

Annual Drinking Water Quality Report
The Water We Drink
City of Buffalo Water Treatment Plant
2014

We're very pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. This report shows our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact Randy Pares, Ronnie Young or Travis Green at the Buffalo Water Treatment Plant (307) 684 - 0572.

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The Buffalo Water Treatment Plant treats surface water from Clear Creek.

We have a source water protection plan available from our office that provides more information such as potential sources of contamination.

If you are interested in opportunities to be involved with decision affecting your drinking water, please contact any of the individuals listed above or attend the Buffalo City Council meetings which are held on the first and third Tuesday of each month..

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present

Parts per billion (ppb) – The concentration of a contaminant in water. One part per billion corresponds to one microgram per liter (ug/l).

Parts per million (ppm) or Milligrams per liter (mg/l) – The concentration of a contaminant in Water. *One part per million (ppm)* corresponds to *One Milligram per liter (mg/l)*.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity has no health effects. However, turbidity can interfere with disinfection & provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, & parasites that can cause symptoms such as nausea, cramps, diarrhea, & associated headaches.

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

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

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 (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.

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.

TEST RESULTS						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG or MRDL G	MCL or MRDL	Likely Source of Contamination
Microbiological Contaminants						
1. Total Coliform Bacteria	N	none		0	presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment
2. Fecal coliform and <i>E.coli</i>	N	none		0	a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive	Human and animal fecal waste
3. Turbidity	N	.080	NTU	n/a	TT	Soil runoff
Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.						
Inorganic Contaminants						
15. Copper Meets 90 th percentile 20 samples	N	0.13	ppm	0	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
18. Lead Meets 90 th percentile, 20 samples	N	5 ppb	ppb	0	15 ppb	Corrosion of household plumbing systems, erosion of natural deposits
20. Nitrate (as Nitrogen)	N	0.2	ppm	0	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG Or MRDL G	MCL or MRDL	Likely Source of Contamination
Thallium	N	0.4	ppb	0.5	2	Dishcharge from electronics, glass and Leaching from ore-processing sites; drug factories.
Disinfection Byproducts						
Chlorine	N	1 ppm Highest Level detected	ppm	4 ppm	4 ppm	Water additive used to control microbes.
TTHM Total trihalomethanes	N	Low 11.0 High 50.0 Avg. 30.5	ppb	0	80	By-product of drinking water chlorination
(HAA) Haloacetic Acids	N	Low 16.0 High 63.0 Avg. 46.0	ppb	0	60	By-product of drinking water chlorination
Radioactive contaminants						
Gross alpha excluding Radon or uranium	N	0.74	pCi/L	0	15 PCi/L	Erosion of natural deposits.
Combined radium 226/228	N	1	pCi/L	0	5	Erosion of natural deposits.
Total Organic Carbon (as a removal ratio or alternative methodology use noted)	N	0.75 removal ratio	0.4 – 1.4ppm	TT	n/a	Naturally present in the environment

Lead: Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

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. City of Buffalo W.T.P 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 the 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>

Some people who drink water containing trihalomethanes in excess of the MCL over many years experience problems with their liver, kidneys, or central nervous systems, and may have increased risk of getting cancer.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in the water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for human health. These substances can be microbes, inorganic or organic chemicals, pesticides, herbicides, and radioactive substances. The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. 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.

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 effect.

Total Coliform: The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.

Nitrates: As a precaution we always notify physicians and health care providers in this area if there is ever a higher than normal level of nitrates in the water supply.

Nitrate in drinking water at levels of 10 ppm is a health risk for infants 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 because of rainfall or agricultural activity. If you are caring for an infant you should ask advice of your health care provider.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Please call our office if you have questions.

We at the City of Buffalo Water Treatment Plant work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.