

ERIE WATER WORKS (EWW) Water Quality Report For Year 2010

PWSID 6250028

SERVING THE CITY OF ERIE, LAWRENCE PARK, WESLEYVILLE, HARBORCREEK, McKEAN AND PORTIONS OF MILLCREEK AND SUMMIT TOWNSHIPS.



Dear Valued Customer of the Erie Water Works:

Thank you for taking a moment to review the Erie Water Works 2010 Consumer Confidence Report. In this report you will find very important information about the water provided to you by the Erie Water Works as well as important information about our organization.

At the Erie Water Works, we pride ourselves on providing you with the highest quality water possible by utilizing the most advanced technology and treatment methods currently available. This ongoing commitment to quality is shared by the board of directors, management and staff of the Erie Water Works. The result is a product that meets or exceeds all Federal, State and Local water quality requirements, while remaining one of the lowest priced water supplies in Pennsylvania.

Thank you for your interest in your water supply and the Erie Water Works. I'm confident that after reviewing the information contained in this report, you will agree that the water delivered directly to you is of the highest quality possible and one of the best values in town!

Sincerely,
Paul D. Vojtek | Chief Executive Officer

THIS REPORT IS ALSO INCLUDED ON EWW'S INFORMATIVE WEB SITE AT WWW.ERIEWATER.ORG, ALONG WITH ADDITIONAL INFORMATION.

Special Information for Immuno-Compromised Individuals

While our water is safe for the vast majority of our customers, some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as those 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 of infections. These people should seek advice from their health care providers. Guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the **Safe Drinking Water Hotline 1-800-426-4791.**

Using Water Wisely

Erie Water Works ensures that fresh, clean drinking water is yours to use whenever you need it. Lake Erie provides the City of Erie and surrounding communities with an abundant supply of water. Erie Water Works has sufficient pumping, storage and distribution capacity to meet the water needs for all EWW customers. However, EWW encourages you to use water wisely. Please be a good steward of the environment and prevent water waste. From cleaning your driveway with a broom instead of with a hose, to checking your hose for leaks, there are many simple steps we can all take to preserve our water source.

Log on to www.eriewater.org/our-water/using-water-wisely for more information and water saving tips.

Preventing Drinking Water Contamination

EWW Cross Connection Control Program

"Safe Drinking Water" is federally mandated and regulated by the U.S. Environmental Protection Agency. The Erie Water Works (EWW) is responsible for ensuring overall protection of safe drinking water under all foreseeable circumstances, through its Cross Connection Control Program. In turn, it is the consumers' responsibility to ensure that no contaminated water is able to flow from their internal plumbing system and into the EWW water distribution system through a reversal of the normal direction of flow. This is best accomplished by installing and maintaining a backflow prevention assembly. Within the EWW system, all commercial, industrial, apartment complexes (three or more rental units served by one water connection) and any residence with an identifiable hazard (such as a lawn irrigation system, swimming pool, etc.) are required to install and maintain a backflow prevention assembly. Residential dwellings without an identifiable hazard require dual check valves for new or modified water service lines or plumbing. For more information on Cross Connection Control, please email backflowprevention@eriewaterworks.org or call the Engineering Department at (814) 870-8000 ext. 205.

The EWW constantly monitors the raw water supply for various contaminants. We routinely monitor for Cryptosporidium and Giardia in our source water. We have analyzed 10 source water samples during the year 2010. No Active Cryptosporidium was found in any sample during 2010, and we did not find any active Giardia organism the entire year. We believe it is important for you to know that Cryptosporidium may cause serious illness in immuno-compromised people, such as those with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders. These individuals should seek advice from their health care providers.

We are pleased to present to you our **Water Quality Report for the Year 2010**. The objective of this report is to inform you about the water quality and related services the Erie Water Works provides to you every day. The mission of the EWW is 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. We want you to know the EWW works continuously to improve the water treatment process. We are committed to ensuring the production and distribution of high quality water. The EWW raw water supply is obtained exclusively from Lake Erie. We are fortunate to operate two (2) separate raw water intake lines that serve two (2) complete

Richard S. Wasielewski Water Treatment Plant – Membrane Filtration Retrofit and Improvement Project

The Richard S. Wasielewski Water Treatment Plant – Membrane Filtration Retrofit and Improvement Project will upgrade aging infrastructure first constructed in 1932. The project will replace the existing "conventional" rapid-sand filtration process with Ultrafiltration (UF) membranes. The UF membranes will provide a physical barrier to turbidity and pathogens. The cutting edge treatment technology will position EWW well to exceed current and anticipated future regulations. Other improvements such as finished water clear well expansion and a new sodium hypochlorite disinfection system will enable EWW to cost effectively enhance treatment which will result in improved water quality to its customers. The project is well aligned with EWW's mission statement. Construction began in March 2011 and is scheduled to be substantially complete in June 2012. Four local contractors were awarded contracts totaling over \$27 million.



Este informe contiene información importante perteneciente a la calidad del agua potable en su comunidad. Por favor, tradúzcalo o busque ayuda de alguien que le pueda explicar su contenido.

Have Questions? We Have Answers.

If you have any questions about this report, please contact **Aaron Stankiewicz**, EWW Human Resources Manager, at 814-870-8000. The complex nature of water treatment sometimes makes it very difficult to provide an accurate response without first gathering factual information. We prefer your questions be in writing so they can be directed to the proper individual(s). We want our valued customers to be fully informed about our product and services. **We encourage you to attend any of our regularly scheduled Board meetings. They are open to the public and are held on the third Thursday of every month at 3:00 PM at the Administration Building.**

Reverse 9-1-1 Can Notify you in an Emergency ... Help Us Help YOU - Please Update Your Information Today!

The Emergency Notification Call-Out System can deliver emergency messages to every landline in Erie County, PA; however, cell phones, TTY/TDD, and Internet phone service require registration. Please visit our website at www.eriewater.org today to make sure our records include your most accurate and useful information. Our website also offers easy-to-use instructions on how to update your information so you can be notified of a water related emergency, water disruption or other emergency that may impact your home.

water filtration plants and pumping stations. Both of these plants are directly connected to a complex and ever expanding network of distribution lines that supply high quality finished water to all of the EWW 52,000 customers. The older of our two facilities, the Chestnut Street plant, has an intake that is 60 inches in diameter and extends 17,641 feet into Lake Erie (5,100 feet past Presque Isle), and terminates at an intake crib submerged under 25 feet of water. Our newer facility, the Richard S. Wasielewski plant, has an intake that is 72 inches in diameter and 8,745 feet in length. This line also extends into Lake Erie and terminates at another intake crib submerged under 25 feet of water.

Jordan to Koehler "J2K" Water Main Extension Project

The J2K project will extend a 12-inch water line 14,000 feet through Harborcreek, Greene, and Millcreek Township to increase water pressure to 600 existing EWW customers located in southeast Millcreek. The project will provide substantial and immediate benefit to over 1,400 people in Erie County. The project will greatly improve fire protection and pressure to existing customers and allow for development to occur in an area where it had been prohibited as high pressure water was unavailable. Public fire protection will be provided for through the installation of 14 fire hydrants along the project route.

The project will introduce a safe and reliable water supply to Greene Township. It will also mark the first time that Greene Township will have access to public fire hydrants and an ample supply of water to fill their tanker trucks in order to extinguish fires. Township and Fire Officials are excited that efficiencies will result as they will no longer have to fill trucks from ponds which may or may not have enough water at any given time and could be frozen during the winter months.

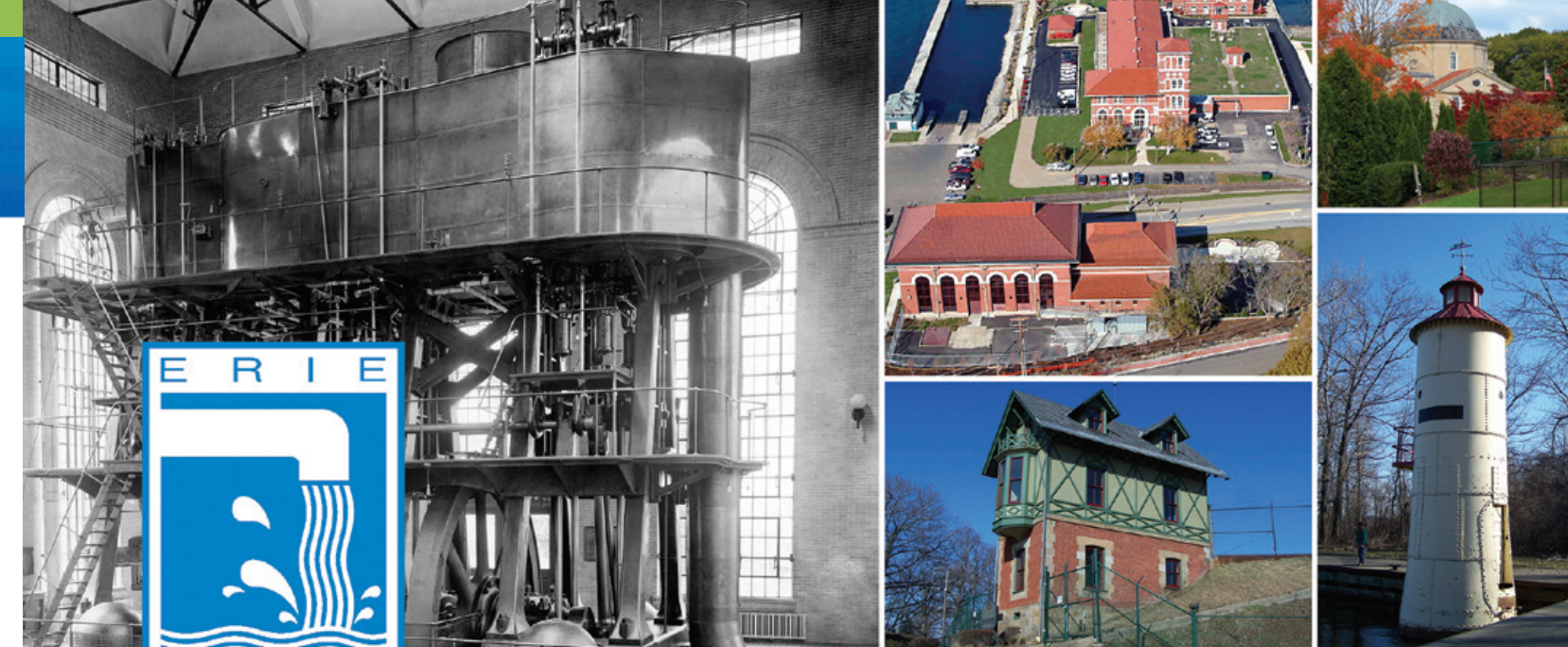
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Phone: 814-870-8000

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Abbreviations and Definitions

In the table you will find many terms and abbreviations with which you may not be familiar. To help you better understand these terms we've provided the following definitions:

EWV	Erie Water Works	AL	Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
PADEP	Pennsylvania Department of Environmental Protection	CP	Chestnut Plant
WP	Wasielowski Plant	ND	Non-Detects - laboratory analysis indicates that the contaminant is not present at a detectable level.
ppm	Parts per million or Milligrams per liter - one part per million corresponds to one minute in two years or a single penny in \$10,000.	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's as feasible using the best available treatment technology.
mg/l	A part per million and a milligram per liter are equal.	MCLG	Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
ppb	Parts per billion - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.	MRDLG	Maximum Residual Disinfection Level Goal
pCi/l	Picocuries per liter - A measure of radioactivity in water.	Y/N	Yes/No
ntu	Nephelometric Turbidity Unit - A measure of the clarity of water. Turbidity in excess of 5 ntu's is just noticeable to the average person.		

What does all this information mean?

As you see from the Test Results Table, the EWW DID NOT HAVE ANY VIOLATIONS FOR EXCESS CONTAMINANTS IN ITS DRINKING WATER DURING YEAR 2010

The Erie Water Works was required to report problems with the drinking water in September of 2010. A main break in the Belle Road area caused a large number of customers to experience no water service for a few hours. Since there was only a single direction feed to the customers, a "boil water" notice was issued for a day. The main was repaired and 2 days of bacteria samples indicated that there was no problem with the water quality. As required the affected customers and the Erie County Health Department were notified.

Total Coliform: The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television, radio or emergency notification by phone. To comply with the stricter regulation, we have adjusted the average amount of chlorine in the distribution system. Using 2010 data, no sample in over 1,400 collected contained Total Coliform Bacteria.

Nitrates: As a precaution, the EWW will notify physicians and health care providers in this area if there is ever a high level of nitrates in our water supply.

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

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Contaminant (Unit of measurement)	Location	Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria	Distribution	N	ND	ND in 1457 samples	0	Presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment
Fecal Coliform and <i>E.coli</i>		N	ND	ND in 1457 samples	0	A routine sample and repeat sample are total coliform positive, one is also fecal coliform or <i>E.coli</i> positive	Human and animal fecal waste
Turbidity (ntu)	CP	N	(b)	(b)	N/A	TT	Soil runoff
	WP		0.134	0.06 - 0.41	N/A		
Giardia (cysts/l)	Lake Erie	N	ND	ND in 10 samples	0	Surface Water Treatment = TT	Naturally present in the environment
Cryptosporidium (cysts/l)	Lake Erie		ND	ND in 10 samples			

Inorganic Contaminants

Arsenic (ppb)	Plant	N	0.53	0 - 3.4	0	10	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
	Distribution	N	ND	ND in 52 samples	0	10	
Barium (ppm)	Plant	N	0.021	(b)	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
	WP	N	0.0002	ND - 0.0029	1.3	AL = 1.3	
Copper (ppm)	Distribution	N	0.0500	ND - 0.52	2	2	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
	CP	N	(b)	(b)			
Fluoride (ppm)	WP		N	0.98	0.15 - 1.38	2	2
	Distribution	0.98		0.39 - 1.81			
Lead (ppb)	Plant	N	ND	ND in 12 samples	0	AL = 15	Corrosion of household plumbing systems; erosion of natural deposits
	Distribution	N	0.5	ND - 16.0	0	AL = 15	
Nitrate (as Nitrogen) (ppm)	CP	N	(b)	(b)	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
	WP		0.17	0.05 - .29			

Disinfection and Disinfection By Products

TTHM (ppb) Total trihalomethanes		N	39.1	12.2 - 98.2	0	80	By-product of drinking water chlorination
HAA (ppb) Haloacetic Acids		N	15.9	0.9 - 40.1	0	60	By-product of drinking water chlorination
Chlorine (ppm)	CP	N	(b)	(b)	MRDLG = 4	MRDLG = 4	Water additive used to control microbes
	WP	N	1.21	1.03 - 1.49			
	Distribution	N	1.03	0.02 - 2.7			
Total Organic Carbon (ppm)	WP	N	1.99	1.6 - 2.5	TT	TT	Naturally present in the environment

Radiological contaminants, Synthetic Organic Contaminants and Volatile Organic Contaminants: Non Detected

Footnotes: (a) Only one sample required. (b) Chestnut Plant not in service in 2010.

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 www.epa.gov/safewater/lead."

Pharmaceuticals: The Erie Water Works voluntarily tested the drinking water supply in 2010 for pharmaceuticals and personal care products. Like the majority of the water systems in the United States, the EWW found trace amounts of a few pharmaceuticals.

The concentration of these compounds was just above the detection limit and both the EPA and the PADEP believe that there is no cause for alarm. The fourteen pharmaceuticals found in the EWW drinking water were: Atrazine (herbicide), Acesulfame-K (artificial sweetener), DEET (insect repellent), DACT (herbicide), Simazine (herbicide), DEA (herbicide), Theobromine (metabolite of caffeine), Dehydronifedipine (heart medication), Caffeine (organic stimulant), Ibuprofen (pain medication), Iopromide (contrast medium in brain scans), Quinoline (herbicide), Triclosin (antibacterial agent), and Trimethoprim (urinary antibiotic).

Additional Safety Precautions

Under waivers granted by the PADEP, our system does not need to annually monitor for most contaminants because years of testing have indicated these substances do

not occur in our source water. Although not required by regulation, the EWW chooses to continue annual testing for many of these contaminants.

Source Water Assessment and Protection Program

The Erie Water Works has completed and documented a Source Water Assessment and Protection (SWAP) program in 2003. This program has identified any sources of potential contamination that may affect the quality of the drinking water. This program was mandated in 1996 as part of the reauthorized Safe Drinking Water Act (SDWA). A copy of the summary SWAP report is available to view at the Erie Water Works offices or at the offices of the Erie County Health Department. The report indicates that there are no major potential sources of contamination to our source supply from accidental releases into the environment.

System Improvements and Water Rates

In order to maintain a safe and dependable water supply, it is necessary to constantly make improvements to the water system. Because some of the costs associated with system improvements may impact the rate structure, periodic rate adjustments may be necessary to complete some of the improvements. However, the EWW is committed to fiscal responsibility and will establish rates that are both fair and equitable. Since its inception in 1992 as a municipal authority, the Erie Water Works has invested

more than \$152 million for system rehabilitation, upgrades and improvements related to ENHANCING OUR REGION'S WATER SYSTEM. Yet, our rates remain among the least expensive compared to other large metropolitan areas across the Commonwealth of Pennsylvania. If you used the same amount of water in Pittsburgh, you would pay nearly 2.2 times the Erie rate; in Harrisburg, it would be about 1.6 times the Erie rate; and if you were a customer of Pennsylvania-American Water, you would pay about 2.1 times the Erie Water Works rate.

Entry Point Disinfectant Residual Minimum Residual Disinfectant Level – The minimum level of residual disinfectant required at the entry point to the distribution system.

Contaminant	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine	0.2	.43	.43 - 1.06	ppm	11/23/10	N	Water additive to control microbes

Lead and Copper

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	3.2	ppb	1 of 52	N	Corrosion of household plumbing
Copper	1.3	1.3	0.0834	ppm	0 of 51	N	Corrosion of household plumbing

Microbial

Contaminant	MCL	MCLG	Highest # or % of Positive Samples	Violation Y/N	Sources of Contamination
Total Coliform Bacteria	For systems that collect <40 samples/month: More than 1 positive monthly sample For systems that collect 120 samples/month: 5% of monthly samples are positive	0	ND in 1457	N	Naturally present in the environment
Fecal Coliform Bacteria of <i>E.coli</i>	0	0	ND in 1457	N	Human and animal fecal waste

Turbidity

Contaminant	MCL	MCLG	Level Detected	Sample Date	Violation Y/N	Sources of Contamination
Turbidity	TT= 1 NTU for a single measuerment	0	.42	8/11/10	N	Soil runoff
	TT= at least 95% of monthly samples <0.3 NTU	0	100%	2010	N	

Total Organic Carbons (TOC) Alternative Compliance Criteria Used in 2010

Contaminant	Range of % Removal Required	Range of % Removal Achieved	# of Quarters Out of Compliance	Violation Y/N	Sources of Contamination
TOC	15-25%	3.8 to 34.3%	1	N	Naturally present in the environment