



# JEFFERSON COUNTY WATER AND SEWER DISTRICT

## 2018 Drinking Water Consumer Confidence Report *For Service Area A*

### Introduction

The Jefferson County Water and Sewer District (JCWSD) has prepared the following report to provide information to you, the consumer, on the quality of our drinking water. Included within this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contacts.

### License to Operate (LTO) Status

We have a current, unconditional license to operate our water system.

### Source Water Information

The JCWSD does not own a water treatment plant. Therefore, it must purchase all the water it delivers to its customers from various suppliers. The vast network of pipelines, storage tanks, and booster pump stations used to distribute water by the JCWSD are divided into different service areas. **Historically, as reflected in previous editions of your Consumer Confidence Report, the areas of Smithfield, Piney Fork and State Route 152 (Dillonvale Ridge) have been supplied by both Brilliant and Tiltonsville but in 2018, these areas were supplied by Brilliant, exclusively.** The Table below lists the different service areas and corresponding supplier.

SERVICE AREA	SUPPLIER
B-1, M, PHKE	City of Toronto Water Department
O, Overlook Hills Subdivision	City of Toronto Water Department
J, Sunshine Park, Jefferson Heights Area	City of Steubenville Water Department
<b><i>A, New Alexandria, CR. 19, SR 151 Piney Fork, State Route 152, Smithfield</i></b>	<b><i>Brilliant Water and Sewer District</i></b>
G1 & G2, Rayland Area, SR 150	Village of Tiltonsville Water and Sewer Department

The Brilliant Water & Sewer District's water source comes from two (2) ground wells. These wells are located at the water treatment plant, which is located at North Market Street in Brilliant, Ohio. The wells are designated as ground water supply, meaning that no surface water enters the well supply. The water is treated with a polyphosphate solution and then is chlorinated with Sodium Hypochlorite before it goes into the system.

Brilliant's source water assessment has been completed by the Ohio EPA. For information on how to obtain a copy of this report, please visit Ohio EPA's Source Water Assessment and Protection Program Web page at <http://www.epa.state.oh.us/ddagw/pdu/swap.html> or contact the Jefferson County Water and Sewer District. A full Source Water Protection Report is also available for viewing at the Brilliant District's office located at 706 2<sup>nd</sup> Street, Brilliant, Ohio.

An additional well and water treatment plant are currently under construction and are expected to be operational in July of 2019.

### Susceptibility Analysis

**The susceptibility of the aquifer (source of drinking water) to contamination** was determined by evaluating: (1) available site-specific and regional information (i.e., aquifer material, topography, soils, rate of ground water recharge, etc.), (2) pollution potential rating of the drinking water source protection area, (3) available ground water quality data, and (4) potential contaminant sources that were identified within the drinking water source

protection area. **The results of this evaluation indicate that the aquifer within the protection area has a high susceptibility** because of the following reasons:

1. Well log information suggests no significant low-permeability protective layer between the aquifer and the ground surface, which if present, could provide protection from contamination; and
2. Potential significant contaminant sources exist within the protection area, both in Ohio and West Virginia.

**A high susceptibility rating of the aquifer does not imply that the wellfield will become contaminated.** It only means that the existing/known aquifer conditions are such that **ground water within the aquifer** could become impacted if the potential contaminant sources are not appropriately managed.

### **What are the sources of contamination to drinking water?**

The sources of 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, 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 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 water 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, urban storm water runoff, and residential uses; (D) 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 storm water runoff, and septic systems; (E) radioactive contaminants, which can be naturally occurring or be 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 the public water systems. The Federal Food and Drug Administration (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 health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791)

### **Who needs to take special precautions?**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-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 for 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).

### **About your drinking water**

The EPA requires regular sampling to ensure drinking water safety. The JCWSD and the Brilliant Water and Sewer Department conducted sampling for, bacteria, nitrate and other contaminants during 2018. The Ohio EPA requires us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, may be more than one year old.

**Listed below is information on the contaminants that were found in the JCWSD Water system as the result of monitoring by the Brilliant Water and Sewer District and the JCWSD. (Contaminants sampled by the JCWSD are marked with an \*.)**

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detection's	Violation	Sample Year	Typical Source of Contaminants
<b>Inorganic Contaminants</b>							
Copper (ppm)*	1.3	AL = 1.3	0.463	NA	No	2018	Corrosion of household plumbing systems; erosion of natural deposits
Zero (0) out of twenty (20) samples were found to have levels in excess of the Action Level of 1.3 ppm							
Lead (ppb)*	0	AL = 15	0	NA	No	2018	Corrosion of household plumbing systems; erosion of natural deposits
Zero (0) out of twenty (20) samples were found to have levels in excess of the Action Level of 15 ppb							
Nitrate (ppm)	10	10	1.35	NA-1.35	No	2018	Runoff from fertilizer use; Leaching from septic tanks, sewage; erosion of natural deposits
Barium (ppm)	2	2	0.0468	NA-0.0468	No	2018	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
<b>Contaminants (Units)</b>							
<b>MCLG</b>							
<b>MCL</b>							
<b>Level Found</b>							
<b>Range of Detection's</b>							
<b>Violation</b>							
<b>Sample Year</b>							
<b>Typical Source of Contaminants</b>							
<b>Volatile Organic Contaminants</b>							
Total Trihalomethanes (ppb)*	N/A	80	30.6	29.0 – 30.6	No	2018	By-product of drinking water disinfection
Haloacetic acids (ppm)*	N/A	60	7.7	0 – 7.7	No	2018	By-product of drinking water disinfection
<b>Residual Disinfectants</b>							
Chlorine (ppm)*	MRDLG=4	MRDL=4	1.03	.50 – 1.35	No	2018	Water additive used to control microbes
<b>Radioactive Contaminants</b>							
Alpha emitters (pCi/l)	0	15	Non-detect	NA	No	2018	Erosion of natural deposits
Radium (combined 226/228) (pCi/l)	0	5	Non-detect	NA	No	2018	Erosion of natural deposits

### 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. JCWSD 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 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

### Revised Total Coliform Rule (RTCR) Information

All water systems were required to begin compliance with a new rule, the Revised Total Coliform Rule, beginning April 1, 2016. The new rule maintains the purpose to protect public health by insuring the integrity of the drinking water distribution system and monitoring for the presence of total coliform bacteria, which includes E. coli

bacteria. The USEPA anticipates greater public health protection under the new rule, as it requires water systems that are vulnerable to microbial contamination to identify and fix problems. As a result, under the new rule there is no longer a maximum contaminant level violation for multiple total coliform detections. Instead, the new rule requires water systems that exceed a specified frequency of total coliform occurrences to conduct an assessment to determine if any significant deficiencies exist. If found, these must be corrected by the Public Water System (PWS).

## **Monitoring and Reporting Violations**

There were no violations in the mandatory MCL testing. However, throughout 2018, the Brilliant Water and Sewer District exceeded the secondary contaminant level for manganese. These contaminants are not a threat to health at the SMCL (secondary maximum contaminant level). The USEPA has established National Secondary Drinking Water Regulations (NSDWRs) that set non-mandatory water quality standards for 15 contaminants. EPA does not enforce these “secondary maximum contaminant levels.” They are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations such as taste, color and odor. These contaminants are not considered to present a risk to human health at the SMCL.

Why is it necessary to set standards? EPA believes that if these contaminants are present in your water at levels above these standards, they may cause the water supply to appear cloudy or colored - or to taste or smell bad. Noticeable effects of manganese above the SMCL could be black to brown color, black staining and a bitter, metallic taste. **The District is currently constructing a new iron and manganese removal treatment facility, a new, third well and dedicated raw water transmission lines from the existing wells to the new treatment plant and also a new, dedicated finished water transmission line from the new treatment plant to the existing tanks.**

## **How do I participate in decisions concerning my drinking water?**

Public participation and comment are encouraged at regular meetings of the Jefferson County Board of Commissioners which meets every Thursday morning at 9:00 A.M. at 301 Market Street, Steubenville, Ohio 43952.

**For help obtaining more information** on your drinking water contact Wayne R. Ruckman of the JCWSD at (740)283-8577 or via email at [wruckman@jwatersewer.com](mailto:wruckman@jwatersewer.com).

## **Definitions of some terms contained within this report.**

Maximum Contaminant Level Goal (MCLG): 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.

Maximum Contaminant levels (MCL): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Parts per Million (ppm) or Milligrams per Liter (mg/L) are units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.

Picocuries per liter (pCi/L): A common measure of radioactivity.

Parts per Billion (ppb) or Micrograms per Liter ( $\mu\text{g/L}$ ) are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.

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

The “<” symbol: A symbol, which means “less than.” (a result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected)

The “>” symbol: A symbol which means “greater than.”