

2015 Benton Harbor Water Quality Report

This report covers the drinking water quality for Benton Harbor for the calendar year 2015. This information is a snapshot of the quality of the water that we provided to you in 2015. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. To receive a paper copy in the mail, contact Jay Ouzts at F&V Operations (616) 588-2900 or Darwin Watson, Benton Harbor City Manager (269) 927-8400.

We invite public participation in decisions that affect drinking water quality. Meetings are held on the 1st and 3rd Monday of each month in the Lula Lee Commission Chambers, 200 E. Wall Street, Benton Harbor. For more information about your water, or the contents of this report, contact Jay Ouzts at F&V Operations (616) 588-2900 or Darwin Watson, Benton Harbor City Manager (269) 927-8400.

The Benton Harbor Water Plant uses Lake Michigan as its source. There are presently 5 other water plants in Berrien County that use Lake Michigan as its source, including: New Buffalo, Bridgman, Lake Township, St. Joseph, and Benton Charter Township. 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 DEQ 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. For additional information, or to obtain a copy of the source water study, please contact Jay Ouzts at F&V Operations (616) 588-2900 or Darwin Watson, Benton Harbor City Manager (269) 927-8400.

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 Jay Ouzts at F&V Operations (616) 588-2900 or Darwin Watson, Benton Harbor City Manager (269) 927-8400.

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 for 2015

Testing data from 2015 resulted in no public notices.

Water Quality Data 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 regulated contaminants detected in our water for the year beginning January 1, 2015 and ending December 31, 2015, unless otherwise noted.

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.

TOC Total Organic Carbon

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

Regulated Monitoring at the Plant

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
Fluoride (ppm)	4	4	0.15	N/A	No	2015	Water additive, which promotes strong teeth.
Chlorine Residual (ppm)	4	MRDL=4	1.38	0.64 to 2.16	No	2015	Disinfectant
TOC (ppm)	TT	N/A	2.11	0.79 to 2.11	No	2015	Naturally present in the environment
Bromodichloromethane (ppb)	80	N/A	7.2	ND to 7.2	No	2015	Formed when chlorine is added to water containing naturally occurring organic material.
Chlorodibromomethane (ppb)	80	N/A	2.9	ND to 2.9	No	2015	Formed when chlorine is added to water containing naturally occurring organic material.
Chloroform (ppb)	80	N/A	11.0	ND to 11.0	No	2015	Formed when chlorine is added to water containing naturally occurring organic material.

Total Trihalomethanes (ppb)	80	N/A	21.0	ND to 21.0	No	2015	Formed when chlorine is added to water containing naturally occurring organic material.
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Regulated Monitoring Distribution System (Disinfection Byproduct)

Detected Substance	Highest Level Allowed (MCL)	EPA Goal Level (MCLG)	Highest Level (RAA)	Lowest-Highest Level Detected/	Violation Yes or No	Date of Sample	Likely Source of Contaminants
TTHM (ppb)	80	N/A	37	22.7 to 60.0	NO	2015	Formed when chlorine is added to water containing naturally occurring organic material
HAA5 (ppb)	60	N/A	56	10 to 17	NO	2015	Formed when chlorine is added to water containing naturally occurring organic material

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	0.25	0.03 to 0.25	No	2015	Soil runoff.

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

Distribution

System Monitoring Lead and Copper. Last Official Test Date 2015.

Detected Substance	Highest Level Allowed (AL)	EPA Goal Level (AL)	90th Percentile Detected	Range	Sites Found Above AL	Violation	Likely Source of Contaminants
Lead (ppb) 2015	15.0	0	12	0 to 38	2	No	Corrosion of Household plumbing
Copper (ppb) 2015	1300	1300	0	0 to 670	0	No	Corrosion of Household plumbing

Lead and copper monitoring began in the early 1990's. Testing was conducted in September 2015.

** Additional Information for 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. Andrews University 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 2/26/2015

Detected Substance	Highest Level Allowed (MCL)	EPA Goal Level (MCLG)	Level Detected	Likely Source
Sodium	N/A	N/A	8	Naturally present in the environment
Sulfate	N/A	N/A	23	Naturally present in the environment
Chloride	N/A	N/A	12	Naturally present in the environment, storm water