
CONSUMER CONFIDENCE REPORT FOR 2015

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."

April 2016

2015 Consumer Confidence Report

Fort Leonard Wood, Missouri

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

2015 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 2015.

The quality of drinking water at this installation continues to be excellent. In 2015, 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 17 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 sixteenth 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 2015 CCR to consumers is July 1, 2016. Prior to this deadline, the CCR will be disseminated to consumers by emailing the complete report to all installation occupants at Fort Leonard Wood and by posting a copy of it on the Fort Leonard Wood Environmental Page at:

http://www.wood.army.mil/newweb/garrison/dpw_env/cwa/2015.pdf

A statement certifying distribution of the 2015 CCR to consumers will be sent to the Missouri Department of Natural Resources.

**ANNUAL DRINKING WATER QUALITY REPORT FOR 2015
FORT LEONARD WOOD, MISSOURI**

Annual Drinking Water Quality Report for 2015

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 2015.

Information about Drinking Water

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.

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.
- **Pesticides and Herbicides:** which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Radioactive:** which can be naturally-occurring or be the result of oil and gas production and mining activities.

Health Information

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).

- ***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.
- ***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>

Concerns stemming from the Flint, Michigan lead issues have raised the awareness of health risks for children exposed to lead for extended periods of time. Fort Leonard Wood drinking water has been tested for lead since 1992. None of the samples exceeded the Federal and State action levels for lead. 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/newweb/garrison/dpw_environmental.html

Source and Treatment

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.

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 10 active permitted wells that serve individual remote areas. The monitoring results for all sources of drinking water at Fort Leonard Wood are included in this report.

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 17 years of publishing this report, including 2015. 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 - 2015

Regulated Contaminants							
Compound	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
Arsenic	1/27/2015	1.48	1.48	Ppb	10	0	Erosion of natural deposits
Barium	1/27/2015	0.192	0.192	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium	1/27/2015	2.05	2.05	ppb	100	100	Discharge from steel and pulp mills
Fluoride	1/27/2015	1.06	0.83 – 1.06	ppm	4	4	Natural deposits; Water additive which promotes strong teeth
Nitrate-Nitrite	12/21/2015	3.56	0 – 3.56	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Disinfection Byproducts							
Byproduct / Sample Point	Monitoring Period	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
(HAA5) / DBPDUAL-01	2015	28	14.3 – 34.3	ppb	60	0	Byproduct of drinking water disinfection
(HAA5) / DBPDUAL-02	2015	31	22.2 – 37.6	ppb	60	0	Byproduct of drinking water disinfection
(HAA5) / DBPDUAL-03	2015	27	15 – 34.4	ppb	60	0	Byproduct of drinking water disinfection
(HAA5) / DBPDUAL-04	2015	28	15.4 – 34.4	ppb	60	0	Byproduct of drinking water disinfection
TTHM / DBPDUAL-01	2015	70	38.3 - 101	ppb	80	0	Byproduct of drinking water disinfection
TTHM / DBPDUAL-02	2015	62	17.7 - 111	ppb	80	0	Byproduct of drinking water disinfection
TTHM / DBPDUAL-03	2015	42	16.1 – 69.7	ppb	80	0	Byproduct of drinking water disinfection
TTHM / DBPDUAL-04	2015	43	19.3 – 82.2	ppb	80	0	Byproduct of drinking water disinfection
TOC							
Total Organic Carbon	Collection Date	Highest Value	Range	Unit	TT	MCLG	Typical Source
Carbon, Total	7/14/2015	1.24	0.57 – 1.24	mg/L	0	0	Naturally present in the environment
Lead and Copper							
Lead and Copper	Date	Highest Value	Range	Unit	AL	Sites over AL	Typical Source
Copper	2013 - 2015	0.0893	0.00201 – 0.233	ppm	1.3	0	Corrosion of household plumbing systems
Microbiological							
Microbiological organisms	Result	MCL	MCLG	Typical Source			
No detected results were found in calendar year of 2015							
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	Highest Single Measurement			
100		12	No	0.26			
Violations and Health Effects Information							
No violations occurred in the calendar year 2015							
Unregulated Contaminant Monitoring Rule							
Unregulated Contaminant	Collection Date	Highest Value	Range	Unit			
Chromium, Hex	12/11/2013	0.13	0.088 – 0.13	ug/L			
Strontium	10/1/2013	36.9	25 – 36.9	ug/L			
Vanadium, Total	6/24/2013	0.29	0 – 0.29	ug/L			

Optional Monitoring (not required by EPA)						
Secondary Contaminants	Collection Date	Highest value	Range	Units	SMCL	MCLG
Alkalinity, CaCO ₃ Stability	1/27/15	200	200	mg/L		
Alkalinity , Total	11/9/2015	180	120 - 180	mg/L		
Aluminum	1/27/2015	0.0854	0.0854	mg/L	0.05	
Calcium	1/27/2015	37.9	37.9	mg/L		
Chloride	1/27/2015	7.63	7.63	mg/L	250	
Chromium, Hex	12/11/2013	0.13	0.088 – 0.13	ug/L		
Hardness, Carbonate	1/27/2015	190	190	mg/L		
Magnesium	1/27/2015	23.2	23.2	mg/L		
Nickel	1/27/2015	0.00482	0.00482	mg/L	0.1	
pH	1/27/2015	7.97	7.97	pH	8.5	
Potassium	1/27/2015	1.19	1.19	mg/L		
Sodium	1/27/2015	2.91	2.91	mg/L		
Strontium	10/1/2013	36.9	25 – 36.9	ug/L		
Sulfate	1/27/2015	7.6	7.6	mg/L	250	
TDS	1/27/2015	176	176	mg/L	500	
Vanadium, Total	6/24/2013	0.29	0 – 0.29	ug/L		
Zinc	1/27/2015	0.0356	0.0356	mg/L	5	

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

SMCL: Secondary Maximum Contaminant Level, non-enforceable guidelines for contaminants that may cause cosmetic or aesthetic effects in drinking water.

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

AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

TT: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

90th Percentile: for lead and copper testing. 10% of test results are above this level and 90% are below this level.

Range of Results: shows the lowest & highest levels found during a testing period, if only one sample was taken, then this number equals the Highest Value.