

Presented By  
Raytown Water Company



ANNUAL  
WATER  
QUALITY  
REPORT

WATER TESTING PERFORMED IN 2015

## Meeting the Challenge

Once again we are proud to present our annual drinking water report, covering all drinking water testing performed between January 1 and December 31, 2015. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to your homes and businesses. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all of our water users.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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 or <http://water.epa.gov/drink/hotline>.



## 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 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 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.

## Lead in Home Plumbing

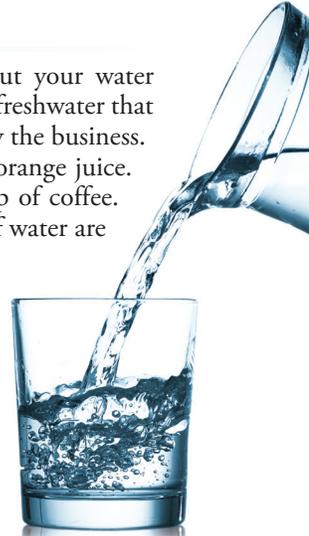
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we 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 [www.epa.gov/lead](http://www.epa.gov/lead).

## What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses over 180 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet, twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to [www.goo.gl/QMoIXT](http://www.goo.gl/QMoIXT).



## To the Last Drop

The National Oceanic and Atmospheric Administration (NOAA) defines drought as a deficiency in precipitation over an extended period of time, usually a season or more, resulting in a water shortage causing adverse impacts on vegetation, animals, and/or people. Drought strikes in virtually all climate zones, from very wet to very dry.

There are primarily three types of drought: Meteorological Drought refers to the lack of precipitation, or the degree of dryness and the duration of the dry period; Agricultural Drought refers to the agricultural impact of drought, focusing on precipitation shortages, soil water deficits, and reduced ground water or reservoir levels needed for irrigation; and Hydrological Drought pertains to drought that usually occurs following periods of extended precipitation shortfalls that can impact water supply (e.g., stream flow, reservoir and lake levels, groundwater).

Drought is a temporary aberration from normal climatic conditions, so it can vary significantly from one region to another. Although drought occurs normally, human factors, such as water demand, can exacerbate the duration and impact that drought has on a region. By following simple water conservation measures, you can help significantly reduce the lasting effects of extended drought.

To learn more about water conservation efforts, check out the U.S. EPA's Water Conservation Tips for Residents at [www.epa.gov/region1/eco/drinkwater/water\\_conservation\\_residents.html](http://www.epa.gov/region1/eco/drinkwater/water_conservation_residents.html).

## 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 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.



## Where Does My Water Come From?

The Raytown Water Company purchases water from Kansas City Water, which produces drinking water from the Missouri River and deep wells dug in the Missouri River Aquifer. Kansas City produces 240 million gallons of drinking water per day and supplied approximately 44 billion gallons annually. To learn more about our watershed on the Internet, go to the U.S. EPA's Surf Your Watershed at [www.epa.gov/surf](http://www.epa.gov/surf).

## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Neal Clevenger, President/General Manager, at (816) 356-0333x107 or visit our Web site, [www.raytownwater.net](http://www.raytownwater.net)

## 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 tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often 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.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

REGULATED SUBSTANCES									
				The Raytown Water Company		Kansas City Water Dept.- Reseller			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Atrazine (ppb)	2015	3	3	NA	NA	1.04	0–1.04	No	Runoff from herbicide used on row crops
Barium (ppm)	2015	2	2	NA	NA	0.025	0.007–0.025	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	2014	100	100	2.34	NA	5	3–5	No	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	2015	200	200	NA	NA	10	0–10	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	2015	4	4	NA	NA	1.22	0.323–1.22	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2015	60	NA	18	13.9–22.5	22	8.21–28.7	No	By-product of drinking water disinfection
Haloacetic Acids [HAA]–Stage 2 (ppb)	2015	60	NA	17	14.1–21.8	NA	NA	No	By-product of drinking water disinfection
Nitrate <sup>1</sup> (ppm)	2015	10	10	NA	NA	5.93	0.777–5.93	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2015	50	50	NA	NA	3.18	1.98–3.18	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	2015	80	NA	10	7.23–13.9	10	3.7–12.4	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2015	80	NA	10	7.38–13.7	NA	NA	No	By-product of drinking water disinfection

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

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH% TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2013	1.3	1.3	0.00643	0/15	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2013	15	0	1.05	0/15	No	Corrosion of household plumbing systems; Erosion of natural deposits

### UNREGULATED CONTAMINANT MONITORING RULE PART 3 (UCMR3)

		The Raytown Water Company		Kansas City Water Dept.–Reseller	
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH
Chromium, Hexavalent (ppb)	2013	2.5	2–2.5	2.7	2.2–2.7
Molybdenum, Total (ppb)	2014	2.78	0.00–2.78	4	2–4
Strontium (ppb)	2014	202	0.00–202	232	169–232
Vanadium, Total (ppb)	2014	1.55	0–1.55	3	0–3

<sup>1</sup> Nitrate 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 advice from your health care provider.

## OTHER SUBSTANCES - KANSAS CITY WATER DEPT. - RESELLER

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Akalinity, Phenolphthalein (ppm)	2011	45	2–2.5
Alkalinity, Total (ppm)	2015	233	20–233
Boron, Total (ppm)	2015	0.077	0.038–0.077
Bromide (ppm)	2015	0.652	0–0.652
Bromochloroacetic Acid (ppm)	2015	0.001	0–0.001
Calcium (ppm)	2015	42.4	29.8–42.4
Chloride (ppm)	2015	46.1	6.56–46.1
Color (Units)	2015	6	1–6
Foaming Agents (ppm)	2015	0.04	0–0.04
Hardness, Total (ppm)	2011	186	88–186
Iron (ppm)	2015	0.026	0.003–0.026
Magnesium (ppm)	2015	7.34	4.87–7.34
Manganese (ppm)	2015	0.005	0–0.005
Metolachlor (ppb)	2015	0.95	0–0.95
Odor (TON)	2015	5	1–5
PH (Units)	2015	10.4	7.28–10.4
Potassium (ppm)	2015	6.97	5.44–6.97
Residual Chlorine (ppm)	2011	2.57	1.53–2.57
Silica (ppm)	2015	5.16	3.47–5.16
Sodium (ppm)	2015	76.7	42.1–76.7
Sulfate (ppm)	2015	1,356	47.4–1,356
TDS (ppm)	2015	510	160–510
Testosterone (ppm)	2013	0.0014	0–0.0014
Total Chlorine (ppm)	2015	2.81	1.56–2.81
Zinc (ppm)	2015	0.006	0–0.006

## Definitions

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

**LRAA (Locational Running Annual Average):** The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for Stage 2 TTHMs and HAAs are reported as LRAAs.

**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

**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).

**TON (Threshold Odor Number):** A measure of odor in water.