

# ANNUAL WATER QUALITY REPORT

Reporting Year 2024



***Presented By***  
**City of Dunkirk**

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Ce rapport contient des informations importantes sur votre eau potable. Traduisez le ou parlez en avec quelqu'un qui le comprend bien.

PWS ID#: NY0600360



## Introduction

To comply with State regulations, the City of Dunkirk will be annually issuing a 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 most State drinking water health standards. In 2024, we detected coliform bacteria in one routine water sample. Further information on this can be found in the “What does this information mean?” section of this report. We also did not meet all monitoring and reporting requirements. More information on this is detailed in the “Is Our Water System Meeting Other Rules That Govern Operations?” section of this report.

This report provides an overview of all 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. If you have any questions about this report or concerning your drinking water, please contact Emily Dillenburg, Laboratory Director, at (716) 366-2955. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled City board meetings. The meetings are held the first and third Tuesday of each month, beginning at 5:30pm at City Hall, 342 Central Avenue, Dunkirk, New York.

## Where Does Our Water Come From?

The City of Dunkirk’s water customers are fortunate because we enjoy an abundant water supply from Lake Erie. Strict international laws ensure the lake will continue to be a source of high-quality water in Western New York. In general, 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 EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department’s and the FDA’s regulations establish limits for contaminants in bottled water which must provide the same protection for public health.


The New York State Department of Health has evaluated Lake Erie’s susceptibility to contamination under the Source Water Assessment Program (SWAP). Their findings are summarized in the paragraph below. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. It does not indicate that any contamination has or will occur. This water supply provides treatment and regular monitoring to ensure that the water that is delivered to consumers meets all applicable standards.

This assessment found an elevated susceptibility to contamination. The amount of pasture in the assessment area results in a high potential for protozoa contamination. There is also a high density of sanitary wastewater discharges in the watershed, which results in elevated susceptibility for nearly all contaminant categories. However, the total amount of wastewater discharged to surface water is not high enough to considerably raise the potential for contamination. There are no noteworthy contamination threats associated with other discrete contaminant sources.

## Water Treatment Process

The treatment process consists of a series of steps. First, raw water flows by gravity through a 36-inch pipe located approximately one mile out in the lake. Second, low lift pumps move the water through a pre-chlorination process and to our chemical building, where a coagulant, polyaluminum chloride, is added at the rapid mix. The coagulant causes dirt, clay, bacteria and organic material in the water to adhere together into floc. From the rapid mix, the water moves to flocculation chambers, where large paddles slowly mix the water, allowing the floc particles to grow bigger. The water then flows to the sedimentation basins, where the majority of the floc settles to the bottom to be removed later. From here, water flows into the filter beds, where it passes through layers of Granular Activated Carbon media and sand to trap the remaining floc particles. The filtered water travels to the clear well, where the water is given final chlorination to maintain chlorine residual in the distribution system. Finally, high-lift pumps move the water from the clear well out into the distribution system to storage tanks and to our customers.

## Facts And Figures



Our water system serves approximately 12,743 customers through approximately 5,557 service connections. The total amount of water produced in 2024 was 982,672,000 gallons. The daily average of water treated and pumped into the distribution system was 2.685-million gallons per day. Approximately 79.89% of the total was billed directly to consumers.

The balance or unaccounted water was used for firefighting purposes, street sweeping, sewer cleaning, hydrant flushing and distribution system leaks. Effective March 2024, water customers in the City of Dunkirk will pay on average \$689 annually for their water (based on EPA’s average family of four quarterly usage of 36,000 gallons).

## Are There Contaminants In Our Drinking Water

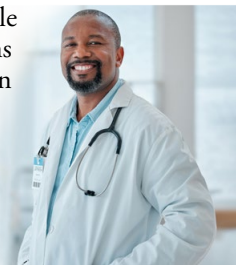
As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: Haloacetic acids, total coliform bacteria, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, PFOA/PFOS, and synthetic organic compounds including pesticides and herbicides. The table presented below depicts 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, are more than one year old.

From April 2023 to January 2024, we were required to collect drinking water samples (finished water being supplied to customers) for the analysis of unregulated contaminants for the EPA Unregulated Contaminant Monitoring Regulation (UCMR). The contaminants tested for included Lithium and 29 per- and polyfluoroalkyl substances (PFAS). PFAS are a group of synthetic chemicals used in many products, including non-stick cookware, cosmetics, firefighting foams, and products that resist grease, water, and oil. PFAS are also found in the blood of people and animals, as well as in soil, water, air and fish at locations throughout the United States and the world. Lithium is a naturally occurring metal used as pharmaceuticals and in batteries, and may also concentrate in brine water. These unregulated contaminants were not detected in our finished drinking water.

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 the 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 Chautauqua County Health Department (716-753-4481).

### 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).



## Why Save Water And How To Avoid Wasting It?

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:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- 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 one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.
- 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.

### 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 2024, our system was in compliance with all applicable State drinking water operating requirements, but not all monitoring and reporting requirements. We failed to report results for Total polychlorinated biphenyls on time, although the water was analyzed for this contaminant at that time. We failed to monitor for 2,3,7,8-TCDD (Dioxin) in 2024, therefore, we cannot be sure of the quality of your drinking water for this contaminants during that time. We have received and reported the results for both the Total polychlorinated biphenyls and have sampled for 2,3,7,8-TCDD (Dioxin) in 2025, and neither of these contaminants were detected in our water.



DETECTED CONTAMINANTS							
CONTAMINANT	VIOLATION	DATE OF SAMPLE	LEVEL DETECTED	UNIT MEASUREMENT	REGULATORY LIMIT (MCL/AL)	MCLG	LIKELY SOURCE OF CONTAMINATION
Microbiological Contaminants							
Turbidity <sup>1</sup>	No	11/03/24	0.130 NTU	NTU	TT= <1.0 NTU	N/A	Soil Run-off
Turbidity <sup>1</sup>	No	November (2024)	100%<0.3	NTU	TT= 95% of samples <0.3NTU	N/A	Soil Run-off
Distribution Turbidity <sup>2</sup>	No	Jan. (2024)	0.21	NTU	MCL>5 NTU	N/A	Soil Run-off
Total Coliform <sup>3</sup>	No	09/2024	1 positive sample	N/A	TT= 2 or more TC positive samples in the same month	N/A	Naturally present in the environment.
Inorganic Contaminants							
Lead <sup>4</sup>	No	6/13/22-8/5/22	6.1; Range=ND-15.3	µg/L	10 µg/L (AL)	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper <sup>5</sup>	No	6/13/22-8/5/22	0.0803; Range=0.002-0.131	mg/L	1.3 mg/L (AL)	1.3 mg/L	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Barium	No	05/15/24	0.021	mg/L	2.0 mg/L (MCL)	2.0 mg/L	Discharge of drilling wastes; discharge from metal refineries; erosion or natural deposits
Nickel	No	05/15/24	1.0	µg/L	N/A	N/A	Nickel enters groundwater and surface water by dissolution of rocks and soils, from atmospheric fallout, from biological decays and from waste disposal.
Nitrate (as Nitrogen)	No	05/15/24	0.319	mg/L	10 mg/L (MCL)	N/A	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Stage 2 Disinfection Byproducts (Dunkirk Senior Center)							
Haloacetic Acids	No	Quarterly (2024)	Avg.=6.8 Range=6.2-7.5	µg/L	60 µg/L (MCL)	N/A	By-products of drinking water chlorination.
Trihalomethanes	No	Quarterly (2024)	Avg.=24.9 Range=11.3-42.7	µg/L	80 µg/L (MCL)	N/A	By-products of drinking water chlorination. TTHM's are formed when source water contains large amounts of organic matter.
Stage 2 Disinfection Byproducts (344 Hoyt Street)							
Haloacetic Acids	No	Quarterly (2024)	Avg.=8.6 Range=5.8-15.4	µg/L	60 µg/L (MCL)	N/A	By-products of drinking water chlorination.
Trihalomethanes	No	Quarterly (2024)	Avg.=25.6 Range=10.3-39.8	µg/L	80 µg/L (MCL)	N/A	By-products of drinking water chlorination. TTHM's are formed when source water contains large amounts of organic matter.
Synthetic Organic Contaminants Including Pesticides And Herbicides							
Perfluorooctane-sulfonic acid (PFOS)	No	05/15/24	0.63	ng/L	10 ng/L (MCL)	N/A	Released into the environment from commercial and industrial sources and is associated with inactive and hazardous waste sites.
Perfluorooctano-ic acid (PFOA)	No	05/15/24	1.0	ng/L	10 ng/L (MCL)	N/A	
1,4-Dioxane	No	05/15/24	0.0525	µg/L	10 ng/L (MCL)	N/A	
Disinfectant							
Chlorine residual	No	Daily (2024)	Avg.=1.03 Range=0.91-1.26	mg/L	4.0 ng/L (MCL)	N/A	Water additive used to control microbes.



ORIGINAL UNITS	MULTIPLY BY	FINAL UNITS
mg/L (ppm)	1,000	µg/L (ppb)
mg/L (ppm)	1,000,000	ng/L (ppt)

<sup>1</sup>Turbidity is a measure of the cloudiness of the water. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system. Our highest single turbidity measurement for the year occurred on 11/03/24 (0.130 NTU). State regulations require that turbidity must always be less than or equal to 1.0 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. Although we recorded our highest combined turbidity reading in the month of November, at no time within the calendar year did we exceed the 0.3 NTU turbidity limit. All readings recorded were in the acceptable range allowed and did not constitute a treatment technique violation.

<sup>2</sup> Distribution Turbidity is a measurement of the cloudiness of the water found in the distribution system. We monitor distribution turbidity because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants. Our highest average monthly distribution turbidity measurement detected during the year 2024 was 0.21 NTU and occurred in the month of January. This value is below the State's maximum contaminant level of 5 NTU.

<sup>3</sup> Although we had one positive sample for Total Coliform, this result was not a violation because our public water system (PWS) did not have 2 or more Total Coliform positive routine/repeat samples in the same month. Therefore, this did not trigger a Level 1 assessment. All routine/repeat samples were collected following this positive result and all were found to be negative for Total Coliforms.

<sup>4</sup>The level presented represents the 90th percentile of the 30 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the Lead values detected in your water system. In this case, 30 samples were collected at your water system and the 90th percentile value was calculated to be the 27th value and that value equaled 6.1 µg/l.

<sup>5</sup>The level presented represents the 90th percentile of the 30 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected in your water system. In this case, 30 samples were collected at your water system and the 90th percentile value was calculated to be the 27th value and that value equaled 0.0803 mg/l. The action level for Copper was not exceeded at any of the 30 sampling locations.

## Definitions

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

**Maximum Contaminant Level Goal (MCLG):** 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**.

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

**Maximum Residual Disinfectant Level Goal (MRDLG):** 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 contamination.

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

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

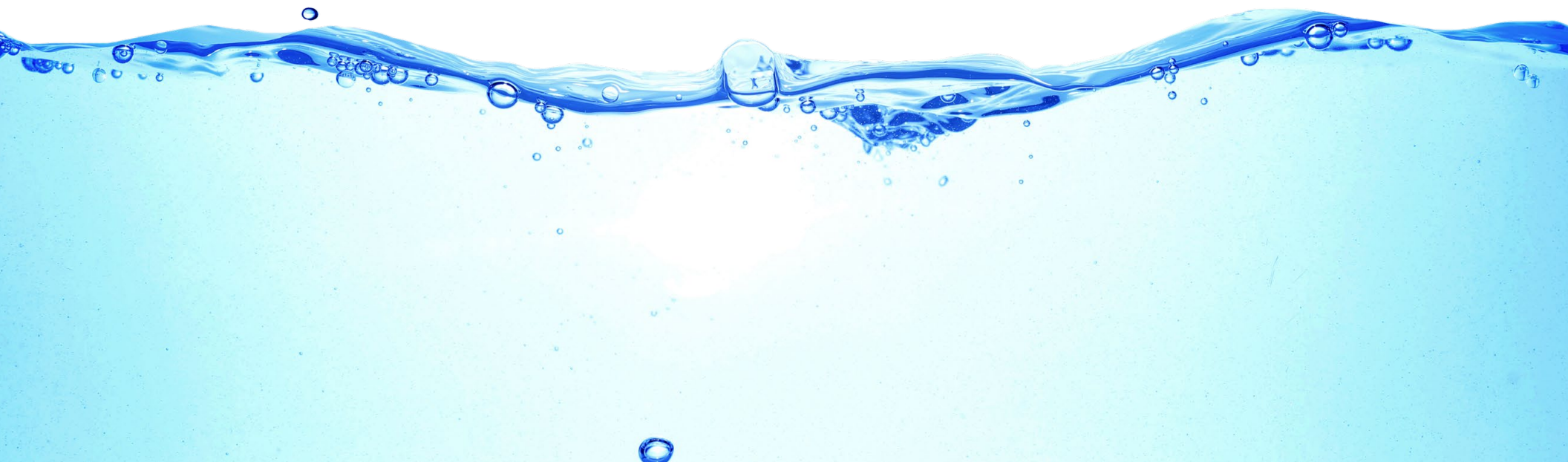
**Non-Detects (ND):** Laboratory analysis indicates that the constituent is not present.

**Nephelometric Turbidity Unit (NTU):** A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**Milligrams per liter (mg/L):** Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

**Micrograms per liter (ug/L):** Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

**Nanograms per liter (ng/L):** Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion-ppt).



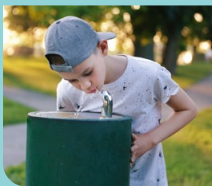
## What Does This Information Mean

As you can see by the table, our system had one positive bacteria sample in 2024. On September 27, 2024, our laboratory determined that a routine water sample tested positive for total coliform bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful waterborne pathogens may be present, or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms, which indicated the need to look for potential problems in water treatment or distribution. Subsequent re-samples were collected at appropriate sampling locations and coliform bacteria was not detected in any of the repeat samples. It should be noted that E. coli, associated with human and animal fecal waste, was not detected in any of the samples collected.

We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State. Lead and copper were detected within the system in 2022 and one of the 30 samples collected was found to be exceeding the action levels. We are required to present the following information on lead in drinking water:

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. The City of Dunkirk is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula.

Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact Emily Dillenburg at the City of Dunkirk Water Treatment Plant at (716)366-2955. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <https://www.epa.gov/safewater/lead>.



## Closing

Thank you for allowing us to continue to provide your family and businesses 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. If you have any questions or concerns regarding your drinking water, please do not hesitate to reach out.

## Information On Lead Service Line Inventory

A Lead Service Line (LSL) is defined as any portion of pipe that is made of lead which connects the water main to the building inlet. An LSL may be owned by the water system, owned by the property owner, or both. The inventory includes both potable and non-potable service lines within a system. The City of Dunkirk is in violation of federal Lead and Copper Rule Revisions (LCRR) requirements for failing to provide a publicly accessible lead service line inventory. The City is required to complete an inventory to be in compliance with state and federal regulations, and will do what is necessary to meet this compliance requirement.



## Improvements And Modifications

During 2024, the City of Dunkirk made the following improvements and modifications:

- Exterior lighting upgraded at High Lift Pump Station.
- Security camera systems installed at Storage Tank and Pump Station.
- 300 new water meters installed.
- 325 ft. of new water piping installed in distribution system.
- 7 service lines replaced on Deer St.
- 10 hydrants replaced.

### Proposed for 2025:

- Repair/upgrade Filter bed #6.
- Install new VFD for High Lift Pump #2.
- Install new Chlorine analyzer equipment at Water Treatment Plant.
- Continue water line replacement projects.
- Install new fencing at Main St. Pump Station.