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MO000091

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which 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 these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/waterhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Missouri Department of Natural Resources has a Web site (www.dnr.mo.gov/) and the Mid American Regional Council (MARC) has a Web site (www.mar.org/environment/water) that provide complete and current information on water issues in Missouri, including valuable information about our watershed.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Monte Johnson, Superintendent of the Water Division, at (816) 322-1885.

ANNUAL WATER QUALITY REPORT

Water testing performed in 2008



CITY OF BELTON

PWS ID#: 1010061

Where Does My Water Come From?

The City of Belton water customers are fortunate because they enjoy an abundant water supply from the Kansas City Water Plant (Missouri). The Kansas City Water Plant draws and treats water from the Missouri River and two deep-well aquifers. In order to obtain a copy of Kansas City's Source Water Assessment, please contact Monte Johnson, Superintendent of Water, Belton City Hall, 506 Main Street, Belton, Missouri 64012, or call (816) 322-1885.



Community Participation

The City Council meets the second and fourth Tuesday of each month at the Belton City Hall Annex, 520 Main Street, at 7:00 p.m. All meetings are open to the public; however, if you have any concerns about your water and wish to participate, you must call the city clerk the Thursday before the scheduled meeting you wish to attend and have your name added to the City Council agenda.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Meeting the Challenge

We are once again proud to present to you our annual water quality report. This edition covers all testing completed from January 1 through December 31, 2008. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal drinking water standards. We continually strive to adopt new and better methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

| REGULATED SUBSTANCES | | | | | | | | | |
|---|-----------------|---------------|-----------------|--------------------|-------------------|--------------------|-------------------|-----------|---|
| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | MCL [MRDL] | MCLG [MRDLG] | City of Belton | | Kansas City | | VIOLATION | TYPICAL SOURCE |
| | | | | AMOUNT DETECTED | RANGE LOW-HIGH | AMOUNT DETECTED | RANGE LOW-HIGH | | |
| Chloramines (ppm) | 2008 | [4] | [4] | NA | NA | 2.30 | 1.88–2.8 | No | Water additive used to control microbes |
| Fluoride (ppm) | 2008 | 4 | 4 | NA | NA | 0.87 | 0.32–1.21 | No | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Haloacetic Acids [HAA] (ppb) | 2008 | 60 | NA | 22.4 | ND–35 | 14.2 | 6.80–21.4 | No | By-product of drinking water disinfection |
| Nitrate (ppm) | 2008 | 10 | 10 | NA | NA | 1.74 | ND–4 | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| TTHMs [Total Trihalomethanes] (ppb) | 2008 | 80 | NA | 9.65 | 3.4–18.7 | 8.5 | 2.6–14.3 | No | By-product of drinking water chlorination |
| Turbidity ¹ (NTU) | 2008 | TT | NA | NA | NA | 0.10 | 0.04–0.10 | No | Soil runoff |
| Turbidity (Lowest monthly percent of samples meeting limit) | 2008 | TT | NA | NA | NA | 100% | NA | No | Soil runoff |

Tap water samples were collected for lead and copper analyses from sample sites throughout the community²

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AL | MCLG | AMOUNT DETECTED (90TH%TILE) | SITES ABOVE AL/TOTAL SITES | VIOLATION | TYPICAL SOURCE |
|--------------------------------|-----------------|-----|------|-----------------------------------|----------------------------------|-----------|--|
| Copper (ppm) | 2007 | 1.3 | 1.3 | 0.0162 | 0/30 | No | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |
| Lead (ppb) | 2007 | 15 | 0 | 5.01 | 0/30 | No | Corrosion of household plumbing systems; Erosion of natural deposits |

Definitions

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

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 of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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

UNREGULATED SUBSTANCES (KANSAS CITY RESULTS)

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AMOUNT DETECTED | RANGE LOW-HIGH | TYPICAL SOURCE |
|--------------------------------|-----------------|--------------------|-------------------|---|
| Chloroform (ppb) | 2008 | 8.13 | 0.61–48.7 | By-product of drinking water disinfection |

¹ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of water quality and the effectiveness of the filtration system and the disinfectants.

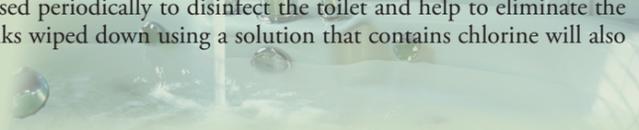
² Tap water samples were collected from 30 homes throughout Belton.

What Causes the Pink Stain on Bathroom Fixtures?

The reddish-pink color frequently noted in bathrooms on shower stalls, tubs, tile, toilets, sinks, toothbrush holders and on pets' water bowls is caused by the growth of the bacterium *Serratia marcescens*. *Serratia* is commonly isolated from soil, water, plants, insects, and vertebrates (including man). The bacteria can be introduced into the house through any of the above mentioned sources. The bathroom provides a perfect environment (moist and warm) for bacteria to thrive.

The best solution to this problem is to continually clean and dry the involved surfaces to keep them free from bacteria. Chlorine-based compounds work best, but keep in mind that abrasive cleaners may scratch fixtures, making them more susceptible to bacterial growth. Chlorine bleach can be used periodically to disinfect the toilet and help to eliminate the occurrence of the pink residue. Keeping bathtubs and sinks wiped down using a solution that contains chlorine will also help to minimize its occurrence.

Serratia will not survive in chlorinated drinking water.



Lead and Drinking Water

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. The City of Belton 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 two 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 www.epa.gov/safewater/lead.



Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you can save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at www.nrdc.org/water/drinking/bw/exesum.asp.

What's a Cross-connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand) causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or when attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continually jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed all industrial, commercial, and institutional facilities in the service area to make sure that all potential cross-connections are identified and eliminated or protected by a backflow assembly. It is a city and state regulation to have an annual inspection and test of each backflow assembly to make sure that it is providing maximum protection.

For more information, review the City of Belton Backflow Prevention Standards, which can be found at our Web site at www.belton.org. You can also call the Safe Drinking Water Hotline at (800) 426-4791.

Is It Safe to Drink Water from a Garden Hose?

Substances used in vinyl garden hoses to keep them flexible can get into the water as it passes through the hose. These chemicals are not good for you nor are they good for your pets. Allow the water to run for a short time in order to flush the hose before drinking or filling your pets' drinking containers. There are hoses made with "food-grade" plastic that will not contaminate the water. Check your local hardware store for this type of hose.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.