Contaminant	Violation Y/N	Level Detected	Units of Measure	MRDLG	MRDL	Likely Source of Contamination
Disinfection and Disinfection Byproduct Contaminants						
Chlorine	N	Annual Avg. 2.4 Range1.8-3.3	ppm	4	4	Water additives used to control microbes

Chlorine can be solid, liquid, or a gas additive used to control microbes in drinking water. Drinking water that has not been treated with chlorine or some other form of disinfectant or process may or may not contain harmful bacteria. Untreated drinking water may cause gastrointestinal distress or other health problems.

Contaminant	Monitoring period	Level Detected	Units of Measure	MCL	MCLG	Likely Source of Contamination
Stage 2 Disinfection Byproducts						
Haloacetic Acids (HAA5) 1000 National Road	2020	Annual Avg. 20.0 Range 11.7-31.8	ppb	60	0	By-product of drinking water disinfection
Haloacetic Acids (HAA5) 139 E. Bethehem Blvd.	2020	Annual Avg. 24.9 Range 13.8-34.2	ppb	60	0	By-product of drinking water chlorination
Haloacetic Acids (HAA5) 2538 National Road	2020	Annual Avg. 25.7 Range 13.6-33.1	ppb	60	0	By-product of drinking water chlorination
Haloacetic Acids (HAA5) 32 Fieldcrest Dr. Oakmont Tank Pit	2020	Annual Avg. 31.2 Range 13.5-41	ppb	60	0	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) 1000 National Road	2020	Annual Avg. 44.1 Range 23-69.7	ppb	80	0	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) 139 E. Bethehem Blvd.	2020	Annual Avg. 52.6 Range 30.8-84.6	ppb	80	0	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) 2538 National Road	2020	Annual Avg. 55 Range 31.9-83.7	ppb	80	0	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) 32 Fieldcrest Dr. Oakmont Tank Pit	2020	Annual Avg. 67.6 Range 32.1-115.4	ppb	80	0	By-product of drinking water chlorination

Some people who drink water containing trihalomethanes (TTHM) in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. Some people who drink water containing haloacectic acids (HAA5) in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant	Monitoring Period	90th Percentile	Range (low/high)	Unit	AL	Sites Over All	Typical Source
Copper, Free	2017-2019	.0557	0.0186-1.55	ppm	1.3	1	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead	2017-2019	4.2	0-156	ppb	15	1	Corrosion of household plumbing systems; Erosion of natural deposits

Copper and Lead samples were collected from 30 homes in our community water system in August 2019. Only the 90th percentile is reported.

Table of Test Results - Unregulated Contaminant Monitoring Rule 4 (UCMR 4)

As part of an on-going evaluation program, the EPA has required us to monitor some additional contaminants/chemicals. Unregulated contaminants are those that don't yet have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help USEPA decide whether the contaminants should have a standard.

Contaminants from UCMR 4 Sampled during 2020	Sample Location	Average	Range (low/high)
Manganese (ppb)	Distribution system Point of Entry	19.3	1.7-42.8
1 – Butonol (ppb)	Distribution system Point of Entry	15.875	ND-24.591
2 – methoxyethanol (ppb)	Distribution system Point of Entry	40.713	ND-67.16

Sanitary Survey Deficiencies

Unresolved Deficiency Date Identified	Facility	Comments
09/15/2020	Distribution System	Cross Connection Program: A city ordinance is adopted and a back flow prevention coordinator has been hired. The city has started working with its commercial customers to implement the program.
09/15/2020	Distribution System	Unaccounted Water greater than 15 %: 17% reported. We are working to reduce this value by changing meters, upgrading water lines in the distribution system, reviewing billing and accounting processes and proactively seeking and repairing leaks.
9/15/2020	Mozart Tanks 1 & 2	Fencing required: We are arranging the installation.

Sodium**	N	33.3	ppm	NE	20	Erosion of natural deposits

** Sodium is an unregulated contaminant. Our sodium level exceeds the guidance MCL. Anyone having a concern over sodium should contact their health care provider.

Additional Information

Wheeling Water conducted additional monitoring under the Long Term 2 Enhanced Surface Water Treatment Rule for cryptosporidium, E.coli, and turbidity issued by the US EPA. There were no detects. The monitoring data is available by contacting Wheeling Water, 304-234-3835.

Terms & Abbreviations

Maximum Contaminant Level Goal (MCLG): the "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL): the "Maximum Allowed" MCL is 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.

Secondary Maximum Contaminant Level (SMCL): recommended level for a contaminant that is not regulated and has no MCL.

Action Level (AL): the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.

Treatment Technique (TT): a required process intended to reduce levels of a contaminant in drinking water.

Maximum Residual Disinfectant Level (MRDL): 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.

Non-Detects (ND): lab analysis indicates that the contaminant is not present.

Parts per Million (ppm) or milligrams per liter (mg/l)

Parts per Billion (ppb) or micrograms per liter (µg/l)

Picocuries per Liter (pCi/L): a measure of the radioactivity in water

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Millirems per Year (mrem/yr): measure of radiation absorbed by the body

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Monitoring Period Average (MPA): An average of sample results obtained during a defined time frame, common examples of monitoring periods are monthly, quarterly and yearly

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Nephelometric Turbidity Unit (NTU): a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is not regulated for groundwater systems.

Running Annual Average (RAA): an average of sample results obtained over the most current 12 months and used to determine compliance with MCLs.

Locational Running Annual Average (LRAA): Average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

Technical Information

Total Coliform Bacteria - the presence of coliform bacteria indicates that other potentially harmful bacteria may be present. Wheeling Water's 2020 testing indicates 0% presence of coliform bacteria.

Wheeling Water works around the clock to meet all regulations required by the Safe Drinking Water Act and provide quality water to all of our customers. The operation staff at our plant is highly trained, experienced and holds a minimum of a Class III Water Plant Operator's License. The facility is staffed 24 hours a day, 365 days a year.

We ask that you help support our water system and protect our water sources, which are the heart of our community.

Your Annual Water Quality Report is available at www.wheelingwv.gov

Wheeling Water Department

AT YOUR SERVICE

Consumer Confidence REPORT 2020 (CCR)

Public Water Supply # WV3303516

Wheeling Water Treatment Plant
1551 Richland Avenue
Wheeling, WV 26003

Published April 2021

www.wheelingwv.gov

In compliance with the Safe Drinking Water Act and Environmental Protection Agency (EPA) requirements, Wheeling Water is pleased to submit information to all of our customers on the quality of our water. The following Water Quality Report details the water analysis from January 1 to December 31, 2020. Wheeling Water is committed to providing you with a clean and dependable supply of drinking water. The high quality of your water is the result of continuous monitoring by highly skilled water treatment professionals.

Our goal is to continue meeting or exceeding the high standards set forth by the EPA and the Safe Drinking Water Act. We hope that you will review the information contained in our Annual Water Quality Report and compare our water supply with the federal regulations. Please feel free to contact Michael Rice, Treatment Plant Manager, at 304-234-3835 with any questions or review our website. You may also attend any of the regularly scheduled City Council meetings held on the first Tuesday of each month at 12:00 noon and third Tuesday of each month at 5:30 p.m. in the Council Chambers of the City County Building, 1500 Chapline St., Wheeling, WV.

Source Water & Treatment

The source of drinking water (both tap and bottled) includes rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of 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.

The Ohio River, which is surface water, is the source water for the Wheeling Water Treatment Plant. The river has a higher susceptibility to contamination, due to the sensitive nature of surface water supplies and the potential contaminant sources identified within the area. This does not mean that this intake will become contaminated; only that conditions are such that the surface water could be impacted by a potential contaminant source. Future contamination may be avoided by implementing protective measures. The West Virginia Bureau for Public Health has completed a Source Water Assessment Report on Wheeling's source water, which includes more detailed information on this issue. The report is available for review by calling the Wheeling Water Treatment Plant at 304-234-3835.

The water is pumped from the Ohio River into the treatment plant where it is carefully treated, filtered and disinfected to ensure safe water to the customer. In addition to the Ohio River, there are seven wells located near the plant that may be utilized as an alternative source of water in the event the Ohio River becomes contaminated due to a spill. These wells, which are not under the influence of surface water, are treated the same way as the river water and can provide approximately 50% of the average daily usage.

The Ohio River is typically a reliable water supply. However, it is vulnerable to contamination. This requires a very diligent monitoring program and a sophisticated treatment facility to ensure that the water meets all state and federal health and safety regulations.

As the water quality of the Ohio River improves, it brings additional treatment problems, such as large quantities of algae and prolific growth of zebra mussels, which can plug intakes and foul treatment systems. These new problems have created additional expenses to meet the increasingly stringent requirements set by the EPA and ensure the quality of water our customers have come to expect.

The Wheeling Water Treatment Plant treats approximately 6.0 million gallons of water per day and distributes this water through 200 miles of water mains, some of which are over 100 years old. The maintenance and upgrade of this diversified system is reflected in periodic rate increases.

Contaminants in Water

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. Food and Drug Administration (FDA) regulations establish limits of contaminants in bottled water which must provide the same protection for public health.
All drinking water, including bottled water, may reasonably be expected to contain at least minute amounts of some contaminants. 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 from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Table of Test Results - Regulated Contaminants

Microbiological	Result	MCLG	MCL	Typical Source
No Detected Results were Found in the Calendar Year of 2020				

Regulated Contaminants	Collection Date	Highest Value	Range (low/high)	Unit	MCL	MCLG	Typical Source
Barium	8/12/2020	0.026	0.026	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	8/12/2020	0.677	0.677	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	2/12/2020	0.85	0.85	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitride-Nitrite	2/12/2020	0.85	0.85	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Regulated Contaminants	Voilation	Level Decected	Unit of Measure	MCGL	MCL	Typical Source
Turbidity	no	0.037 100% of monthly samples <0.30	NTU	0	TT	Soil Runoff

Turbidity is a measure of cloudiness in water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Turbidity, caused by soil runoff, is generally thought of as the cloudiness of water. We test turbidity because it is a good indicator of the effectiveness of our filtering system. Although turbidity has no health effects, at high levels it can impair the disinfection process. The highest turbidity reading for 2020 was 0.070 NTU and the lowest turbidity reading was 0.020 NTU. The yearly average was 0.037 NTU.

Contaminants that may be present in source water include:

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

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, and farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm runoff, and residential uses.

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.

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