2020 WATER QUALITY REPORT

# WATER QUALITY REPORT FOR THE YEAR 2020

PWSID 6250096

Serving McKean Township and McKean Borough

Dear Valued Customers of the Erie Water Works,

It's impossible to look back at 2020 without devoting our attention to COVID-19, the world-wide pandemic that still impacts our daily lives in ways most of us never imagined. What began with the cancelation of the annual Saint Patrick's Day Parade snowballed into school and business closures, an interruption of all construction projects, and a blanket "stay-at-home" order.

The water industry provides an essential service to businesses and residents in the communities they serve. Clean, safe, reliable water service is critical to public health. When the pandemic hit, the Erie Water Works immediately took the necessary precautions to keep our employees safe by following the guidance issued by the CDC and the PA Department of Health. Employees continued to perform their daily duties to ensure safe and reliable water was delivered to the 220,000 people the Erie Water Works serves in Northwest Pennsylvania. I could not be more proud of the tenacious dedication of all 115 employees during a time of true uncertainty.

When 2020 ended, the United States and Erie County were in the midst of a post-holiday spike in cases of COVID-19. However, as we enter the second quarter of 2021, the situation doesn't seem nearly as bleak. The vaccine rollout continues and many of our employees are fully vaccinated. Experts are predicting a level of normalcy by late-summer, and I for one, hope they're correct. One thing is certain, the Erie Water Works will continue its mission "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."

Sincerely,

Paul D. Vojtek
Chief Executive Officer / Chief Financial Officer
*"World-Class Water, First-Class Service"*

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 for 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).

## Monitoring Your Water

We routinely monitor for contaminants in your drinking water according to federal and state laws. The following tables show the results of our monitoring for the period of January 1 to December 31, 2020. The Commonwealth 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.

## Abbreviations and Definitions

Throughout this document you may find some abbreviations that are not familiar to you. To help you understand these terms we've provided the following definitions:

| | |
|---|---|
| **EWW** | Erie Water Works |
| **PA DEP** | Pennsylvania Department of Environmental Protection |
| **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 addition of a disinfectant is necessary for control of microbial contaminants. |
| **MRDLG** | Maximum Residual Disinfection Level Goal: the level of a 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 (µg/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 |
| **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 | 0.021 | | 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 | 0.48 | | 2 | 2 | Erosion of natural deposits; water additive which promotes stronger teeth; discharge from fertilizer and aluminum factories |
| | CP | N | 0.52 | | | | |
| **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 | 0.31 | ND - 0.62 | 10 | 10 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| **Orthophosphate (ppm)** | WP | N | 0.46 | 0.29-0.66 | (na) | (na) | Water additive used for corrosion control |
| | CP | N | 0.37 | 0.21-0.46 | | | |
| | Dist | N | 0.63 | 0.52-0.74 | | | |
| **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 |
|---|---|---|---|---|---|---|---|
| **2,4- D (ppb)** | CP | N | 0.04 | ND-0.118 | 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 | 25.6 | 15.3-32.0 | (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 | 56.0 | 29.2-94.0 | | | |
| **Chlorine (ppm) (Highest monthly average)** | Dist | N | 1.36 | 0.68-1.36 | 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 | MCL | MCLG | Level Detected | Sample Date | Violation Y/N | Sources of Contamination |
|---|---|---|---|---|---|---|
| **Turbidity (CFE) (ntu)** | TT= 1 NTU for a single measurement (WP) | 0 | 0.224 | 4/6/2020 | N | Soil runoff |
| | TT= 95% of monthly samples < 0.3 NTU (WP) | 0 | 100.0% | April 2020 | N | Soil runoff |
| | TT= 1 NTU for a single measurement (CP) | 0 | 0.229 | 9/10/2020 | N | Soil runoff |
| | TT= 95% of monthly samples < 0.3 NTU (CP) | 0 | 100.0% | September 2020 | N | Soil runoff |

| Contaminant (Unit of measurement) | Location | Violation Y/N | Level Detected | Range | MCLG | MCL | Source of Contamination |
|---|---|---|---|---|---|---|---|
| **Turbidity (CFE) (ntu)** | WP | N | 0.017 | 0.010-0.224 | (na) | TT | Soil runoff |
| | CP | N | 0.034 | 0.002-0.229 | (na) | | |

## Entry Point Disinfectant Residual

| Contaminant | Location | Minimum Disinfectant | Lowest Level | Range of Detections | Units | Sample Date | Violation Y/N | Sources of Contamination |
|---|---|---|---|---|---|---|---|---|
| Chlorine | WP | 0.2 | 0.67 | 0.67-1.75 | ppm | 9/11/2020 | N | Water additive used to control microbes |
| | CP | 0.2 | 0.16 | 0.16-1.99 | ppm | 9/15/2020 | 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 | 1.45 | ppb | 0 of 10 | N | Corrosion of household plumbing systems; erosion of natural deposits |
| Copper | 1.3 | 1.3 | 0.146 | ppm | 0 of 10 | 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 | 0.9 | 0.6-1.4 | (na) | (na) | Test to determine TOC reactivity |
| | CP | N | 1.0 | 0.9-1.1 | | | |
| DOC (ppm) | WP | N | 1.85 | 1.40-2.20 | (na) | (na) | Test to determine TOC reactivity |
| | CP | N | 1.55 | 1.36-1.80 | | | |
| UV254 ($cm^{-1}$) | WP | N | 0.017 | 0.011-0.026 | (na) | (na) | Test to determine TOC reactivity |
| | CP | N | 0.015 | 0.012-0.018 | | | |

| 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) | 25.0 - 30.4% | 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 system. When this occurs, we are required to conduct an evaluation to identify any problems and take corrective action. Of the 36 samples collected throughout 2020 none of them were found to be positive for Total Coliform bacteria.

## 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 DEP prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA and DEP regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that 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).

## Source of 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 Street 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.

## Educational Information: Continued

### 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 4 (UCMR4)

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 Erie Water Works concluded testing in 2020 for this round of sampling.

### Pharmaceuticals and Personal Care Products

There is not an official list of pharmaceuticals or personal care products that are required to be tested for by regulation in the drinking water. The Erie Water Works tested for 57 of the most common potential contaminants in 2020. Like most drinking water systems in the country, we found a few present at very low concentrations (parts per trillion, or nanograms per liter) that the EPA and PA DEP do not consider to be of concern to human health. The list of contaminants that were found in low concentration include: acesulfame-K (artificial sweetener), cotinine (metabolite of nicotine), DEET (insect repellent), sulfamethoxazole (antibiotic), Gemfibrozil (cholesterol medication), sucralose (artificial sweetener), and TCPP (flame retardant).

## Have Questions?

If you have any questions about this report, please contact Ron Costantini, EWW Manager of Administration, at 814-870-8000, ext. 306. Due to the complex nature of water treatment, sometimes it is very difficult to provide an accurate response without first gathering factual information. For that reason, we prefer questions be 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**

### Customer Notification System

REGISTER TODAY @ https://ErieWaterWorks.OnTheAlert.com
Help us help YOU by updating your information today!

The EWW Customer Notification System can deliver important messages to every landline in Erie County, PA, however, cell phones, TTY/TDD, and Internet phone service require registration. Please register today to make sure our records include your most accurate information.