

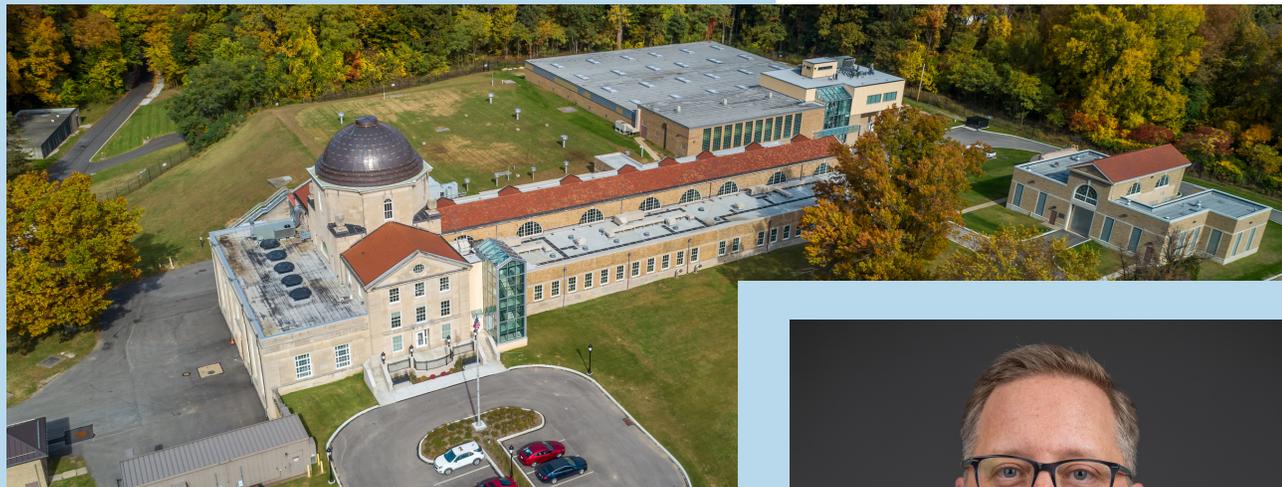
2023 WATER QUALITY REPORT

ERIEWATER.ORG



Serving McKean Township
and McKean Borough

PWSID 6250096



Craig H. Palmer, CEO

Dear Valued Customers of the Erie Water Works,

2023 was a year of great success as our 105 member team worked hard to improve the public water system. In October, a Ribbon Cutting Ceremony was held to mark the completion of a \$70M, 3 phase project to renovate the Richard S. Wasielewski Water Treatment Plant. It is truly a world class water treatment facility.

Erie Water Works also invested \$20M into planned infrastructure projects aimed at renewing essential components of the water system. Over \$10M of those expenses were funded by PA Infrastructure Investment Authority grants and low interest loans, which help keep water rates affordable.

Ongoing lead removal efforts in the City of Erie gained momentum as 2,800 lead “gooseneck” connections were removed in 2023. With \$39.6M in grants and \$8.9M in low interest loans obtained in the past 2 years to physically “Get the Lead Out”, Erie Water Works is poised to remove all lead lines by 2028, ten years ahead of EPA requirements. For more information, go to eriewater.org/leadlinegrantproject.

Every day, more than 220,000 people in the Erie region have access to high quality tap water. Although all utilities are necessary to sustain our quality of life, water utilities like Erie Water Works are the only ones that deliver a consumable product directly to your home or business. Our team is honored to have that responsibility.

Erie Water Works is proud to be your regional water supplier, providing World-Class Water, First-Class Service. Cheers to Water!



Monitoring Your Water

We routinely monitor for contaminants in your drinking water according to federal and state laws. The tables included in this report show the results of our monitoring for the period of January 1 to December 31, 2023. The PA DEP allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Although not required by regulation, the Erie Water Works has chosen to continue testing for these contaminants on an annual basis.

Source Water

Our water source is exclusively surface water from Lake Erie. We are fortunate to operate two water filtration plants where raw water is treated; the Chestnut Water Treatment Plant and the Richard S. Wasielewski Water Treatment Plant. A Source Water Assessment and Protection (SWAP) program was completed and documented by the Erie Water Works in 2003. This program is a way to identify any sources of potential contamination that could affect the quality of our drinking water. The report indicated that there are no major potential sources of contamination to our source supply from accidental releases into the environment. The summary SWAP report is available online at www.eriewater.org/what-we-do/reports/ or at the offices of the Erie County Health Department.

Contact Information

Erie Water Works
340 West Bayfront Parkway
Erie, PA 16507

If you have questions about this report, please contact Ron Costantini, Senior Manager of Administration, at rcostantini@eriewaterworks.org. Due to the complex nature of water treatment, we prefer questions in writing so they can be directed to the proper individuals to provide the most complete and accurate information about our product and services.

EWW 24 Hour Emergency Phone:
814-870-8087
Personnel are on duty 24/7

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda.

(This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.)

Special Information for Immuno-Compromised Individuals

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/CDC guidelines on appropriate means to lessen the risk of infections by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Information about Lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.

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 Erie Water Works 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>.

Information about Nitrate

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. 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.

Unregulated Contaminant Monitoring Rule 5 (UCMR5)

The Environmental Protection Agency (EPA) requires many water systems throughout the country to test for a list of potential contaminants that the federal government may regulate in future years. The EPA requires many water systems throughout the country to test for a list of potential contaminants that the federal government may regulate in future years. The Erie Water Works completed this testing in 2023. Erie Water Works conducted quarterly sampling of both the Wasielewski Treatment Plant and the Chestnut Treatment Plant and tested for 29 per-and polyfluoroalkyl substances (PFAS) as well as Lithium. There were no detections for any of these samples. PFAS are a group of chemicals used in a variety of products from clothing, heat-resistant non-stick cooking surfaces, food packaging and more. These chemicals are a new concern because they do not break down in the environment and have shown to bioaccumulate in fish and wildlife.

Abbreviations and Definitions

EWW: Erie Water Works

PA DEP: Pennsylvania Department of Environmental Protection

PSWID: Public Water Supply ID

CP: Chestnut Water Treatment Plant

WP: Wasielewski Water Treatment Plant

Dist: Distribution Sample

ACC: Alternative Compliance Criteria

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

MCL (Maximum Contaminant Level): the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG as feasible using the best available treatment technology.

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.

MRDL (Maximum Residual Disinfection Level): the highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfection Level Goal): the level of 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.

cm⁻¹: Reciprocal centimeter or wave number; a unit of energy

ntu: Nephelometric turbidity unit: a measure of the clarity of water

ppb: Parts per billion, or micrograms per liter ($\mu\text{g/L}$)

ppq: Parts per quadrillion, pictograms per liter (pictograms/l)

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

ppm: Parts per million, or milligrams per liter (mg/L)

ND: Not Detected

TOC: Total Organic Carbon

SUVA: Specific Ultraviolet Absorbance

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



McKEAN DETECTED SAMPLE RESULTS

Public Water System ID: 6250096

Inorganic Contaminants

Contaminant (Unit of measurement)	Location	Violation Y/N	Level Detected	Range	MCLG	MCL	Source of Contamination
Aluminum (ppb)	WP	Y (2019)	92	ND-290	50-200	200	Erosion of natural deposits; Leaching from rocks and soil
	CP	N	34				
	Dist	Y (2019)	177	64-290			
Barium (ppm)	WP	N	0.019		2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
	CP	N	0.020				
Copper (ppm)	WP	N	0.0071	0.0032 - 0.0110	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
	CP	N	0.0015				
Fluoride (ppm) (a)	WP	N	0.56		2	2	Erosion of natural deposits; water additive which promotes stronger teeth; discharge from fertilizer and aluminum factories
	CP	N	0.46				
Manganese (ppb)	WP	N	0.63	ND-2.70	50	50	Erosion of natural deposits; discharge from metal refineries; runoff from agriculture
Nitrate (ppm)	WP	N	0.53		10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Orthophosphate (ppm)	WP	N	0.50	0.20-0.72	(na)	(na)	Water additive used for corrosion control
	CP	N	0.55	0.47-0.63			
	Dist	N	0.75	0.63-1.09			
Sodium (ppm)	WP	N	13	10-15	(na)	(na)	Erosion of natural deposits; wastewater effluent; runoff from road salting
	CP	N	12				
	Dist	N	13	13-14			
Sulfate (ppm)	WP	N	20	19-20	250	(na)	Erosion of natural deposits; Leaching from rocks and soil
	CP	N	20				
Zinc (ppb)	Dist	N	19.0		(na)	(na)	Erosion of natural deposits; Discharge of mining wastes; discharge from metal refineries

Synthetic Organic Compound (SOC)							
Contaminant (Unit of measurement)	Location	Violation Y/N	Level Detected	Range	MCLG	MCL	Source of Contamination
Dioxin [2,3,7,8-TCDD] (ppq)	CP	N	0.52	0.44-0.59	0	30	Emissions from waste incineration and other combustion; Discharge from chemical factories
2,4- D (ppb)	CP	N	0.05	ND-0.139	70	70	Runoff from herbicide used on row crops
Disinfection and Disinfection By Products							
Contaminant (Unit of measurement)	Location	Violation Y/N	Level Detected	Range	MCLG	MCL	Source of Contamination
Haloacetic Acids (ppb) (Highest Running Average)	Dist	N	24.8	12.6-35.8	(na)	60	Byproduct of drinking water disinfection
Total Trihalomethanes (ppb) (Highest Running Average)	WP	N	15.6	8.4-23.4	(na)	80	Byproduct of drinking water disinfection
	CP	N	9.4				
	Dist	N	45.8	20.3-82.1			
Chlorine (ppm) (Highest monthly average)	Dist	N	1.56	0.89-1.56	MRDLG = 4	MRDL= 4	Water additive used to control microbes
Radiological Contaminants							
Contaminant (Unit of measurement)	Location	Violation Y/N	Level Detected	Range	MCLG	MCL	Source of Contamination
Gross Beta (pCi/L) (b)	WP	N	5.8		0	50	Decay of natural and man-made deposits
Microbiological Contaminants							
Turbidity							
Contaminant (Unit of measurement)	MCL	MCLG	Level Detected	Sample Date	Violation Y/N	Sources of Contamination	
Turbidity (CFE) (ntu)	TT= 1 NTU for a single measurement (WP)	0	0.270	3/14/2023	N	Soil runoff	
	TT= 95% of monthly samples < 0.15 NTU (WP)	0	100.0%	March 2023	N	Soil runoff	
	TT= 1 NTU for a single measurement (CP)	0	2.000	9/14/2023	N	Soil runoff	
	TT= 95% of monthly samples < 0.3 NTU (CP)	0	100.0%	September 2023	N	Soil runoff	
Contaminant (Unit of measurement)	Location	Violation Y/N	Level Detected	Range	MCLG	MCL	Source of Contamination
Turbidity (CFE) (ntu)	WP	N	0.021	0.001-0.27	(na)	TT	Soil runoff
	CP	N	0.047	0.021-2.00	(na)		

Entry Point Disinfectant Residual								
Contaminant	Location	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine	WP	0.2	0.49	0.49-1.76	ppm	9/9/2023	N	Water additive used to control microbes
	CP	0.2	0.33	0.33-1.64	ppm	9/13/2023	N	
Lead and Copper Study								
Contaminant	Action Level (AL)		MCLG	90th Percentile Value	Units	# of Sites Above AL of Total Sites	Violation Y/N	Sources of Contamination
Lead	15		0	0.644	ppb	0 of 11	N	Corrosion of household plumbing systems; erosion of natural deposits
Copper	1.3		1.3	0.133	ppm	1 of 11	N	
Microbial								
Contaminant	TT		MCLG	Assessments/ Corrective Actions		Violation Y/N	Sources of Contamination	
Total Coliform Bacteria	Any system that has failed to complete all the required assessments or correct all identified sanitary defects, is in violation of the treatment technique requirement		(na)	See detailed description under "Detected Contaminants Health Effects Language and Corrective Actions" section		N	Naturally present in the environment	
Total Organic Carbon (TOC)								
Contaminant (Unit of measurement)	Location	Violation Y/N	Level Detected	Range	MCLG	MCL	Source of Contamination	
SUVA (ppm)	WP	N	0.98	0.77-1.19	(na)	(na)	Test to determine TOC reactivity	
	CP	N	0.96	0.91-1.02				
DOC (ppm)	WP	N	1.72	1.49-2.10	(na)	(na)	Test to determine TOC reactivity	
	CP	N	1.86	1.64-2.01				
UV254 (cm ⁻¹)	WP	N	0.017	0.014-0.020	(na)	(na)	Test to determine TOC reactivity	
	CP	N	0.018	0.017-0.020				
Contaminant	Range of % Removal Required		Range of Percent Removal achieved		Number of quarters out of compliance		Violation Y/N	Sources of Contamination
TOC	25% (CP only)		22.4 - 30.3%		0		N	Naturally present in the environment
			ACC used when below 25%		SUVA			

(a) EPA's MCL for fluoride is 4 ppm. However, Pennsylvania has set a lower MCL to better protect human health.

(b) EPA considers 50 pCi/L to be the level of concern for beta particles.

(na) Not Applicable

Detected Contaminants Health Effects Language and Corrective Actions

Total Coliform: Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. If coliforms are found, this indicates the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct an evaluation to identify and correct any problems that were found. Only 4 of the 1,807 samples collected throughout 2023 were found to be positive for Total Coliform bacteria and all follow up check samples were negative with no problems identified in the evaluation of the system.

Violations: As demonstrated in our Test Results Tables, the Erie Water Works did not receive any violations as a result of our water quality in 2023. We did receive a minor reporting violation issued by the Pennsylvania Department of Environmental Protection. It is important to note that the quality and safety of the drinking water was never in question.

On August 7, 2023, a turbidimeter on an Individual Filter Effluent (IFE) malfunctioned and was reading unreliably low for about 7 hours overnight. 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 August 7, 2023, we did not complete all monitoring on the IFE turbidity and therefore cannot be sure of the quality of your drinking water during that time. This was a self-reported event and readings on the Combined Filter Effluent (CFE) turbidimeter were never out of compliance however, since the IFE turbidimeter was malfunctioning it was considered a failure to continuously monitor. The turbidimeter was taken offline and fixed immediately upon discovery.



Educational Information

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 human activity. 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 stormwater run-off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater run-off, 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 stormwater run-off, and septic systems.
- 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 and PA DEP prescribes regulations which limit the amount of certain contaminants in water provided by public water systems.

Drinking water may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the 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 (800-426-4791).

Top Customer Questions



Why is my water cloudy?

Water that is cloudy or white in appearance is usually caused by an abundance of air. Cold water holds more air in solution than warm water. The best thing to do is let it sit in an open container until the bubbles naturally dissipate.



Why does my water sometimes smell like a swimming pool?

The Erie Water Works utilizes Sodium Hypochlorite in the treatment process to kill bacteria and waterborne organisms in order to keep the water safe. This disinfectant is what occasionally gives tap water the chlorine or pool water taste and smell. To reduce the chlorine taste and smell, place water in a glass container uncovered in the refrigerator overnight to dissipate the chlorine, removing most of the taste, but also the disinfectant that kills bacteria growth. Discard any unused water after a few days.

What could cause my water to have an earthy flavor sometimes?

Seasonal algae blooms in Lake Erie and changing weather conditions can cause earthy or musty tastes and odors. These natural compounds have no known health effects. We take steps to reduce their presence when detected.

How hard is Erie Water Works water?

Water from Lake Erie is considered to be moderately hard to hard, with levels ranging from 110-130 ppm.

Water Hardness Scale

Grains/Gal	mg/L & ppm	Classification
Less than 1	Less than 17.1	Soft
1 - 3.5	17.1 - 60	Slightly Hard
3.5 - 7	60 - 120	Moderately Hard
7 - 10	120 - 180	Hard
over 10	over 180	Very Hard

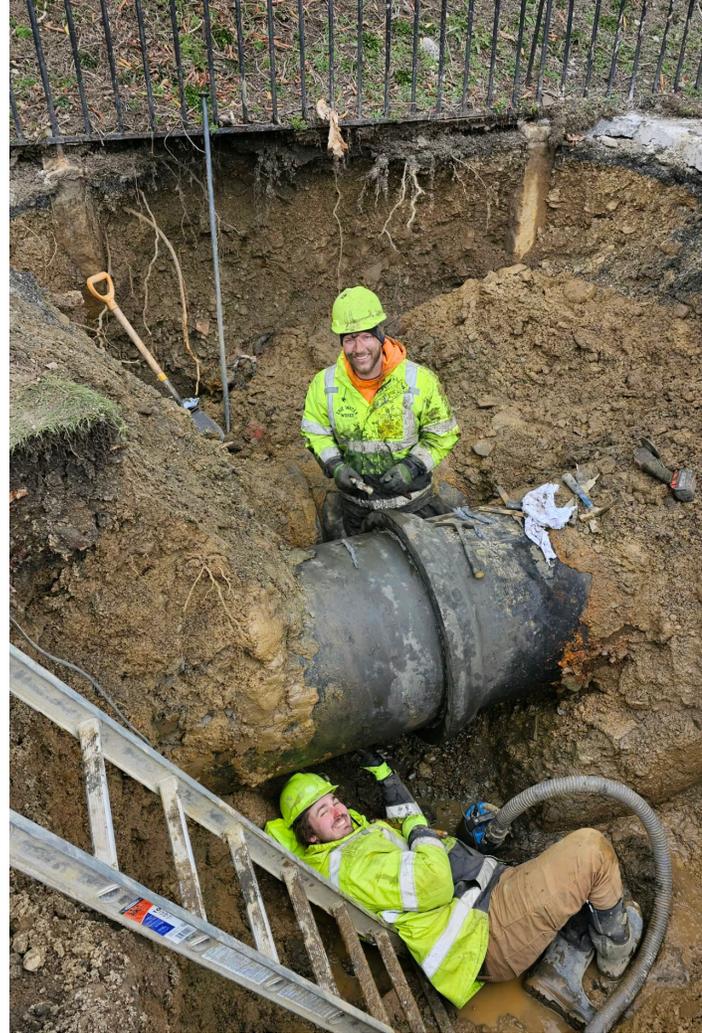
Can I get my water tested by Erie Water Works?

If you have concerns about your water, contact our water quality professionals at laboratory@eriewaterworks.org



World-Class Water,
First-Class Service

eriewater.org



Erie Water Works Mission Statement

“To guarantee a continuous, uninterrupted, reasonably priced supply of quality water to its customers which assures public health while promoting regional stability and future development.”