



CITY OF WILMINGTON

# WATER QUALITY

REPORT 2025



# WATER SERVICE LINE INVENTORY

The City of Wilmington has released an updated Water Service Line Inventory that includes the type of materials contained in each service line in our distribution system. The Service Line Inventory Map is available through our website at [WilmingtonDEWater.gov](http://WilmingtonDEWater.gov) on our [Wilmington Water Lead Reduction Program page](#). In addition to the inventory, answers to common questions can be found on our website or you may call us at **Wilmington 311** or **(302) 576-2620** (outside City limits).

## Key Tables

- 101 Primary parameters are contaminants that are regulated by a maximum contaminant level (MCL), because above this level consumption may adversely affect the health of a consumer.
- 102 MCLG - Maximum Contaminant Level Goal is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow no margin of safety.
- 103 MCL - Maximum Contaminant Level is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available.
- 104 TT - Treatment Technique refers to the required process intended to reduce the level of a contaminant in drinking water. EPA's surface water treatment rules require systems to (1) disinfect their water and (2) filter their water such that the specific contaminant levels cited are met. Lead and copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. Total organic carbon is regulated by a Treatment Technique that requires systems operate with enhanced coagulation or enhanced softening to meet specified percent removals.
- 105 Unless otherwise indicated value given is a MCL.
- 106 The state allows us to monitor 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. If this is the case, the sample year will be noted in the table.
- 107 State limit is to not exceed 2.0 mg/L.
- 108 Collected in 2023.
- 109 Collected in 2015.
- 110 Total Organic Carbon compliance is calculated quarterly based on the running annual average of removal %.
- 111 MRDLG - Maximum Residual Disinfectant Level Goal is the level of drinking water disinfectant below which there is no known or expected health risk. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- 112 MRDL - Maximum Residual Disinfectant Level is 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.
- 113 Cited value is the lowest and/or highest number of routine samples.
- 114 Cited range is the range of all individual results in 2025.
- 115 Cited value is the highest Locational Running Annual Average (LRAA). MCL is based on the LRAA, which is compiled to include data from previous quarters.
- 116 Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether the Agency should consider regulating those contaminants in the future.
- 117 The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.
- 118 The MCL is combined Radium-226 and Radium-228 at 5 pCi/L.
- 119 SMCL - Secondary Maximum Contaminant Level, ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water. ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
- 120 AL - Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.

## HEALTH EFFECTS OF LEAD

If present, 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 City of Wilmington 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.

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. 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 the city of Wilmington Water Quality Laboratory at (302) 571-4158. 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>.



# WATER QUALITY REPORT 2025



To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in public water systems. The EPA requires the City of Wilmington, and all other water suppliers in the U.S., to report annually on specific details about testing for various contaminants in our water. Chemical and biological monitoring provide the data that helps suppliers, such as the City of Wilmington, make key water quality management decisions to ensure freshness and purity. This report, published in the spring of 2026 includes water quality information for the 2025 calendar year.



## SOURCES OF DRINKING WATER

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. The City of Wilmington water is sourced from surface water from Brandywine Creek watershed. 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 activity.

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 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 at **(800) 426-4791**.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 storm water runoff, 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 storm water runoff, 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 storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the customer call center at **(302) 576-2620**.

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 infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline **(800) 426-4791**.

## Source Water Assessment

The Division of Public Health, in conjunction with the Department of Natural Resources and Environmental Control (DNREC), has conducted source water assessments for nearly all community water systems in the state. The assessment may also be viewed at this website: [www.delawaresourcewater.org](http://www.delawaresourcewater.org).

**TABLE 1: WATER QUALITY RESULTS - DETECTED PRIMARY<sup>[1]</sup> PARAMETERS AT ENTRY POINTS TO DISTRIBUTION SYSTEM<sup>[6]</sup>**

| Contaminant   | Units                                 | MCLG <sup>[2]</sup> | MCL <sup>[3]</sup> or TT <sup>[4][5]</sup>                                | Brandywine Filter Plant  |                        |                    | Porter Filter Plant      |                        |                    | Likely Source of Contamination   |
|---|---------------------------------------|---------------------|---|--------------------------|------------------------|--------------------|--------------------------|------------------------|--------------------|--|
|   |                                       |                     |   | Range of Levels Detected | Highest Detected Level | Violation          | Range of Levels Detected | Highest Detected Level | Violation          |  |
| <b>Microbiological Indicators</b>   |                                       |                     |   |                          |                        |                    |                          |                        |                    |  |
| Turbidity - Percentile  | % of samples below 0.3                | N/A                 | 95% of monthly samples must be less than 0.3.                             | 100%                     | 100%                   | No                 | 100%                     | 100%                   | No                 | Soil runoff  |
| Turbidity - Values  | NTU                                   |                     | No sample must ever exceed 1.0.   | 0.020 - 0.117            | 0.117                  | No                 | 0.019 - 0.154            | 0.154                  | No                 | Soil runoff  |
| <b>Inorganic Chemicals (Metals and Nutrients)</b>                           |                                       |                     |   |                          |                        |                    |                          |                        |                    |  |
| Barium  | ppm                                   | 2                   | 2   | 0.0511 - 0.0511          | 0.0511                 | No <sup>[8]</sup>  | 0.0414 - 0.0414          | 0.0414                 | No <sup>[9]</sup>  | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits   |
| Nickel  | ppb                                   | N/A                 | 100   | < 10 - < 10              | < 10                   | No <sup>[8]</sup>  | 2.0 - 2.0                | 2.0                    | No <sup>[9]</sup>  | Discharge from industrial sources; Erosion of natural deposits   |
| Chromium  | ppb                                   | 100                 | 100   | < 10 - < 10              | < 10                   | No <sup>[8]</sup>  | 1.9 - 1.9                | 1.9                    | No <sup>[9]</sup>  | Discharge from steel and pulp mills; Erosion of natural deposits   |
| Fluoride  | ppm                                   | 2                   | Delaware State MCL: 2 ppm <sup>[7]</sup>                                  | 0.19 - 0.93              | 0.93                   | No                 | 0.13 - 1.50              | 1.50                   | No                 | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories  |
| Nitrate   | ppm                                   | 10                  | 10  | 2.1 - 4.3                | 4.3                    | No                 | 1.5 - 5.8                | 5.8                    | No                 | Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits  |
| Nitrite   | ppm                                   | 1                   | 1   | 0.002 - 0.008            | 0.008                  | No                 | 0.002 - 0.005            | 0.005                  | No                 | Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits  |
| <b>Disinfectants</b>  |                                       |                     |   |                          |                        |                    |                          |                        |                    |  |
| Chlorine  | ppm                                   | N/A                 | At least 0.3 residual entering Distribution System.                       | 1.11 - 2.4               | 2.4                    | No                 | 1.38 - 2.8               | 2.8                    | No                 | Water additive used to control microbes.   |
| <b>Disinfection Byproduct Precursors</b>                                    |                                       |                     |   |                          |                        |                    |                          |                        |                    |  |
| Total Organic Carbon  | ppm                                   | N/A                 |   | 0.7605 - 3.3409          | 3.3409                 | N/A                | 0.6225 - 1.6943          | 1.6943                 | N/A                | Naturally present in the environment. Total organic carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection byproducts. |
| Total Organic Carbon  | % Removal (Raw to Treated)            | N/A                 | TOC Removal 25-35% requirement based on source water Alkalinity between   | 27 - 74%                 | 74%                    | No                 | 44 - 73%                 | 73%                    | No                 |  |
| Total Organic Carbon  | Compliance Ratio (rolling annual avg) | N/A                 | Ratio of Actual to Required Removal - must be greater than or equal to 1. | 1.0 - 2.1                | 2.1                    | No <sup>[10]</sup> | 1.0 - 2.5                | 2.5                    | No <sup>[10]</sup> |  |
| <b>Synthetic Organic Chemicals (pesticides, defoliants, fuel additives)</b> |                                       |                     |   |                          |                        |                    |                          |                        |                    |  |
| 2, 4-D  | ug/L                                  | 70                  | 70.00   | 0.13 - 0.13              | 0.13                   | -                  | <0.10<0.10               | <0.10                  | -                  | Runoff from herbicide used on row crops.   |

**TABLE 2: WATER QUALITY RESULTS - DETECTED PRIMARY<sup>[1]</sup> PARAMETERS AT ENTRY POINTS TO DISTRIBUTION SYSTEM**

| Contaminant                       | Units                            | MCLG <sup>[2]</sup>         | MCL <sup>[3]</sup> or TT <sup>[4][5]</sup> | Range of Levels Detected | Highest Detected Level | Violation | Likely Source of Contamination   |
|-----------------------------------|----------------------------------|-----------------------------|--|--------------------------|------------------------|-----------|--|
| <b>Microbiological Indicators</b> |                                  |                             |  |                          |                        |           |  |
| Total Coliform                    | % of samples positive each month | 0%                          | 5.0%                                       | 0 - 2.7%                 | 2.7%                   | No        | Bacteria that are naturally present in the environment. Used as an indicator of the presence of other potentially harmful bacteria.  |
| <b>Disinfectants</b>              |                                  |                             |  |                          |                        |           |  |
| Chlorine                          | ppm                              | MRDLG = 4.0 <sup>[11]</sup> | MRDL = 4.0 <sup>[12]</sup>                 | 0 - 2.05 <sup>[13]</sup> | 2.05                   | No        | Water additive used to control microbes.   |
| <b>Disinfection Byproducts</b>    |                                  |                             |  |                          |                        |           |  |
| Total Trihalomethanes             | ppb                              | No goal for the total       | 80 <sup>[15]</sup>                         | 6 - 85 <sup>[14]</sup>   | 60 <sup>[15]*</sup>    | No        | Byproduct of drinking water disinfection. Forms due to reaction of chlorine with total organic carbon. <b>Health effects:</b> Some people who drink water containing TTHMs in excess of the MCL over many years could experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer. |
| Haloacetic Acids                  | ppb                              | No goal for the total       | 60 <sup>[15]</sup>                         | 10 - 53 <sup>[14]</sup>  | 37 <sup>[15]</sup>     | No        | Byproduct of drinking water disinfection. Forms due to reaction of chlorine with total organic carbon.   |

\*Cited value is the highest Locational Running Annual Average (LRAA). MCL is based on the LRAA, which is compiled to include data from previous quarters.



**TABLE 3: DETECTION OF UNREGULATED CONTAMINANTS<sup>[16]</sup>**

| Chemical or Constituent                    | Units | Average | Range of Levels Detected | Likely Source of Contamination       |
|--|-------|---------|--------------------------|--------------------------------------|
| <b>Per- and Polyfluoroalkyl-Substances</b> |       |         |                          |                                      |
| Perfluorooctanoic Acid (PFOA)*             | ppt   | 5.96    | 4.7 - 9.5                | Industrial discharges                |
| Perfluorooctanesulfonic Acid (PFOS)*       | ppt   | 2.69    | <1.9 - 3.3               | Industrial discharges                |
| PFHxS*                                     | ppt   | <1.92   | <1.9 - <2.0              | Industrial discharges                |
| Perfluorononanoic Acid (PFNA)*             | ppt   | 2.20    | <1.9 - 3.4               | Industrial discharges                |
| HFPO-DA (GenX)*                            | ppt   | <1.92   | <1.9 - <2.0              | Industrial discharges                |
| Perfluorobutanesulfonic Acid (PFBS)*       | ppt   | 2.76    | 2.0 - 3.5                | Industrial discharges                |
| Perfluoroheptanoic Acid (PFHpA)            | ppt   | 2.98    | 2.0 - 6.2                | Industrial discharges                |
| Perfluorohexanoic Acid (PFHxA)             | ppt   | 7.49    | 3.5 - 30.0               | Industrial discharges                |
| <b>Disinfection Byproducts</b>             |       |         |                          |                                      |
| Bromochloroacetic Acid (BCAA)              | ppb   | 3.50    | <1.0 - 12.9              | Chlorination disinfection by-product |
| Bromodichloromethane (BDCM)                | ppb   | 10.26   | 2.1 - 20.2               | Chlorination disinfection by-product |
| Chlorodibromomethane (CDBM)                | ppb   | 2.75    | <1.0 - 10.5              | Chlorination disinfection by-product |
| Dibromoacetic Acid (DBAA)                  | ppb   | 1.02    | <1.0 - 1.3               | Chlorination disinfection by-product |
| Dichloroacetic Acid (DCAA)                 | ppb   | 15.67   | 2.4 - 34.9               | Chlorination disinfection by-product |
| Monobromoacetic Acid (MBAA)                | ppb   | 1.09    | <1.0 - 2.7               | Chlorination disinfection by-product |
| Monochloroacetic Acid (MCAA)               | ppb   | 2.46    | <2.0 - 6.6               | Chlorination disinfection by-product |
| Trichloroacetic Acid (TCAA)                | ppb   | 11.21   | 3.7 - 26.0               | Chlorination disinfection by-product |

For more information on Unregulated Contaminants visit <https://www.epa.gov/dwuocmr>.

\*In April 2024, the EPA announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS. The EPA established legally enforceable levels, called Maximum Contaminant Levels (MCLs), for PFOA, PFOS, PFHxS, PFNA, and HFPO-DA (GenX) as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA (GenX), and PFBS using a Hazard Index MCL to account for the combined and co-occurring levels of these PFAS in drinking water.

Beginning in 2029, public water systems that have PFAS in drinking water which violates one or more of these MCLs must take action to reduce levels of these PFAS in their drinking water and must provide notification to the public of the violation. This situation is continually evolving. For the most up to date information, visit the EPA's website at <https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas#Summary> [epa.gov].

Delaware's specific PFAS regulations are primarily governed by the Forever Chemicals Mandatory Reporting Act (Senate Bill 72), which officially took effect on January 15, 2026. These regulations are designed to be more stringent and timely than current federal standards. For more information, visit the PFAS in Delaware Public Drinking Water website at <https://publichealthalerts.delaware.gov/pfas-in-delaware-public-drinking-water/>.

**TABLE 4: RADIOACTIVE CONTAMINANTS (2020 UNLESS NOTED)**

| Radioactive Contaminants      | Units | MCLG | MCL <sup>[18]</sup> | Highest Detected Level | Range of Levels Detected | Violation | Likely Source of Contamination          |
|-------------------------------|-------|------|---------------------|------------------------|--------------------------|-----------|---|
| Beta/photon emitters (2011)   | pCi/L | 0    | 50 <sup>[17]</sup>  | 3.5                    | 3.5 - 3.5                | No        | Decay of natural and man-made deposits. |
| Gross Alpha Particle Activity | pCi/L | 0    | 15 <sup>[18]</sup>  | 0.14                   | 0.14 - 0.14              | No        | Decay of natural and man-made deposits. |
| Radium-226                    | pCi/L | 0    | 5 <sup>[18]</sup>   | 0.25                   | 0.25 - 0.25              | No        | Decay of natural and man-made deposits. |
| Radium-228                    | pCi/L | 0    | 5 <sup>[18]</sup>   | 0.84                   | 0.84 - 0.84              | No        | Decay of natural and man-made deposits. |

**TABLE 5: SECONDARY<sup>[18]</sup> PARAMETERS AND OTHER PARAMETERS OF INTEREST DETECTED IN WATER AS IT ENTERS DISTRIBUTION SYSTEM**

| Contaminant  | Units                    | SMCL <sup>[18]</sup> | Brandywine Filter Plant |        |         | Porter Filter Plant |        |         | Source  |
|--|--------------------------|----------------------|-------------------------|--------|---------|---------------------|--------|---------|---|
|  |                          |                      | Average                 | Lowest | Highest | Average             | Lowest | Highest |   |
| <b>Conventional Physical and Chemical Parameters</b> |                          |                      |                         |        |         |                     |        |         |   |
| pH   | units                    | 6.5 - 8.5            | 7.7                     | 7.1    | 8.7     | 7.5                 | 6.7    | 8.0     | Waters with pH = 7.0 are neutral  |
| Alkalinity   | ppm as CaCO <sub>3</sub> | N/A                  | 73                      | 40     | 89      | 67                  | 48     | 82      | Measure of buffering capacity of water or ability to neutralize an acid   |
| Hardness   | ppm as CaCO <sub>3</sub> | N/A                  | 136                     | 94     | 190     | 154                 | 100    | 228     | Naturally occurring; Measures Calcium and Magnesium   |
| Conductivity   | µS/cm                    | N/A                  | 413                     | 176    | 791     | 469                 | 307    | 740     | General measure of mineral content  |
| Sodium   | ppm                      | N/A                  | 23                      | 23     | 23      | 22                  | 22     | 22      | Naturally occurring; Chemical additive to treat the water; Road salt application and run-off                    |
| Sulfate  | ppm                      | 250                  | 12                      | 12     | 12      | 14                  | 14     | 14      | Naturally occurring; Can cause objectionable taste and odor in water  |
| Chloride   | ppm                      | 250                  | 75                      | 31     | 198     | 96                  | 67     | 205     | Naturally occurring; Chemical additive to treat the water; Road salt application and run-off                    |
| <b>Metals</b>  |                          |                      |                         |        |         |                     |        |         |   |
| Iron   | ppb                      | 300                  | -                       | -      | -       | 21                  | 20     | 40      | Naturally occurring; Chemical additive to treat the water; Corrosion of pipes; Can cause discoloration in water |
| Manganese  | ppb                      | 50                   | 13                      | 6      | 42      | 11                  | 6      | 34      | Naturally occurring; Can cause discoloration and objectionable taste in water                                   |
| Zinc   | ppm                      | 5                    | 0.139                   | 0.100  | 0.190   | 0.139               | 0.100  | 0.170   | Naturally occurring; Chemical additive to treat the water   |

**TABLE 6: LEAD AND COPPER**

(BASED ON 2023 SAMPLING—TESTING IS DONE EVERY 3 YEARS)

| Contaminant | MCLG | Action Level (AL) <sup>[19]</sup> | 90th Percentile | # Sites Over AL | Units | Violation | Likely Source of Contamination   |
|-------------|------|-----------------------------------|-----------------|-----------------|-------|-----------|--|
| Copper      | 1.3  | 1.3                               | 0.23            | 0               | ppm   | No        | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems |
| Lead        | 0    | 15                                | 2.0             | 1               | ppb   | No        | Corrosion of household plumbing systems; Erosion of natural deposits                                   |





# TAKE PART IN OUR SYSTEMWIDE LEAD TESTING



Because Wilmington Water’s lead levels have fully complied with the Lead and Copper Rule for a set period of time, we are required to test for lead across our system every three years, not every year as required of others.

This summer, we will conduct our triennial sampling at 50 locations throughout our service area. To make the sampling successful, we would like to ask for your help. By signing up to serve as a sampling site, you will receive helpful information about your water quality while helping us comply with federal regulations.

<https://www.wilmingtonewater.gov/210/Lead-Testing>



## CONTACT US

You can help us ensure the safety of our water supply by reporting any unusual or suspicious activity either on our waterways, near our reservoirs, water filtration plants, water towers, or pumping stations.

To report an incident or general water quality concerns, call **Wilmington 311**, or call **(302) 576-2620**.

If you have questions about this report, call the Water Quality Laboratory at **(302) 571-4158**. Weekends or after 4 P.M., call **Wilmington 311**, or call **(302) 576-2620** (outside City limits).



Kelly A. Williams, Commissioner  
Department of Public Works  
Louis L. Redding City/County Bldg.  
800 French Street, Wilmington, DE 19801-3537

[WilmingtonDEWater.gov](http://WilmingtonDEWater.gov)

An electronic version of this document is available at [cwrwilmingtonde.com](http://cwrwilmingtonde.com).

Una versión en español de este documento está disponible por correo, previa solicitud.

