

A Notice to our Benton Harbor Drinking Water Community.

Please note that the following required lead language was missing from our 2016 Consumer Confidence Report:

Information about lead: 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. Benton Harbor 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>.

We apologize for this omission. A copy of the full report is available on our website at www.BentonHarborCity.com Follow the links on the opening page to the Water Page and the Updated Consumers Confidence Report. If you would like a copy you can request a paper copy by contacting The Benton Harbor Water Plant (269) 927-8471-2 or the Water Payment Center at (269) 927-8400-2. We are open weekdays 8:30 am to 5:00 pm.

The limits have not changed from 15ppb for Lead and 1300ppb for Copper but the focus on Lead in drinking has increased dramatically. Benton Harbor and nearly all Cities in Michigan are working very hard to protect the City water supply and our residents.

The lead sampling shown in the table of the report indicates that Lead is at very low or non-existent levels at most homes, but any Lead is still our focus to eliminate.

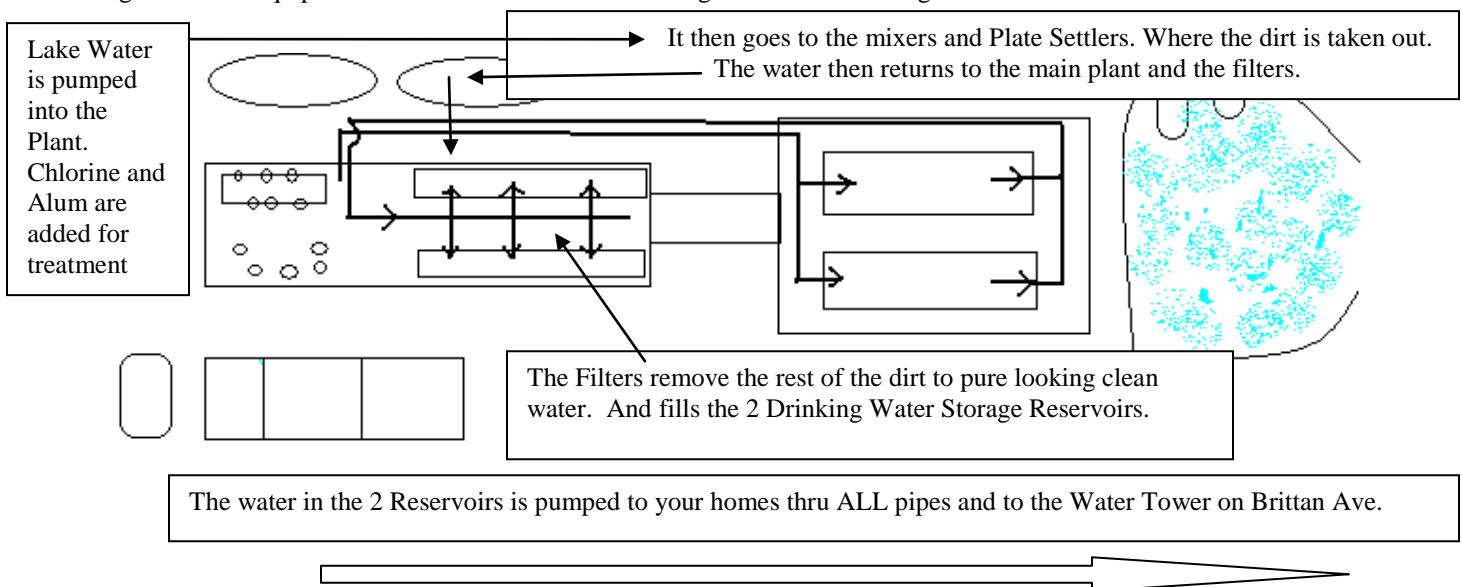
As stated above in the required MDEQ language, PLEASE, ALWAYS LET YOUR WATER RUN TILL COOL BEFORE YOU TAKE A DRINK. BE SURE TO TEACH YOUR CHILDREN AND GRANDCHILDREN TO DO THE SAME!

AND NOW OUR REVISED 2016 CCR

City of Benton Harbor Utility Services Department's 2016 Consumers Confidence Report

Contact Us: Michael O'Malley, Benton Harbor Water Plant (269) 927-8471
Darwin Watson, Benton Harbor City Manager (269) 927-
Kaye Jenkins, Utility Billing Payment Center (269) 934-7638

A diagram of the equipment and how we make Lake Michigan Safe for Drinking at the Benton Harbor Water Plant



2016 Benton Harbor Water Quality Report

The Benton Harbor Water Plant uses Lake Michigan as its source. There are presently 5 water plants in Berrien County that use Lake Michigan as its source, including: New Buffalo, Bridgman, Lake Township, St. Joseph, and Benton Charter Township Water Plant. Lake Michigan is a surface water supply and is vulnerable to a wide range of contaminants. Because of this the EPA and MDEQ have very strict guidelines for the proper operation and testing of the water processed in these types of plants. Our Lake Michigan water is collected through a 36" pipeline that extends 4800 feet west of the water plant's shoreline. The Benton Harbor Utility Service Department's number one priority is to provide safe, high quality water to all of its customers. In pursuit of that mission, we consistently meet, and often exceed, federal and state standards for safe water.

The State MDEQ performed an assessment of our source water in 2003 to determine the susceptibility or the relative potential of contamination. The susceptibility rating is on a six-tiered scale from "very-low" to "high" based primarily on geologic sensitivity, water chemistry and contaminant sources. The susceptibility of our source is moderately high. This is due to the fact that the source water area for the Benton Harbor intake includes 1,236 potential contaminant sources, 121 listed potential contaminant sources within the susceptible area, plus urban and agricultural runoff from the St. Joseph River watershed in the St. Joseph River. A copy of the full report can be obtained by calling the water plant at (269) 927-8471.

General Health Information Provided by EPA

To ensure that tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water.

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 Environmental Protection Agency's Safe Drinking Water Hotline (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 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:

- A. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- B. Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- C. Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm-water runoff, and residential uses.
- D. Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also, come from gas stations, urban storm-water runoff and septic systems.
- E. Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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 healthcare providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (800-426-4791).

National Primary Drinking Water Regulation Compliance

For more information about our water quality, or to receive an additional copy of this report, please contact the Water Superintendent, Michael O'Malley (269) 927-8471 or e-mail to momalley@cityofbentonharbormi.gov.

Tours of the Water Plant are easily arranged for school or community groups by contacting the plant. For more information about safe drinking water, visit the U.S. Environmental Protection Agency (EPA) at www.epa.gov/safewater

Public Notices Required in 2016

There was one (1) event in the Benton Harbor Water System that required Public Notice to be made to you by MDEQ rules. The notice was a testing violation where, the water was not tested for Disinfection by Products in February of 2016 on the appropriate day, as was required.

Water Quality Detect Tables

Benton Harbor water personnel routinely monitor over 80 potential contaminants in our drinking water according to Federal and State laws. The following table lists detects of regulated contaminants found in our water for the year beginning January 1, 2016 and ending December 31, 2016, unless otherwise noted. Other contaminants are required as regulated monitoring, that the Water Plant

Test results in the next few tables are tests that our Water Plant personnel cannot do. These are sampled and sent to the MDEQ laboratory in Lansing and listed in the tables with various dates assigned. The last table in this report are tests routinely done at the water plant.

Regulated Monitoring at the Plant Done at the MDEQ Laboratory in Lansing, MI.

Detected Substance	Highest Level Allowed (MCL)	EPA Goal Level (MCLG)	Highest Level Detected (RAA)	Range	Violation Yes or No	Date of Sample	Likely Source of Contaminants
Arsenic	10*	0*	Less than 2 ppb	NA	No	9/6/10	Erosion of natural deposits; Runoff from Orchards; Runoff from glass and electronics production waste.
Nitrate (ppm)	10	N/A	0.5	0.4 to 0.5	No	9/30/16& 11/21/16	Naturally present in the environment.
Fluoride (ppm)	4	4	0.78	0.6 to 0.78	No	9/30/16& 11/21/16	Water additive, which promotes strong teeth.
Chlorine Residual	4	MRDL=4	1.86	1.37 to 3.14	No	2016	Disinfectant
TOC**	TT	N/A	1.97	1.35 to 1.97	No	2016	Naturally present in the environment
Bromodichloromethane (ppb)	80	N/A	11	11	No	9/30/16	Formed when chlorine is added to water containing naturally occurring organic material.
Chlorodibromomethane (ppb)	80	N/A	4.8	4.8	No	9/30/16	Formed when chlorine is added to water containing naturally occurring organic material.
Chloroform (ppb)	80	N/A	18	18	No	9/30/16	Formed when chlorine is added to water containing naturally occurring organic material.
Total Tri-halomethanes (ppb)	80	N/A		34	No	9/30/16	Formed when chlorine is added to water containing naturally occurring organic material.

Regulated Monitoring Distribution System (Stage 2 Disinfection Byproduct Rule) Testing in 2016

Detected Substance	LRAA is locational Running Annual Average	Benton Harbor city Samples LRAA Site 1	Benton Harbor city Samples LRAA Site 2	Likely Source of Contaminants. This testing is being conducted over a 12 month period to determine the vulnerability of various points in the 2 largest distribution systems served by the Benton Harbor Water Plant. Results listed are for tests run October to December 2008 only.
TTHM (ppb)	Each site is measured in ppb	51.5	48.1	Formed when chlorine is added to water containing naturally occurring organic material
HAA5 (ppb)	19/21 Each site is measured in ppb	14.5	12.0	Formed when chlorine is added to water containing naturally occurring organic material

TTHM's are Total Trihalomethanes and HAA5's are Haloacetic Acids. They form when Chlorine is in contact with organic matter over time. The results are averaged at each location as a running annual average (LRAA) to assure the community that the waters are properly disinfected and do not pose a threat from these by-products.

Long Term 2 (Enhanced Surface Water Treatment Rule) Testing in 2008-2009

Detected Substance	Largest Number Detected	Range of organisms detected	Likely Source of Contaminants is Lake Michigan. Lake Michigan testing is was conducted over a 24 month period that began April 2008. Testing is complete in 2009
Cryptosporidium (# of organisms)	3	0 to 3	Open Lake Michigan. Cryptosporidium are microbes found in open water sources.
<i>E. coli</i> (# of organisms)	7	1 to 82	Open Lake Michigan. <i>E. coli</i> are bacteria found in open water sources.
<i>Giardia</i>	3	0 to 3	Open Lake Michigan. <i>Giardia</i> are microbes found in open water sources.

Turbidity Monitoring at the Plant

Water Clarity	Highest Level Allowed (MCL)	EPA Goal Level (MCLG)	Highest Level Detected	Range	Violation Yes or No	Date of Sample	Likely Source of Contaminants
Filter Effluent NTU	0.3* or no sample above 1.00	N/A	1.8 & 0.33	0.07 to 1.8	Yes, 1.8 NTU	2011 Violation 6/18/11	Soil runoff.

* Turbidity is a measure of the cloudiness of the water.

Distribution System Monitoring Lead and Copper. Last Official Test Date 2008. And, Tests Not complete in 2011.

Detected Substance	Highest Level Allowed (AL)	EPA Goal Level (AL)	90 th Percentile Result Detected	Range	Sites Found Above AL of 15 ppb.	Violation	Likely Source of Contaminants
Lead (ppb)	15.0	0	12	0 to 38	2	No	Corrosion of Household plumbing
Copper (ppb)	1300	1300	0	0 to 670	0	No	Corrosion of Household plumbing

Lead and copper monitoring began in the early 1990's. The 9th round of Benton Harbor testing was conducted in September 2015. The 2 sites above the EPA action level were more than 12 ppb and one at 38 ppb. All homes on the list of sites are notified of their results and the site with 38 ppb had their water line replaced with copper. The next round of testing #10 is due in 2018.

Information about lead: 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. Benton Harbor 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>.

Unregulated and Special Monitoring

Detected Substance	Highest Level Allowed (MCL)	EPA Goal Level (MCLG)	Level Detected	Likely Source
Sodium	N/A	N/A	17	Naturally present in the environment
Sulfate	N/A	N/A	29	Naturally present in the environment
Fluoride	2 Secondary and 4 Primary	N/A	0.6	Water Additive to help protect teeth from Dental Caries and for Public Health

A sample was taken at the Water Plant on September 9, 2016. A laboratory in South Bend analyzed it for total Cyanide and did not detect any. Cyanide is a dangerous chemical and the EPA is determining how it may be monitored in water systems in the future.

Definitions

- 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. MCLG's allow for a margin of safety.
- MRDL** Maximum Residual Disinfectant Level or 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.
- MRDLG** Maximum residual disinfectant level goal, or 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.
- AL** Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
- PPM** parts per million or milligrams per liter (mg/l)
- PPB** parts per billion, or micrograms per liter (ug/l)
- NTU** Nephelometric Turbidity Units, a measure of the cloudiness of water
- N/A** Not applicable
- RAA** Running Annual Average.
- LRAA** Locational Running Annual Average.
- TT** Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

Other Water Quality Parameters of Interest

At the plant we routinely perform other water quality tests. These tests are not for official reporting, but are useful when describing the quality of our drinking water.

Parameter	2016 Average	2016 Range	Units
Chlorine	1.86	1.37 to 3.14	Mg/L as free Cl-
PH	7.67	7.3 to 8.2	pH units
Total Alkalinity	105	93 to 133	Mg/L as CaCO ₃
Total Hardness	166	112 to 208	Mg/L as CaCO ₃
Calcium Hardness	48	30 to 67	Mg/L as Ca
Magnesium Hardness	11	2 to 18	Mg/L as Mg
Chloride	26.1	22.5 to 32.5	Mg/L as Cl-
Fluoride as F-ion	0.73	0.23 to 1.07	Mg/L as F-ion

- For Customers owning a new dishwasher the Benton Harbor average water hardness is *8-10 grains per gallon*.