Village of Bellaire

2014 DRINKING WATER CONSUMER CONFIDENCE REPORT

INTRODUCTION: The Village of Bellaire Water Department has prepared the following report to provide information to you the consumer, on the quality of your drinking water. . Included within this report is general health information, water quality test results, and how to participate in decisions concerning your drinking water. The Village has an unconditioned license to operate the water plant.

WHAT'S THE SOURCE OF YOUR DRINKING WATER? The Village of Bellaire receives its drinking water from the Upper Ohio Wheeling Watershed. This includes an area of about 1,509 square miles. This area is largely agricultural with forested regions amounting to about 88% of the total. Within this watershed are rivers, creeks and numerous small lakes. The water you drink comes from t he Ohio River. Surface waters are one of the principle sources of water in the United States. Water is always available from the river which makes it a reliable source. In general surface water requires more extensive treatment than ground waters because they are subject to runoff from surrounding land as well as direct discharges into the water. For this reason the Ohio Environmental Protection Agency (OEPA) requires specific treatment techniques (TT). Your water is treated in a "treatment train" (a series of processes applied in a sequence) that includes coagulation, flocculation, sedimentation, filtration, and disinfection. Coagulation removes dirt and other particles suspended in the source water by adding chemicals (coagulants) to form tiny sticky particles called "floc," which attract the dirt particles. Flocculation (the formation of larger floc from smaller floc) is achieved using gentle, constant mixing. The heavy particles settle naturally out of the water in a sedimentation basin. The clear water then moves to the filtration process where the water passes through sand, gravel, charcoal or other filters that remove even smaller particles. A small amount of chlorine or other disinfection method is used to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water before it is stored and distributed to homes and businesses in the community.

Protecting our drinking water source from contamination is the responsibility of all area residents. Please dispose of hazardous chemicals in the proper manner and report polluters to the appropriate authorities. Only by working together can we insure an adequate safe supply of water for future generations.

The Ohio EPA recently completed a study of Bellaire's source of drinking water, to identify potential contaminant sources and provide guidance on protecting the drinking water source. According to this study, the aquifer (water rich zone) that supplies water to the village has a high susceptibility to contamination. This determination is based on the following:

- The presence of a relatively thin layer of sediment overlying the aquifer.
- The presence of significant potential contaminant sources in the protection area.
- The presence of man-made contaminants in the aquifer.

More information about the source water assessment, or what consumers can do to help protect the aquifer is available by calling the water plant superintendent at 740.676.2664

WHAT ARE SOURCES OF CONTAMINATION TO DRINKING WATER? The sources of drinking water, (both tap and bottled) includes 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 include: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plant, 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 water runoff, industrial or domestic wastewater discharge, oil and gas production, mining, or farming; (C) Pesticides arid herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses; (D) Organic chemical contaminants including synthetic and 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 storm water runoff, and septic systems (E) radioactive contaminants, which can be naturally-occurring or be the result of oil 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. 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 1800.426-4791.

WHO NEEDS TO TAKE SPECIAL PRECAUTIONS? Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with H1V/Aids or other immune system disorders, some elderly and infants can be particularly at risk from infection. 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 microbial contaminants are available from the Safe Drinking Water Hotline 1.800.426.4791. 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. Bellaire water 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.

ABOUT YOUR DRINKING WATER: The Ohio EPA requires regular sampling to ensure **drinking water safety. The Village's Water Department sampling for 2014 of its water supply** was for the following parameters: fluoride, nitrates, inorganics, radiologicals, volatile organic chemicals (VOC's), synthetic organic chemicals (SOC's), totals organic carbon (TOC's), trihalomethanes (HAA5) & (TTHM), turbidity and chlorine. The above data had no detectable results and therefore found to be in compliance with OEPA standards. The microbiological testing (total coliform) done for the year 2014 was also found to be in compliance with no positive results. Listed below is the information on these contaminants.

TABLE OF DETECTED CONTAMINANTS

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Bacteriological							
None							
Radioactive Contaminants							
Radium-228	**0**	**5 pCi/l**	**1.1 pCi/l**	**N/A**	**NO**	**2014**	
Inorganic Contaminants							
Arsenic	**0**	**10 (ppb)**	**3.1 (ppb)**	**N/A**	**NO**	**2014**	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Fluoride	**4 (ppm)**	**4 (ppm)**	**1.18 (ppm)**	**N/A**	**NO**	**2014**	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	**10 (ppm)**	**10 (ppm)**	**2.9 (ppm)**	**N/A**	**NO**	**2014**	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits.
Synthetic Organic Contaminants including Pesticides and Herbicides							
None							
Volatile Organic Contaminants							
None							
Residual Disinfectants							
TTHM	**N/A**	**80 (ppb)**	**7.9 (ppb)**	**N/A**	**NO**	**2014**	By-product of drinking water chlorination.

Include the following if Beta was detected: EPA considers 50 pCi/L to be the level of concern for beta particles.

Turbidity:

Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is ***{0.3 NTU)*** in 95% of the daily samples and shall not exceed 5 NTU at any time. The ***Bellaire Water System's*** highest recorded turbidity result for 2014 was .15 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100 %.

Violations:

The Bellaire Water System had a Contact Time (CT) violation during the month of February 2014. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. The Bellaire Water System took corrective action to prevent future violations of this type from re-occurring.

DEFINITIONS OF SOME TERMS CONTAINED WITH THIS REPORT

Unit Descriptions	
Term	**Definition**
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	**Definition**
MCLG	MCLG: Maximum Contaminant Level Goal: 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.
MCL	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection level goal. 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.
MRDL	MRDL: Maximum residual disinfectant level. 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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level
The < symbol	A symbol that means less than. (Example) a result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.
Parts per Million (ppm)	Are units of measure for concentration of a contaminant. A part per million corresponds to one second in approximately 11.5 days
Parts per Billion (ppb)	Are units of measurement for a concentration of a contaminant. A part per billion corresponds to a second in 31.7 years.

HOW DO I PARTICIPATE IN DECISIONS ABOUT MY DRINKING WATER? Village council meetings are held on the 1st and 3rd Thursdays of each month at 6:00 PM at the Municipal building. Public participation and comments are encouraged. We will appreciate all your questions or concerns with your water system. Additional copies of this report are available at the municipal building and the water plant.