Village of Blissfield Annual Water Quality Report for 2013

#16 June 2014

A MESSAGE TO OUR CONSUMERS

The Village of Blissfield is pleased to present this report to you as part of your right to know about the quality of your drinking water. Included are details about where your water comes from, what it contains, and how it compares to EPA and state standards. This report lists contaminates detected in the drinking water and an explanation of any violations in 2013.

ORIGIN AND TREATMENT

Blissfield's drinking water origin is the River Raisin.

CONTAMINATION SOURCES In addition to natural occurring minerals in the River Raisin, erosion of the river bank, agricultural runoff and animal or human activity along the shore can cause contaminations to be present in the river. **These include:**

Microbial contaminates, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, livestock, and wildlife.

Inorganic contaminates, such as salt and metals, which can be natural or from storm runoff, wastewater discharge, oil and gas production and farming.

Pesticide and Herbicide contaminants, which may come from a variety of sources such as agriculture storm water runoff, urban storm water runoff, and residential uses.

Organic chemicals, including synthetics and volatile organic chemicals, which are by-products of industrial processes, and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive substances, which can be naturally occurring or be the result of oil and gas production, or mining activities.

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

Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less then six month of age. 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 for advice from your health care provider regarding nitrate residuals in drinking water. Pregnant woman, nursing mothers, and infants less then six months old are advised to seek an alternative source of drinking water if nitrate levels exceed 10 ppm.

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. The Village of Blissfield Water Treatment Plant 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.

This report will not be mailed.

SOURCE WATER ASSESSMENT:

The Michigan Department of Environmental Quality, Water Division completed a source water assessment in 2003 determining the source water very highly sensitive to potential contaminants then issued the SWA report results in 2004. A copy of this report is available through the Blissfield Village Office.

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immune-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immune-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

Blissfield Village Council

Meets at 7:00 pm on the second
and fourth Mondays each month.
Schultz-Holmes Memorial Library
407 South Lane, Blissfield, MI. 49228

The Village of Blissfield

Village Administrator James A. Wonacott
408 East Adrian Street Blissfield MI. 49228
517-486-4347

WHO NEEDS TO TAKE SPECIAL PRECAUTIONS?

Drinking water, including bottled water may reasonably be expected to contain at least small amounts of some contaminates. The presence of contaminates does not necessarily indicate that the water poses a health risk. More information about contaminates and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791. Some people may be more vulnerable to contaminates in drinking water then 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 at risk from infections. These people should seek advice about drinking water from their health providers. EPA/ CDC guidelines on appropriate means to diminish the risk of infection by Cryptosporidium and other microbial contaminates are also available from the EPA's Safe Drinking Water Hotline.

In order to ensure that tap water is safe, the EPA prescribes regulations, which limit the amount of certain contaminates in drinking water, provided by public water systems. The Blissfield Water Treatment Plant staff tests water samples from the river and throughout the treatment process frequently each day. These tests ensure that proper chemical levels are maintained and any contaminates that cannot be removed by treatment are at safe levels. If you would like more information about your water, please call the Blissfield Water Treatment Plant at 486-3350.

Copies of this report are available at the Blissfield Village Office, 408 E. Adrian St. Blissfield, MI. 49228 and at www.blissfieldmichigan.gov

Description of treatment technique violation we experience this past year.

During a routine inspection of the water plant on March 6, 2014, it was discovered that our SCADA system had not been properly communicating and recording individual filter turbidity data as required. The SCADA system was repaired by the end of the next business day. All water that passed through these filters was properly disinfected and was documented to have met all requirements of the Safe Drinking Water Act at a compliance point further downstream from the individual filters.

Water quality data table 2013

TERMS AND ABBREVIATIONS:

Maximum Contaminate Level Goal (MCLG): The level of contaminant in drinking water below which there is no known or expected health risk.

Maximum Contaminate Level (MCL): The highest level of contaminant allowed in drinking water, MCL's are set as close to the MCLG's as possible using the best available treatment technology.

Maximum Residual Disinfectant Level Goal (MRDLG): Means the level of disinfectant in drinking water below which there is no know or expected health risk.

TT – treatment technique (a required process intended to reduce the level of contaminant in drinking water)

Maximum Residual Disinfectant Level (MRGD): Is the highest level of disinfectant allowed in drinking water. Disinfectant is necessary for control of microbial contaminants.

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

ppb – parts per billon or microgram per liter
ppm – parts per million or milligram per liter
NTU – Nephelometric Turbidity Units
pC/l – Picocuries per liter
ND – not detected **N/A** – not applicable
RAA – Running Annual Average

Contaminate	MCL	MCLG	Blissfield Water	Range of Detection	Sample Date	Violation	Typical Source of Contaminate
Microbial Contaminates							
* Turbidity	TT	N/A	Single Highest Measurement 0.16 NTU	0.07 - 0.16 NTU	2013	No	Soil Runoff
Lowest month % of samples meeting turbidity limit 100% - Annual average 0.10 NTU							
Total Coliform	>5% Positive	0	ND	ND	2012	No	Naturally present
Inorganic Contaminates							
Nitrate	10 ppm	10 ppm	Single Highest Measurement 8.75 ppm	0.64 – 8.75 ppm	2013	No	Fertilizer runoff; septic tank leaching
Fluoride	4 ppm	4 ppm	Single Highest Measurement 0.87 ppm	0.13 - 0.87 ppm	2013	No	Water additive- promotes strong teeth
** Sodium	N/A	N/A	Single Highest Measurement 50 ppm	40 - 50 ppm	2013	No	Naturally present in groundwater
Barium	2 ppm	2 ppm	Single Highest Measurement 0.04 ppm	0.04 ppm	Sept. 2009	No	Discharge from refineries or drilling & natural erosion
Arsenic	10 ppb	0 ppb	Single Highest Measurement ND ppb	ND ppb	Sept. 2009	No	Runoff from orchards, glass & electronics wastes. Natural erosion
Selenium	50 ppb	50 ppb	Single Highest Measurement ND ppb	ND ppb	Sept. 2009	No	Discharge from petroleum & metal refineries Natural erosion
Disinfectant Residuals and Disinfection By-Products – Monitoring in Distribution System							
Total Trihalomethanes	80 ppb RAA	N/A	Highest Annual Average 42.9 ppb	14 – 62 ppb	2013	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5)	60 ppb RAA	N/A	Highest Annual Average 15.7 ppb	<1.0 – 19.0 ppb	2013	No	By-product of drinking water disinfection.
Chlorine Disinfectant	4 ppm	4 ppm	Annual Average 0.66 ppm	0..93 -2.87 ppm	2013	No	Disinfectant
Organic Contaminates							
Atrazine	3 ppb RAA	3 ppb	Highest Annual Average ND ppb	ND ppb	2013	No	Runoff from herbicide used on row crops
Lead and Copper Monitoring at Consumer's Tap							
*** Lead	AL=15 ppb	0 ppb	90th percentile 2 ppb	0 out 20 sites over AL	Sept. 2012	No	Corrosion of household plumbing
*** Copper	AL=1,300 ppb	1,300 ppb	90th percentile 270 ppb	0 out 20 sites over AL	Sept. 2012	No	Corrosion of household plumbing
Regulated Contaminant	Treatment Technique		Running Annual Average	Monthly Ratio Range		Violation	
Total Organic Carbon	Removal Ratio >1.0		2.29 RAA	1.38 - 2.78	2013	No	Naturally present

The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. TOC has no health effects. However, TOC provides a medium for the formation of disinfection byproducts.

* Turbidity must be less then or equal to 0.3 NTU in at least 95% of the measurements taken throughout the month. Turbidity must never exceed 1.0 NTU.

** Sodium is an unregulated contaminate and there is no MCL associated with it. Unregulated contaminate monitoring helps EPA to determine whether there is a need to regulate that contaminate.

*** Lead and Copper results list the number of samples that exceeded the Action Level, not range detected.

If you have questions about you're drinking water, please call the Blissfield Water Treatment Plant at 486-3350.