Annual Drinking Water Quality Report

PWS ID# MO3024058

Public **W**ater **S**upply **D**istrict #**9** of Boone County

We're pleased to present to you this year's Annual Water Quality Report For 2002

This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. **Attencion!** Este informe contiene información imuy importante. Tradúscalo o prequntele a alguien que lo entienda bien.

We want you to understand the efforts we continually make to improve the water treatment process and protect our water resources. If you would like to observe the decision-making process that affect drinking water quality or if you have any further questions about your drinking water report, please call us at (573) 474-9521 to inquire about scheduled meetings or contact persons. We are committed to enduring the quality of your water. Our water source is ground water from four wells. The wells are set at various depths in rock formations. We have a well head protection plan available from our office that provides more information. The Department of Natural Resources is conducting a source water assessment to determine the susceptibilty of our source water to contamination. The final assessment will not be completed until later this year but you can review the preliminary results on the internet at http://maps.cares.missouri.edu/maproom/SwipMaps/index.html.

Our water comes from: Ground Water - Wells

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoir, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactiv material, and can pickup substances resulting from the presence of animals or from human activity

We're pleased to report that our drinking water is safe and meets federal and state requirements.

PWSD #9 of Boone County routinely monitors for constituents in your drinking water according to Federal and State laws. The Missouri Department of Natural Resources regulates our water system and requires us to test our water on a regular basis to ensure it's safety. Our system has been assigned the identification number MO3024058. The following tables show the results of our monitoring for the period of January 1st to December 31st, 2002. All drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

You will find listed below definitions for unfamiliar terms and abbreviations found in the following tables.

ppm (Parts per million) or (Milligrams per liter) mg/l – one part per million corresponds to one minute in two years.

ppb (Parts per billion) or (Micrograms per liter) – one part per billion corresponds to one minute in 2,000 years.

pCi/L (Picocuries per liter) - picocuries per liter is a measure of the radioactivity in water

AL (Action Level) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

TT (Treatment Technique) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

MCL (Maximum Contaminant Level) - The "Maximum Allowed" MCL is 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 "Goal" MCLG is the level of a contaminant in drinking water below which there is no known or expected risk of health. MCLGs allow for a margin of safety.

ND - Not detectable at testing limits

N/A - Not applicable

Source Water Analysis on PWSD #9 of Boone County Wells

Constituent	Level Detected	Unit of Measure	MCL	MCLG	Likely Source
REGULATED CONSTITUENTS (Inorganic)					
Fluoride *	0.625 Range 0.6 - 0.65	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Barium, dissolved *	0.112 Range 0.0733 - 0.13	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
COPPER & LEAD SAMPLINGS					
Copper 06/01/2001-9/30/01	0.17 No samples exceeded action level	ppm 90th Percentile	AL = 1.3 0.17	AL = 1.3	Corrosion of household plumbing systems; leaching from wood preservatives; erosion of natural deposits
Lead 06/01/2001-9/30/01	5.8 No samples exceeded action level	ppb 90th Percentile	AL = 15 5.8	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
GROSS ALPHA PARTICLES					
Gross Alpha Particles Year 2000	14.575 Range 9.1 - 23.9	pCi/L	15	N/A	Erosion of natural deposits

UNREGULATED CONSTITUENTS								
Constituent	Level Detected	Unit of Measure	Constituent	Level Detected	Unit of Measure	Constituent	Level Detected	Unit of Measure
Calcium, dissolved *	67.225 Range 61.2 - 74.1	ppm	Manganese dissolved *	1.01 Range ND - 4.04	ppb	**Volatile Organic**		
Hardness as CaCO3 *	297.5 Range 280 - 330	ppm	Sulfate *	21.30 avg Range 15.6 - 26.8	ppm	Bromoform *	.350 avg Range ND - 1.4	ppb
Iron, dissolved *	44.7 Range ND - 116	ppm	pH *	7.377 Range 7.32 - 7.43		Dibromo-chloro-methane *	.200 avg Range ND - 0.8	ppb

Unregulated Contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Information on all the contaminants that were monitored for, whether regulated or unregulated, can be obtained from this water system or the Department of Natural Resources.

The state has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Records marked with * , though representative, are more than one year old.

MICROBIOLOGICAL TESTING					
Coliform	Positive Samples 0	% Positive Samples 0	0	Presence of coliform bacteria in 5% of monthly samples Naturally present in environment	Naturally present in environment
	Month of Detect N/A	Violation No			

If you have any questions about this report or concerning your water utility, please contact Roger Ballew at (573) 474-9521. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the third Tuesday of each month at 7:30 p.m. at the District office located at 391 N. Rangeline Road.

Constituent	Level Detected	Unit of Measure	MCL	MCLG	Indoor Air Contribution	Likely Source
OTHER MONITORING						
Radon	271.92 Range 271.92	pCi/L	Not Estab-lished	Not Established	0.0272	Naturally occurring

We constantly monitor the water supply for various constituents. We have detected radon in the finished water supply in four out of four samples tested. There is no federal regulation for radon levels in drinking water. Exposure to air transmitted radon over a long period of time may cause adverse health effects.

Radium action level has been exceeded. But no action has been required due to pending legislation concerning action level and requirements.

Radon is a naturally occurring gas present in soil and most ground waters in Missouri. Radon in home indoor air comes mainly from infiltration from soil in contact with foundations, slabs, and basement walls. EPA recommends that indoor air levels not exceed 4 pCi/L (picocuries per liter). EPA uses a conversion factor of 10,000 to 1 to determine indoor air contribution from water (see above figure). Radon poses a risk for lung cancer (estimated at 160 deaths/year nationally from drinking water, 85% of these in smokers), and stomach cancer (5 deaths annually). However, experts are not sure exactly what the cancer risk is from a given level of radon in drinking water.

If you are concerned about radon in your home, tests are available to determine the exact levels. Call your local health department for details.

What does this mean?

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or man made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. All 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 Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

The sources of drinking water, both tap 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 and , in some cases, radioactive material, can pick up substances resulting from the presence of animals or human activity. Contaminants that may be present in source water include:

1. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
2. Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
3. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
4. Organic chemical contaminants, including synthetic and volatile organic chemical, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
5. Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Missouri Department of Natural Resources proscribes regulations which limit the amount of certain contaminants in water provided by public water systems. Missouri Department of Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effects.

A Word About Immuno-compromised Persons

Some people may be 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, persons who have 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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from their Safe Drinking Water Hotline (800-426-4791).