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Jackson County Water
304 N Ranson Road
Greenwood, MO 64034

**The little things
that count.**



**2009 Annual Water Quality Report
Jackson County Public Water
Supply District #12**

PWS ID #MO1024278

Jackson County Public Water Supply District # 12

816-537-6856

PWS ID # MO1024278

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

What's the Quality of My Water?

Jackson County Public Water Supply District #12 is pleased to share this water quality report with you. It describes to you, the customer, the quality of your drinking water. This report covers January 1 through December 31, 2009. Jackson County PWSD #12's water supply surpassed the strict regulations of both the State of Missouri and the U.S. Environmental Protection Agency (EPA), which requires all water suppliers to prepare reports like this every year.

Our water source is purchased, pretreated water from Tri-County Water Authority and Kansas City, Missouri Water Services Department. Tri-County relies on groundwater. Their wells are located in the Missouri River Alluvium. Tri-County treats your water using disinfection to reduce harmful bacteria. Kansas City, MO relies on surface water from the Missouri River. Kansas City, MO treats your water through a multi-step process involving coagulation, sedimentation, disinfection and filtration.

As required by the 1996 Safe Drinking Water Act Amendments, the Missouri Department of Natural Resources prepared a source water assessment plan (SWAP) for each of our two purchased water sources. These reports include a delineation of areas providing water for each of their water sources, an inventory of the regulated and unregulated drinking water contaminants within the delineated area, and a determination of the systems' relative susceptibility to contamination. These reports gave a susceptibility rating for the following contaminants: Volatile Organic Compounds, Nutrients, Radio-nuclides, Radon, Pathogens, Pesticides, Disinfection Byproduct Precursors, Inorganic Compounds and Synthetic Organic Compounds. **If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination.** The full reports can be obtained at the Missouri Department of Natural Resources website.

If you have any questions about this report or concerning your water utility, please contact Vickie J. McLaughlin at 816-537-6856. We want our valued customers to be informed about their water utility. Please call us at 816-537-6856 to inquire about scheduled meeting or contact persons.

The U.S. Environmental Protection Agency (EPA) wants you to know:

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

The 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 and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

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. Jackson County Public Water Supply District # 12 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 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>.

Table of Detected Contaminants for Tri-County & Kansas City, MO

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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the [Safe Drinking Water Hotline \(1-800-426-4791\)](tel:1-800-426-4791).

Of the many contaminants tested, only these few were at levels of detection. All results shown in this chart are from the monitoring year 2009 unless otherwise noted.¹

CONTAMINANT	MCLG	MCL	Unit	Amount & Range Detected		Likely Source of Contamination
				Tri-County	Kansas City, MO	
Bacteriological						
Total Organic Carbon	NA	TT	ppm	NA	2.13 (finished water) 1.47 - 5.30	Naturally present in the environment.
Turbidity ²	0	TT/ never more than 1 NTU and less than or equal to 0.3NTU in 95% of samples.	NTU	NA	0.16 Lowest monthly percentage of samples meeting limits:100%	Soil runoff.
Inorganic Chemicals						
Barium	2	2	ppm	0.042 (2008) 0.036 - 0.042	0.015 0.007 - 0.026	Discharge of drilling wastes. Discharge from metals refineries. Erosion of natural deposits.
Arsenic	0	10	ppb	1.69 (2008) 1.06 - 1.69	ND	Erosion of natural deposits. Runoff from orchards. Runoff from glass and electronics production wastes.
Nitrate ³	10	10	ppm	0.09 ND - 0.09	4.0 ND - 4.0	Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits.
Fluoride	4	4	ppm	0.18 (2008) 0.16 - 0.18	0.90 (average) 0.67 - 1.19	Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories.
Selenium	50	50	ppb	ND	3.0 ND - 3.0	Discharge from petroleum and metal refineries. Erosion of natural deposits. Discharge from mines.
Synthetic Organic Contaminants						
Atrazine ⁶	3	3	ppb	ND	0.37 ND - 2.19	Runoff from herbicide used on row crops.
Volatile Organic Contaminants						
Haloacetic Acids (HAA5)	NA	60	ppb	NA	19.2 14.9 - 29.1	Byproduct of drinking water chlorination.
Total Trihalomethanes (TTHM)	0	80	ppb	NA	8.7 3.8 - 13.9	Byproduct of drinking water chlorination.

Table of Detected Contaminants for Jackson County PWS #12

Contaminant	MCLG	MCL	Unit	Amount & Range Detected	Potential Source of Contamination
Microbiological Contaminants					
Total Coliform Bacteria ⁴	0	1 positive monthly sample	positive/negative	1 positive in July	Naturally present in the environment.
Disinfectants and Disinfection By-products					
Chloramines, Residual (Total)	MRDLG = 4	MRDL = 4	ppm	2.56 0.67 - 3.23	Water additive used to control microbes.
Lead and Copper monitoring was completed by Jackson County PWS #12 at the customer's taps. Results are from 2008 ¹ .					
Copper	1.3	AL = 1.3	ppm	0.114 0.004 - 0.187 All sites below AL	Corrosion of household plumbing systems. Erosion of natural deposits. Leaching from wood preservatives.
Lead	0	AL = 15	ppb	3.76 (90th percentile) 1.16 - 7.61 All sites below AL	Corrosion of household plumbing systems. Erosion of natural deposits.

**Secondary and Physical Characteristics testing
completed in 2009 unless otherwise stated.¹**

Substance	Unit	Average Level Detected & (Range)	
		Tri-County (2008)	Kansas City, MO
Alkalinity	ppm	73	33 (20 - 58)
Ammonia	ppm	ND	0.18 (0.06 - 57)
Calcium	ppm	11.4 - 12.4	33.5 (22.8 - 45.4)
Magnesium	ppm	16 - 16.9	4.94 (2.31 - 10.4)
Potassium	ppm	5.67 - 6.53	6.76 (6.14 - 7.47)
Sodium	ppm	33.4 - 39.1	48.9 (37.1 - 61.8)
Chloride	ppm	22.4 - 24.5	20.7 (9.7 - 39)
pH	units	7.99 - 8.45	9.7 (9.2 - 10.6)
Total Dissolved Solids	ppm	227	NA
Sulfate	ppm	64.7 - 69.8	138 (64 - 221)
Hardness	ppm	98.1 - 130	105 (80 - 139)
Unregulated Contaminants			
Bromoform	ppb	ND - 1.29	ND
Bromodichloromethane	ppb	ND - 6.62	ND
Chloroform	ppb	0.89 - 7.3	ND

Definitions:

Maximum Contaminant Level (MCL): 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.

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

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

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

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

90th Percentile: 90% of samples are equal to or less than the number in the chart.

NTU (Nephelometric Turbidity Units): A measure of clarity.

NA: Not applicable.

ND: Not detectable at testing limits.

PPB (parts per billion): micrograms per liter (ug/l).

PPM (parts per million): milligrams per liter (mg/l).

CDC: Centers for Disease Control.

EPA: Environmental Protection Agency.

Notes:

¹The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, are more than one year old.

²Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

³Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

⁴Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Cryptosporidium and Giardia are microscopic organisms that are relatively widespread in the environment. Surface waters, such as lakes and rivers that contain a high amount of sewage contamination or animal wastes are more susceptible to increased numbers of these parasites. The Kansas City, MO Water Services Department is taking steps to make sure these organisms do not pose a problem in your drinking water. Current protection measures taken include chlorination, filtration and monitoring turbidity levels and particle sizes. Additionally, routine backwashing of the filters helps to eliminate the chances of finding these organisms in treated water. Occasionally, these organisms have been found in the raw (untreated) water, but neither Cryptosporidium nor Giardia has ever been detected in the finished (treated) water. The Kansas City, MO Water Services Department continues to monitor for these and other contaminants, taking all necessary precautions to ensure that your water is safe.