendar year of 2012

### Turbidity

Turbidity is a measure of cloudiness of water. We monitor turbidity because it is a good indicator of the effectiveness of the filtration system.

Percentage of samples in compliance with standard	Months Occurred	Violations	Typical Source
100	12	No	

### Violations and Health Effects Information

No violations occurred in the calendar year 2012

### Optional Monitoring (not required by EPA)

Secondary Contaminants	Collection Date	Highest value	Range	Units	MCL	MCLG
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