

City of Brown City

2019 Consumer Confidence Report (CCR)

The City conducts routine testing for drinking water contaminants. We detected very few contaminants, and none were higher than the Environmental Protection Agency (EPA) or the Michigan Department of Environment, Great Lakes and Energy (EGLE) allows. This annual report is a snapshot of the quality of water that we provided last year. Included are details about where your water comes from, what it contains, and how we have surpassed EPA/EGLE water quality standards. We are committed to providing you with this information because informed customers are our best allies. Copies of this report are filed with the Sanilac County Health Department and Michigan EGLE, and are available to the public at City Hall and on the City's website (www.ci.brown-city.mi.us). For more information about your water, please call City Manager Clint Holmes at 346-2325, or the Department of Public Works Foreman Phil Bartle at 346-3060, or via e-mail at browncty@greatlakes.net.

We encourage public interest and participation in our community's decisions affecting drinking water. Regular City Council Meetings occur the second and fourth Monday of each month at 7:00 PM in City Hall. The public is welcome and encouraged to attend and participate.

Overview:

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 EPA's Safe Drinking Water Hotline (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 and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water before treatment 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 wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture and residential uses.

Radioactive contaminants, which are naturally occurring.

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 stormwater runoff, and septic systems. Another source is individuals not properly disposing of household or automotive chemicals such as paint, used motor oil or hydraulic fluid.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as persons with cancer undergoing chemotherapy, individuals 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 and the US Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline (1-800-426-4791).

The City of Brown City

Water Source: The City of Brown City is supplied by groundwater drawn from two wells. Well Number 3 was drilled in 1967, last inspected and tested in 2018, and is located in the northeast section of the City near the water tower. Well Number 4 was drilled in 1974, last inspected and tested in 2018, and is located about 1,600 feet south of Well Number 3. Both wells are approximately 320 feet deep and draw water from the Black Watershed. The City owns the land around these wells and restricts any activity that could contaminate them. After the water comes out of the wells, we add chlorine to protect you against microbial contaminants. Additionally, an arsenic abatement facility, using an adsorption-based treatment technology, has been operational on Well #3 since January 2008 and on Well #4 since April 2004. Wells Number 1 and 2 are no longer in service. Water is provided to homes and businesses via about 8.5 miles of water mains.

Brown City's Public Water Supply Source Water Assessment (SWAS) was conducted by EGLE (MDEQ) and based on a point system analyzing well log and location, geologic sensitivity, well construction, water chemistry and isotope data and isolation from sources of contamination. The EGLE assigned the Susceptibility Determination for Well #3 at Very Low and for Well #4 at Very Low. The Michigan SWAP evaluated over 2,400 community groundwater sources and determined susceptibility to be Very Low for only 1.6% of communities. A copy of this detailed report is available at City Hall.

Water can be supplied by either well since they operate independently. Additionally, an auxiliary natural gas-powered generator can provide water in the case of an electrical power failure.

In order to ensure that tap water is safe to drink, EPA / EGLE prescribes regulations that limit the amount of certain contaminants in water provided by public water systems, such as ours. We treat our water according to these regulations. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

City of Brown City

2019 Consumer Confidence Report (CCR)

The table below lists all the drinking water contaminants that we tested for during the 2019 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this field is from testing done January 1 - December 31, 2019. The state requires us to monitor for certain contaminants less than once a year because concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Water test results must be kept on file at City Hall for ten years. These are public documents, and may be reviewed by anyone during normal working hours. Individual test copies are available for purchase.

Substances Detected	Date Tested	Unit	MCL	MCLG	Detected Max	Range	Violation	Major Sources	Testing Frequency
Arsenic (As)	12/11/19	ppb	10**	0	5	0-5	NO	Erosion of natural deposits	Monthly
Hardness-CaCO3	07/15/19	ppm	-	-	89	87-89	NO	Naturally present	Annually
Fluoride	07/15/19	ppm	4	4	1.8	1.4-1.8	NO	Naturally present	Annually
Sulfate	07/15/19	ppm	-	-	85	65-85	NO	Naturally present	Annually
Sodium (Na)	07/15/19	ppm	-	-	150	90-150	NO	Naturally present	Annually
Chloride	07/15/19	ppm	-	-	53	23-53	NO	Naturally present	Annually
Alpha emitters	07/21/17	pCi/L	15	0	3.6	1.4-3.6	NO	Erosion of natural deposits	2020
Radon (226/228)	08/06/14	pCi/L	-	-	1.2	0.5-1.2	NO	Erosion of natural deposits	2023

Substances Detected	Date Tested	Unit	MCLG	AL	90 th Percentile*	# Over AL	Violation	Major Sources	Testing Frequency
Lead (Pb)	09/12/18	ppb	0	15	3	1 [†]	NO	Corrosion of plumbing	5 years
Copper (Cu)	09/12/18	ppm	1.3	1.3	0.15	0	NO	Corrosion of plumbing	5 years

Substances NOT Detected	Date Tested	Unit	MCL	MCLG	Detected Max	Range	Violation	Major Sources	Testing Frequency
Haloacetic Acids	07/15/19	ppb	60	-	0	0	NO	Disinfection byproduct	3 years
Trihalomethanes ²	07/15/19	ppb	80	-	0	0	NO	Disinfection byproduct	3 years
Nitrate	07/15/19	ppm	10	10	0	0	NO	Fertilizer, septic tanks	Annually
Nitrite	07/15/19	ppm	1	1	0	0	NO	Fertilizer, septic tanks	Annually
Coliform	Monthly	Presence/absence samples	-	-	0	0	NO	Animal wastes, sewage	Monthly

**These arsenic values became effective January 23, 2006.

*The 90th percentile value means 90 percent of the homes tested have copper and lead levels below the given 90th percentile value. If the 90th percentile value is above the AL, additional requirements must be met.

[†]Testing revealed that one of the individual samples was above the lead action level. See statement on Lead (Pb) below.

²A list of these organic compounds is available for review at City Hall.

Terms and Definitions:

ppm: parts per million - parts of contaminant per million parts of water. One part per million corresponds to 1 penny in \$10,000 or one second out of 11 days.

ppb: parts per billion – parts of contaminant per billion parts of water. One part per billion corresponds to one penny in \$10,000,000 or one second in 11,000 days (a little over 30 years).

pCi/L: picocuries per liter; one trillionth of a curie per liter of water. One part per trillion corresponds to one penny in \$10 billion, or one second in 11,000,000 days (a little over 30,000 years).

Maximum Contaminant Level (MCL): 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.

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

Maximum Contaminant Level Goal (MCLG): The “goal.” MCLG is 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.

Detected Max: Of all tests conducted, gives the maximum, or highest, level discovered.

Range: Of all tests conducted, gives the lowest and highest amounts detected.

Inorganic Chemicals: Chemical substances of mineral origin, such as lead and copper.

Radionuclides: Contaminants giving off ionizing radiation, or radioactivity, such as alpha (α) and beta (β) particles, and measured in pCi/L.

Microbiological Contaminants: Very small organisms, such as the Coliform bacteria, viruses, or fungi.

Organic Compounds: Naturally occurring or synthetic substances containing mainly carbon, hydrogen, nitrogen and oxygen. These include pesticides and industrial chemicals.

Maximum Residual Disinfectant Level (MRDL) – means 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) – means 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.

Important Health Concerns:

Arsenic (As): While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Lead (Pb): Brown City's Preliminary Distribution System Materials Inventory indicated that out of 653 water service pipes in the City, an estimated 88 likely contains lead or galvanized pipe previously connected to lead. The City continues to identify the material of all water service pipes. 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 Brown City 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 at 1-800-426-4791 or at <http://www.epa.gov/drink/info/lead>. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Copper (Cu): Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short period of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Is our water system meeting other rules that govern our operations? The EPA and Michigan EGLE require us to test our water on a regular basis to ensure its safety. The City of Brown City continues to meet all of these requirements.

THIS NOTICE WILL NOT BE MAILED TO INDIVIDUAL CUSTOMERS.