

Annual Drinking Water Quality Report For Calendar Year 2022

Buffalo Water/Managed by Veolia NA, LLC

2 Porter Avenue
Buffalo, NY 14201
PWS ID # NY1400422

MAYOR BYRON W. BROWN

Buffalo Water Board:

Chairperson: *Oluwole McFoy, P.E.*

Members: *Gerald E Kelly, William Sunderlin, Denine Jackson*

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Project Manager: *David Hill*

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Website: www.buffalowater.org			
For health issues, contact: Erie County Health Department: (716) 961-6800			
Senior Citizen Discount: Contact Department of Assessments at (716) 851-5733			

Este informe contiene información significativa sobre el agua que usted bebe.

Tradúzcalo ó hable con alguien que lo entienda bien.

INTRODUCTION

To comply with State regulations, Buffalo Water (managed by Veolia NA) provides an annual report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. This report is an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards. We are pleased to provide you with this information because informed customers are our best customers.

If you have any questions about this report or concerning your drinking water, please contact Elizabeth Scheeler, Water Treatment Supervisor at (716) 847-1065 ext. 130. We want you to be informed about your drinking water. If you would like to learn more, please attend any of the regularly scheduled Water Board meetings, typically held the second Wednesday of each month at 9:00 AM, at 2 Porter Ave. in the conference room. Please access the Buffalo Water website for updated meeting schedules.

WHERE DOES OUR WATER COME FROM?

In general, 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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the Federal Environmental Protection Agency (EPA) prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department and the Federal Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source is Lake Erie (a surface water source) which is the southernmost of the Great Lakes, bounded on the north by the Canadian province of Ontario, on the south by the U.S. states of Ohio, Pennsylvania, and New York, and on the west by the state of Michigan. Lake Erie is the shallowest of the Great Lakes, with an average depth of only 62-ft. It also has the shortest detention time of the Great Lakes. Water remains in the lake for only 2.6 years before it is replaced by fresh water (as compared with 191



years in Lake Superior or 22.6 years in Lake Huron). It is also the siltiest of the Great Lakes. Its bottom consists of fine sand, easily upset during turbulent storms. The combination of its shallowness, short detention time and sandy unstable bottom is especially beneficial to our water quality. The lake is able to flush itself of harmful contaminants such as pesticides and other organic wastes. When Lake Erie becomes turbulent, fine particles of sand and silt become agitated and suspended throughout the lake. Organic contaminants have the propensity to cling to these particles and be flushed from the lake. Therefore, water treatment begins as a natural process due to the structure and makeup of Lake Erie. During 2022, our system did not experience any restriction of our water source.

SOURCE WATER ASSESSMENT (SUMMARY)

A source water assessment was completed under the New York State Department of Health (NYSDOH) Source Water Assessment Program (SWAP). The following is the Executive Summary of this report:

" The New York State Department of Health recently completed a draft Source Water Assessment of the raw water supply's source under the state's Source Water Assessment Program (SWAP). The purpose of this program is to compile, organize, and evaluate information regarding possible and actual threats to the quality of public water supply (PWS) sources. It is important to note that source water assessment reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water.

The Great Lakes' watershed is exceptionally large and too big for a detailed evaluation in the SWAP. General drinking water concerns for public water supplies which use these sources include: storm generated turbidity, wastewater, toxic sediments, shipping related spills, and problems associated with exotic species (e.g. zebra mussels – intake clogging and taste and odor problems). The SWAP is based on the analysis of the contaminant inventory compiled for the drainage area deemed most likely to impact drinking water quality at this public water supply raw water intake. This assessment found a moderate susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for protozoa and disinfection byproduct precursor contamination. There is also a high density of sanitary wastewater discharges, which results in elevated susceptibility for nearly all contaminant categories.

There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: Toxics Release Inventory facilities, Chemical Bulk Storage facilities, inactive hazardous waste sites, landfills and Resource Conservation and Recovery Act facilities."

If you have any questions about the state's Source Water Assessment Program, please contact the Erie County Health Department at (716) 961-6800.

DRINKING WATER TREATMENT PROCESS

Buffalo's water intake is located in the northeastern region of Lake Erie, just upstream of the Niagara River. This region is known as the Emerald Channel, due to the sparkling clarity of the source water. Raw water enters the intake through 12 sluice gates and collects in a circular conduit where it's conveyed by gravity down a 12-foot diameter, mile-long tunnel burrowed under the lake bed. Chlorine is injected on seasonal basis at this point to control zebra and quagga mussels, and provide some disinfection of the water. The water then enters an onshore screen house at the Colonel Francis G. Ward Pumping Station where traveling screens remove large objects such as fish and other debris that could potentially damage equipment.

Water continues to flow by gravity through the raw water conduit as chlorine is added for disinfection. Six low lift pumps are utilized to control the amount of water withdrawn from Lake Erie depending on system demands. A poly-aluminum chloride (PACI) coagulant is fed and mixed immediately downstream of the low lift pumps. PACI is a coagulant designed to cause organics in the water to bind together forming floc. Next, the water is then conveyed into underground basins where the flocculation and sedimentation processes occur. During flocculation, the water is slowly mixed by mechanical equipment to enhance floc formation. Following the flocculation process, water enters into the settling portion of the underground basins where the heavy floc is allowed to settle out by gravity. The settled water, still containing light floc, is conveyed to 40 rapid sand/antracite filter beds where the filtration process occurs, removing the light floc. A filter aid (PACI) can be added when necessary to enhance filtration and additional chlorine can also be added if needed. Filtered water then enters a 28 million gallon clearwell, where it is stored until needed in the distribution system.

Prior to potable water being pumped into the distribution system, a phosphate based corrosion inhibitor is added. The phosphate provides a protective layer inside service connections and plumbing systems. Fluoride is also dosed at this point in the process. Lastly, High lift pumps located at the Colonel Ward and Massachusetts Pumping Stations deliver the treated water to the community. Our in-house laboratory tests the quality and safety of the water at every stage of the treatment process. Additional tests are conducted from samples taken throughout the City, including private homes, businesses and public facilities to ensure our water remains safe.

The 40 filters that remove suspended solids are cleaned on a regular basis, which is accomplished by backwashing the filters with potable water. The backwash wastewater generated during the backwash process contains concentrated amounts of light floc removed by the filters. This wastewater is collected and pumped to gravity thickening clarifiers. Clarified backwash water is recycled to the raw water conduit or to the Black Rock Canal, and the concentrated residuals generated during the thickening process are pumped to a storage lagoon and subsequently to a centrifuge for further processing.

FACTS AND FIGURES

Water is essential for all life. Besides drinking, bathing and recreation, water is used to fight fires, and has countless industrial applications. The City of Buffalo treated over 24.4 billion gallons last year averaging over 67 million gallons each day for a population of approximately 276,807 people, covering 46 square miles of piping network. On our highest single day, December 27, 2022 we treated over 83.1 million gallons of water for distribution.

The distribution system consists of approximately 765 miles of water main pipe (not including hydrant laterals and service connections), 19,770 valves, 75, 000 service connections and 7,993 fire hydrants. The distribution system is maintained, day and night, throughout all seasons.

Customer Cost

The average 2022 annual water charge was approximately \$760.00 per year. The total quarterly bill includes the cost of water used and the service charge. Eligible senior citizens receive a discount.

Water Usage (gallons)		Price per 1,000 gallons		Quarterly Service Charge as of January 1, 2019			
Monthly	Quarterly	Regular	Seniors	Meter Size	Regular	Seniors	Regular
Up to 149,600	Up to 448,800	\$3.05	\$1.80	5/8"	\$49.90	\$29.94	\$798.40
Over 149,600	Over 448,800	\$2.75	\$1.60	3/4"	\$74.85	\$44.91	\$1,247.50
				1"	\$124.75	\$74.85	\$2,495.00
				1 1/2"	\$249.50	\$149.70	\$3,992.00
				2"	\$399.20	\$239.52	\$10,479.00

ABBREVIATIONS AND DEFINITIONS OF TERMS USED IN THIS REPORT

MCLG (Maximum contaminant level goal): The level of contaminant in drinking water below which there is no known or expected risk to health, MGLGs allows for a margin of safety.
MCL (Maximum contaminant level): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MGLGs as possible.
MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant (chlorine) 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): The level of a drinking water disinfectant (chlorine) below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
TT (Treatment Technique): A required process intended to reduce the level of contamination in drinking water.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological, synthetic organic compounds, 1,4-Dioxane PFOA and PFOS. The following tables present which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, is more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably 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 EPA's Safe Drinking Water Hotline (800) 426-4791 or the Erie County Health Department at (716) 961-6800.

AL (Action Level): The concentration of a contaminant, which, if exceeded, triggers a treatment, or other requirement, which a water system must follow.
NTU (Nephelometric Turbidity Units): A measure of clarity (turbidity) of water, turbidity in excess of 5NTU is just noticeable to the average person.
Poly/Ortho – phosphate: A chemical blend used as a treatment technique (TT) intended to minimize the potential for lead and copper contamination in drinking water. EPA's Action Level (AL) for lead in water delivered to users of public drinking water systems is 15 µg/L. (parts per billion) Its goal for lead is zero.
Floc: Clumps or tufts formed when suspended particles combine with chemical substance or compound that promotes the combination, agglomeration, aggregation or coagulation of suspended particles in the water.
Sedimentation: The process of suspended solid particles settling out (going to the bottom of the vessel) in water.
Coagulation: Agglomeration of finely divided particles into larger particles, which can then be removed by settling and/or filtration.
Ppm: Parts per million, or milligrams per liter (mg/L). Corresponds to one part of liquid in one million parts of liquid.
Ppb: Parts per billion, or micrograms per liter (µg/L). Corresponds to one part of liquid in one billion parts of liquid.
Ppt: Parts per trillion, or nanograms per liter (ng/L). Corresponds to one part of liquid in one trillion parts of liquid.
ND: Not Detected. **N/A:** Not applicable.
TTHM (Total Trihalomethane): Organic compounds, which are disinfection by-products of the chlorination of drinking water. Some people who drink water with TTHMs 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.
HAA (Halogenated Acetic Acids): Organic compounds, which are disinfection by-products of the chlorination of drinking water, currently the EPA lists HAA's as a health advisory
TOC (Total Organic Carbon): SUVA (Specific Ultraviolet Absorption): A measure of the organic content of the water. This is a precursor to disinfection by-product when combined with the chlorination of drinking water.
90th % Value: The values reported for lead & copper represent the 90th percentile for each of these contaminants. A percentile is a value on a scale of 100 that indicates a percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead (or copper) values detected at your water system.
RAA: The value in the Running Annual Average (RAA) field is the average of the Monitoring Period Average (MPA) for a year. It is calculated by determining the monitoring periods that began within 365 for the current monitoring period and averaging them.

Location	Contaminant	Violation Yes/No	Date of Sample	Level Detected (Min/Max) (Average)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
2022 Table of Detected Contaminants – Inorganic Entry Point								
Entry Point	Barium	No	4/12/22, 10/11/22	19.1-19.5 Avg.: 19.3	ppb	2000	2000	Discharge of drilling wastes; discharge from metal refineries; and erosion of natural deposits.
	Fluoride	No	4/12/22, 10/11/22	0.11-0.12 Avg.: 0.115	ppm	N/A	2.2	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories.
	**Sodium	No	4/12/22, 10/11/22	10.6-13.6 Avg.: 11.95	ppm	N/A	**	Naturally occurring; Road salt; Water softeners; Animal waste.
	Nitrate	No	4/12/22, 10/11/22	ND-0.21 Avg.: 0.11	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage, Erosion of natural deposits.
Distribution	Copper ⁽¹⁾	No	5/1/22-9/30/22	ND -113 90% = 50.1	ppb	0	AL = 1300	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives.
	Lead ⁽¹⁾	No	5/1/22-9/30/22	ND – 7.1 90% = 2.8	ppb	0	AL = 15	Corrosion of household plumbing; erosion of natural deposits.
2022 Table of Detected Contaminates – Microbiological								
Distribution	Heterotrophic Bacteria	No	¼/22-12/30/22	0-112 Avg.: 1.18	count/ml	N/A	N/A	Naturally occurring.
	Turbidity ⁽²⁾	No	¼/22-12/30/22	0.05-1.53 Avg.: 0.14	NTU	N/A	≤ 5.0	Soil runoff.
Entry Point	Turbidity ⁽³⁾	No	¼/22-12/30/22	0.05 – 0.25 Avg.: 0.10	NTU	N/A	≤ 1.0	Soil runoff.
		No		100% < 0.3	NTU	N/A	TT: 95% ≤ 0.3	
	Heterotrophic Bacteria	No	¼/22-12/30/22	0 – 2 Avg.: 0	count/ml	N/A	N/A	Naturally occurring.
2022 Table of Detected Contaminates – Total and Free Chlorine Residuals – Disinfectants								
Entry Point	Total Chlorine	No	¼/22-12/30/22	1.13-1.95 Avg.: 1.51	ppm	N/A	N/A	Water additive used to control microbes.
	Free Chlorine	No	1/4/22-12/30/22	0.95-1.65 Avg.: 1.122	ppm	(MRDLG) 4.0	(MRDLG) 4.0	Water additive used to control microbes.
Distribution	Free Chlorine	No	1/4/22-12/30/22	0.03-1.46 Avg.: 0.86	ppm	(MRDLG) 4.0	(MRDLG) 4.0	Water additive used to control microbes.
2022 Table of Detected Contaminates - Disinfection Byproducts								
Distribution	TTHM ⁽⁴⁾	No	2/7/22-11/8/22	12.6-81.4 RAA= 38.6	ppb	N/A	80	By-product of drinking water chlorination needed to kill harmful microorganisms. TTHM's are formed when source water contains large amounts of organic matter.
	HAA	No	2/7/22-11/8/22	6.8-41.0 RAA= 19.7	ppb	N/A	60	By-product of drinking water disinfection needed to kill harmful microorganisms.
Entry Point	TOC	No	1/11/22-12/13/22	1.7-2.19 Avg.: 1.95	ppm	N/A	TT < 2.0	Precursors to by-products of drinking water chlorination.
	SUVA	No	1/11/22-12/13/22	0.76-1.10 Avg.: 0.95	L/mg-m	N/A	TT < 2.0	Precursors to by-products of drinking water chlorination.
2022 Table of Detected Contaminates - Other Properties of Water								
Entry Point	Total Solids	No	1/11/22-12/13/22	159-199 Avg.: 175.8	ppm	N/A	N/A	Naturally occurring.
	Total Dissolved Solids	No	1/11/22-12/13/22	154-198 Avg.: 169.0	ppm	N/A	N/A	Naturally occurring.

	Alkalinity (as CaCO ₃)	No	1/11/22-12/13/22	80-101 Avg.: 94.3	ppm	N/A	N/A	Naturally occurring.
	Calcium Hardness (as CaCO ₃)	No	1/11/22-12/13/22	84-112 Avg.: 99.2	ppm	N/A	N/A	Naturally occurring.
	pH	No	1/4/22-12/30/22	7.38 -7.98 Avg.: 7.72	SU	N/A	N/A	Naturally occurring.
Distribution	pH	No	1/4/22-12/30/22	7.63-7.86 Avg.: 7.78	SU	N/A	N/A	Naturally occurring.
	Alkalinity (as CaCO ₃)	No	8/16/22-9/13/22	84-117 Avg.: 99.2	ppm	N/A	N/A	Naturally occurring.
	Calcium Hardness (as CaCO ₃)	No	8/16/22-9/13/22	80-101 Avg.: 94.3	ppm	N/A	N/A	Naturally occurring.
Unregulated Contaminant Monitoring Rule (UCMR4)								
Entry Point	Manganese	No	1/31/19-10/24/19	0.51-2.13 Avg.: 1.34	ppb	N/A	N/A	
Distribution	HAA's	No	2/12/19-11/13/19	3.07-41.38 Avg.: 22.33	ppb	N/A	60	By-product of drinking water disinfection needed to kill harmful microorganisms.
PFOS								
Entry Point	PFOA-Perfluoro-octanoic acid	No	1/11/22-10/21/22	1.71-2.1 Avg.: 1.87	ppt	N/A	10	Man-made chemicals widely used in the manufacturing of industrial and consumer products.
	PFOS-Perfluoro-octane sulfonate	No	1/11/22-10/21/22	1.64-2.5 Avg.: 1.92	ppt	N/A	10	Man-made chemicals widely used in the manufacturing of industrial and consumer products.

Stage 2 Disinfection Byproducts 2022

Sample Site	Avg. (range) THM, ppb	Avg. (range) HAA, ppb
3396 Bailey	30.5 (17.3-47.4)	22.5 (9.9-28.7)
396 Kenmore	34.3 (19.5-47)	19.8 (9.2-25.7)
31 Marine Dr	32.7 (12.6-56.9)	21.7 (6.9-27.2)
3043 Main	39.4 (15.0-66.3)	22.8 (8.9-29.7)
262 Grider	56.6 (28.4-81.4)	27.5 (11.0-41.0)
150 Reading	40.6 (30.1-55.8)	9.8 (8.3-11.2)
3079 Bailey	32.7 (22.8-45.7)	20.7 (11.9-26.0)
1177 Abbott	33.8 (20.9-50.4)	19.5 (10.7-27.3)
300 Dorrance	36.2 (22.6-52.9)	19.8 (16.2-24.2)
398 Dingens	34.0 (19.3-55.1)	15.2 (7.2-25.0)
1625 Bailey	56.6 (44.3-66.7)	17.8 (9.8-23.7)
939 Abbott	35.7 (25.2-53.04)	19.7 (6.8-26.2)

Footnotes for Table of Detected Contaminants:

** Water containing more than 20 mg/l of sodium should not be used for drinking by anyone on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

(1) In 2022 62 homes were tested for Lead and Copper as part of the annual Surveillance Program during June 1, 2022 through September 30, 2022. No sample results were above the action level (AL) of 15 ppb for lead or 1.3 ppm for copper. All of the homes are classified as Tier 1 sample sites. Buffalo Water will return to standard compliance monitoring beginning July 1st, 2023. The treatment technique (TT) employed by Buffalo Water, intended to reduce lead and copper contamination of drinking water is the addition of a poly/orthophosphate blend as a part of water treatment.

- (2) Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Our highest single distribution measurement for the year occurred on April 5, 2022 (1.53 NTU). State regulations require that the distribution average monthly turbidity must be below 5.0 NTU.
- (3) The regulations also require that 99% of the effluent turbidity samples collected have measurements below 0.3 NTU and that no single turbidity measurement be above 1.0 NTU. 100% of all measurements for all of the months met the TT for turbidity (0.3 NTU), and were in the acceptable range allowed and did not constitute a violation.
- (4) Representative testing for TTHM included samples collected through 2022. Our highest detected reading occurred on May 19, 2022, 81.4 ppb. Some people who drink water, containing TTHM in excess of the MCL over many years, experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

WHAT DOES THIS INFORMATION MEAN?

As presented in the Table of Detected Contaminants, our system had no violations for the parameters referenced. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

UNDETECTED CONTAMINANTS:

According to State regulations, Buffalo Water routinely monitors your drinking water for various contaminants. Your water is tested for inorganic contaminants, nitrate, lead and copper, volatile organic contaminants, synthetic organic contaminants, total Trihalomethanes, 1, 4-Dioxane, PFOA and PFOS. Additionally, your water is tested for coliform bacteria a minimum of 150 times a month. The contaminants detected in your drinking water are included in the Table of Detected Contaminants. Below is a list of contaminants that were tested for in 2022 but **were not detected** in our drinking water:

1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,1-Dichloropropene, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dibromoethane, 1,2-Dibromomethane, 1,2-Dibromo-3-chloropropane, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3,5-Trimethylbenzene, 1,3-Dichlorobenzene, 1,3-Dichloropropane, 1,4-Dichlorobenzene, 1,4-Dioxane, 2-Butoxyethanol, 2,2-Dichloropropane, 2,3,7,8-TCDD(Tetra- Chlorinated dioxin), 2,4-D, 3-Hydroxycarbofuron, 2,4,5,-Trichlorophenox, Alachlor, Aldicarb, Aldicarb sulfoxide, Aldicarb sulfone, Aldrin, Antimony, Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Arsenic, Atrazine, Benzene, Benzo[a]pyrene, Beryllium, bis(2-Ethylhexyl)phthalate, Bromate, Bromobenzene, Bromochloromethane, Bromoform, Bromomethane, Butachlor, Cadmium, Carbaryl, Carbon Tetrachloride, Carbofuran, Chlordane, Chlorite, Chlorobenzene, Chloroethane, Chloromethane, cis-1,2-Dichloroethene, cis-1,3-Dichloropropene, Chromium, Cyanide, Dalapon, Di(2-ethylhexyl)adipate, Dibromomethane, Dicamba, Dichlorodifluoromethane, Dieldrin, Dinoseb, Diquat, Endothall, Endrin, Ethylene glycol, Ethylbenzene, gamma-BHC (Lindane), Glyphosate, Heptachlor, Heptachlor epoxide, Hexachlorobenzene, Hexachlorobutadiene, Hexachlorocyclopentadiene, Isopropylbenzene, Mercury, Methomyl, Methoxychlor, Methylene Chloride, Metolachlor, Metribuzin, MTBE (Methyl tert-butyl ether), n-Butylbenzene, n-Propylbenzene, Naphtalene, Nickel, Nitrite as Nitrogen, o-Chlorotoluene, Oxamyl, o-Xylene, p-Chlorotoluene, p-Isopropyltoluene, p/m-Xylene, Pentachlorophenol, Picloram, Polychlorinated Biphenyls, Propachlor, Propylene glycol, sec-Butylbenzene, Selenium, Simazine, Styrene, Taxophene, tert-Butylbenzene, Tetrachloroethene, Thallium, Toluene, trans-1,2-Dichloroethene, rans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, Vinyl chloride.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During 2022, our system was in compliance with applicable state drinking water operations, monitoring, and reporting requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Some people may be more vulnerable to disease causing microorganisms or pathogens 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 from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800) 426-4791.

INFORMATION ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control (CDC), fluoride is very effective in preventing cavities when present in drinking water at a properly controlled level.

Since June 22, 2015 fluoride has not been added to your drinking water. Currently there is an interruption to fluoride addition due to ongoing capital improvements associated with upgrades to our fluoride system. This project is scheduled to be completed in 2023 allowing Buffalo Water to resume fluoride addition. You may want to discuss this with your family dentist to see if some other form of fluoride supplement should be considered for your dental protection.

INFORMATION ON LEAD and COPPER

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. Buffalo Water is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Elizabeth Scheeler, Water Treatment Supervisor at (716) 847-1065 ext. 130 Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

WISE WATER USE

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life
- Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential firefighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Run only full loads in the washing machine and dishwasher. This saves 300 to 800 gallons per month.
- Turn off the tap when brushing your teeth and shaving. This saves three gallons each day.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an otherwise invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Put a plastic bottle or a plastic bag weighted with pebbles and filled with water in your toilet tank. Displacing water in this manner allows you to use less water with each flush. Saves 5 to 10 gallons a day. That's up to 300 gallons a month, even more for large families. Better yet, for even greater savings, replace your water-guzzling 5-7 gallon a flush toilet with a 1.6 gallon, low flush, or 1.28 gallon, ultra-low flush model.
- Avoid flushing the toilet unnecessarily. Dispose of tissues, insects and other similar waste in the trash rather than the toilet.
- Retrofit all household faucets by installing aerators with flow restrictors to slow the flow of water.

- Don't run the hose while washing your car. Use a bucket of water and a quick hose rinse at the end which may save 150 gallons each time. For a two-car family that's up to 1,200 gallons a month.
- Place a bucket in the shower to catch excess water and use this to water plants. The same technique can be used when washing dishes or vegetables in the sink.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes, if it moved, you have a leak.

System Improvements

To insure continuing quality and safety in our water supply, Buffalo Water has made the following improvements to our utility in 2022:

- Corrosion control evaluations continued by SUNY Buffalo, utilizing an on-site pipe loop pilot system.
- Engineering Design of a flood protection system for Buffalo Water facilities located at 2 Porter Avenue.
- Engineering Design for upgrades to Buffalo Water's primary disinfection system chemical facilities.
- Engineering Design for improvements to building roofs for the Colonel Ward Pumping Station.
- Engineering Design for improvements associated with electrical and façade improvements at the Massachusetts Avenue Pumping Station.
- Construction and upgrades to Buffalo Water's residuals handling systems.
- Continued the City's pilot program for annual lead and copper monitoring with increased customer awareness.
- Continued electrical improvements at the Colonel Ward Pump Station and Filtration Plant to improve electrical service and reliability.
- In the distribution system, 131 fire hydrants were replaced, 398 were repaired and hydrant marker installation continued throughout the City.
- Distribution system improvements continued including valve replacements, water cut restorations, and rehabilitation/replacement of water mains.
- Building envelope improvements at Colonel Ward and Massachusetts Avenue Pumping Stations.
- The façade of the Grover Pumping Station was rehabilitated.

An absolute commitment to produce the best quality of drinking water available will remain highest priority for Buffalo Water. The planned improvements for 2023 demonstrate this commitment:

- Over 125 hydrants are scheduled to be replaced.
- Control system upgrades will continue. The improved monitoring systems will optimize control over water treatment and plant pumping systems.
- Building envelope improvements will continue at the Colonel Ward, and Massachusetts Avenue Pumping Stations.
- Improve accuracy of metering program by replacing specific groups of meters.
- Various distribution system improvements will be designed and constructed.
- Construction of a flood protection system for Buffalo Water facilities located at 2 Porter Avenue.
- Construction of upgrades to Buffalo Water's primary disinfection system chemical facilities.
- Continuation of construction upgrades to Buffalo Water's residuals handling facilities.
- Engineering Design for improvements associated with electrical and façade improvements at the Massachusetts Avenue Pumping Station.
- Engineering Design for improvements associate with the Filtration Plant clearwell
- Engineering Design for improvements associated with improving distribution system hydraulics and system pressures.

METERING PROGRAM

The New York State's Department of Environmental Conservation has mandated that all households and businesses served by Buffalo Water have a water meter installed to insure equitable billing and to foster water conservation. The water meters installed under this program, are read from outside your residence, and accurately bill for the water that has been used, the same way you are currently billed by other utilities. Buffalo Water currently reads and bills metered accounts quarterly. Bills are processed and mailed within approximately 30 days following the previous quarter. If your meter is stopped, or we cannot read your meter, you may receive an estimated bill. If you receive a notice regarding a problem with your meter, or an estimated bill, you should contact customer service at (716) 847-1065.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community. A copy of the Annual Water Quality Report can be found on Buffalo Water's website (www.buffalowater.org). Please call our treatment plant supervisor at (716) 847-1065 ext. 130 or the laboratory at (716) 847-1065 ext. 133 if you have questions about water quality. As always, if you are concerned about elevated levels of lead in your home's plumbing, please contact Mayor Byron W. Brown's 3-1-1 Call and Resolution Center to have your water tested for lead by Buffalo Water.