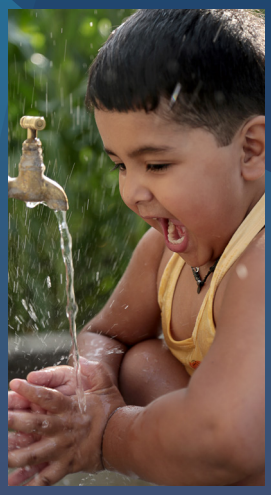
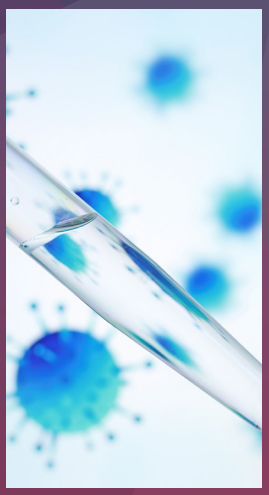
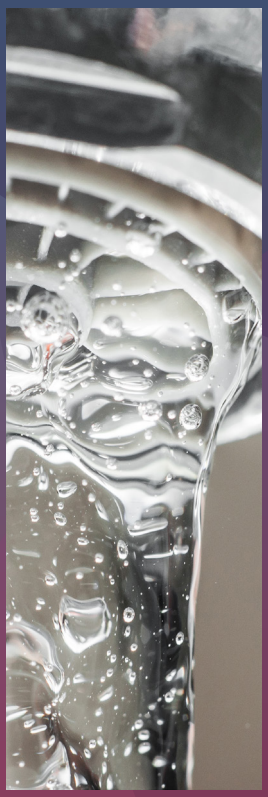
Wilmington DE WATER



CITY OF WILMINGTON

WATER QUALITY REPORT 2024





SPRING 2025 CITY OF WILMINGTON PUBLIC WATER SYSTEM • IDENTIFICATION # DE0000663

WATER QUALITY REPORT 2024

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 2025 includes water quality information for the 2024 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. 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 EPAs Safe Drinking Water Hotline at (800) 426-4791. 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.

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 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**.

WATER SERVICE LINE INVENTORY

On October 15, 2024, the City of Wilmington released the initial Water Service Line Inventory. In accordance with the United States Environmental Protection Agency's (EPA) revised Lead and Copper Rule (LCRR), the City of Wilmington recently submitted to the state of Delaware an initial inventory of the City's service lines that connect our water mains to our customers' homes and businesses.

The Service Line Inventory Map is available through our website at WilmingtonDEWater.gov on our Wilmington Water Lead Reduction Program page. In addition to the initial inventory, answers to common questions can be found on our website or you may call us at Wilmington 311 or (302) 576-2420.

KEY TO TABLES

[1] 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.

[2] 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.

[3] 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.

[4] 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.

[5] Unless otherwise indicated value given is a MCL.

[6] 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.

[7] State limit is to not exceed 2.0 mg/L.

[8] Collected in 2023.

[9] Collected in 2015.

[10] Total Organic Carbon compliance is calculated quarterly based on the running annual average of removal %.

[11] 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.

[12] 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.

[13] Cited value is the lowest and/or highest number of routine samples.

[14] Cited range is the range of all individual results in 2024.

[15] 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.

[16] Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether the Agency should consider regulating those contaminants in the future.

[17] The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

[18] 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.

[19] AL - Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow. ND: not detected.

HEALTH EFFECTS OF 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 materials and components associated with service lines and home plumbing. We cannot control the variety of materials used in home plumbing components.

When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for a few 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**.

TABLE 1: WATER QUALITY RESULTS - DETECTED PRIMARY[1] PARAMETERS AT ENTRY POINTS TO DISTRIBUTION SYSTEM

				Brandywine Filter Plant			Porter Filter Plant			
Contaminant	**Units**	**MCLG[2]**	**MCL[3] or TT[4][5]**	**Range of Levels Detected**	**Highest Detected Level**	**Violation**	**Range of Levels Detected**	**Highest Detected Level**	**Violation**	**Likely Source of Contamination**
Microbiological Indicators[6]										
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.	0.017 - 0.117	0.117	No	0.025 - 0.118	0.118	No	Soil runoff
Inorganic Chemicals (Metals and Nutrients)										
Barium	ppm	2	2	0.0511 - 0.0511	0.0511	No[8]	0.0414 - 0.0414	0.0414	No[9]	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nickel	ppb	N/A	100	< 10 - < 10	< 10	No[8]	2.0 - 2.0	2.0	No[9]	Discharge from industrial sources; Erosion of natural deposits
Chromium	ppb	100	100	< 10 - < 10	< 10	No[8]	1.9 - 1.9	1.9	No[9]	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride	ppm	2	Delaware State MCL: 2 ppm[7]	0.45 - 1.13	1.13	No	0.23 - 1.36	1.36	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	ppm	10	10	1.6 - 3.7	3.7	No	1.1 - 4.0	4.0	No	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits
Nitrite	ppm	1	1	0.002 - 0.005	0.005	No	0.002 - 0.009	0.009	No	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits
Disinfectants										
Chlorine	ppm	N/A	At least 0.3 residual entering Distribution System.	1.34 - 2.5	2.5	No	1.35 - 3.0	3.0	No	Water additive used to control microbes.
Disinfection Byproduct Precursors										
Total Organic Carbon	ppm	N/A		0.5934 - 2.1410	2.1410	N/A	0.5566 - 1.7718	1.7718	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	26 - 66%	66%	No	41 - 69%	69%	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 - 2.0	2.0	No[10]	1.0 - 2.6	2.6	No[10]	
Synthetic Organic Chemicals (pesticides, defoliants, fuel additives) - (2016 unless noted)										
Dalapon	ug/L	200	200	0.79 - 0.79	0.79	-	-	-	-	Runoff from herbicide on rights of way
Atrazine	ug/L	3	3	-	-	-	0.031 - 0.031	0.031	-	Runoff from herbicide on rights of way
Di (2-ethylhexyl) phthalate	ug/L	0	6	0.27 - 0.27	0.27	-	0.28 - 0.28	0.28	-	Discharge from plastic production
Hexachlorocyclopentadiene	ug/L	50	50	-	-	-	0.077 - 0.077	0.077	-	Runoff from herbicide on rights of way
Simazine	ug/L	4	4	-	-	-	0.072 - 0.072	0.072	-	Runoff from herbicide on rights of way

TABLE 2: WATER QUALITY RESULTS - DETECTED PRIMARY[1] PARAMETERS AT ENTRY POINTS TO DISTRIBUTION SYSTEM

Contaminant	**Units**	**MCLG[2]**	**MCL[3] or TT[4][5]**	**Range of Levels Detected**	**Highest Detected Level**	**Violation**	**Likely Source of Contamination**
Microbiological Indicators							
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.
Disinfectants							
Chlorine	ppm	MRDLG = 4.0[11]	MRDL = 4.0[12]	0.02 - 2.09[13]	2.09	No	Water additive used to control microbes.
Disinfection Byproducts							
Total Trihalomethanes	ppb	No goal for the total	80	9 - 79[14]	60[15]	No	Byproduct of drinking water disinfection. Forms due to reaction of chlorine with total organic carbon. **Health effects:** 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	4 - 35[14]	36[15]	No	Byproduct of drinking water disinfection. Forms due to reaction of chlorine with total organic carbon.

TABLE 3: DETECTION OF UNREGULATED CONTAMINANTS[16]

Chemical or Constituent	Units	Average	Range of Levels Detected	Likely Source of Contamination
Per-and Polyfluroalkyl-Substances (2024)				
Perfluorooctanoic Acid (PFOA)*	ppt	6.98	< 1.9 - 13.0	Industrial discharges
Perfluorooctanesulfonic Acid (PFOS)*	ppt	2.78	< 1.9 - 3.7	Industrial discharges
PFHxS*	ppt	1.93	<1.9 - <2.0	Industrial discharges
Perfluorononanoic Acid (PFNA)*	ppt	2.52	< 1.9 - 4.3	Industrial discharges
HFPO-DA (GenX)*	ppt	1.93	<1.9 - <2.0	Industrial discharges
Perfluorobutanesulfonic Acid (PFBS)*	ppt	2.81	< 1.9 - 3.4	Industrial discharges
Perfluoroheptanoic Acid (PFHpA)	ppt	4.03	< 1.9 - 11.0	Industrial discharges
Perfluorohexanoic Acid (PFHxA)	ppt	7.30	< 1.9 - 17.0	Industrial discharges
Disinfection Byproducts (2024)				
Bromochloroacetic Acid (BCAA)	ppb	3.41	< 1.0 - 7.5	Chlorination disinfection by-product
Bromodichloromethane (BDCM)	ppb	10.48	< 1.0 - 21.5	Chlorination disinfection by-product
Chlorodibromomethane (CDBM)	ppb	4.21	< 1.0 - 12.7	Chlorination disinfection by-product
Dibromoacetic Acid (DBAA)	ppb	1.28	< 1.0 - 3.1	Chlorination disinfection by-product
Dichloroacetic Acid (DCAA)	ppb	9.02	1.6 - 17.5	Chlorination disinfection by-product
Monobromoacetic Acid (MBAA)	ppb	1.02	< 1.0 - 1.3	Chlorination disinfection by-product
Monochloroacetic Acid (MCAA)	ppb	2.12	< 2.0 - 3.0	Chlorination disinfection by-product
Trichloroacetic Acid (TCAA)	ppb	7.08	1.5 - 12.7	Chlorination disinfection by-product

For more information on Unregulated Contaminants visit https://drinktap.org/Water-Info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR.

*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. For more information, visit the EPA's website at https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas#Summary [epa.gov].

TABLE 4: RADIOACTIVE CONTAMINANTS (2020 UNLESS NOTED)

Radioactive Contaminants	Units	MCLG	MRL	Highest Detected Level	Range of Levels Detected	Violation	Likely Source of Contamination
Beta/photon emitters (2011)	pCi/L	0	50[17]	3.5	3.5 - 3.5	No	Decay of natural and man-made deposits.
Gross Alpha Particle Activity	pCi/L	0	3	0.14	0.14 - 0.14	No	Decay of natural and man-made deposits.
Radium-226	pCi/L	0	1	0.25	0.25 - 0.25	No	Decay of natural and man-made deposits.
Radium-228	pCi/L	0	1	0.84	0.84 - 0.84	No	Decay of natural and man-made deposits.

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

			Brandywine Filter Plant			Porter Filter Plant			
Contaminant	Units	SMCL[18]	Average	Lowest	Highest	Average	Lowest	Highest	Source
Conventional Physical and Chemical Parameters									
pH	units	6.5 - 8.5	7.4	6.7	7.9	7.4	6.9	8.2	Waters with pH = 7.0 are neutral
Alkalinity	ppm as $CaCO_3$	N/A	66	39	90	62	41	88	Measure of buffering capacity of water or ability to neutralize an acid
Hardness	ppm as $CaCO_3$	N/A	128	82	200	148	106	220	Naturally occurring; Measures Calcium and Magnesium
Conductivity	µmhos/cm	N/A	370	126	477	424	284	526	General measure of mineral content
Sodium	ppm	N/A	24	24	24	23	23	23	Naturally occurring; Chemical additive to treat the water; Road salt application and run-off
Sulfate	ppm	250	16	16	16	17	17	17	Naturally occurring; Can cause objectionable taste and odor in water
Chloride	ppm	250	62	29	109	81	50	113	Naturally occurring; Chemical additive to treat the water; Road salt application and run-off
Metals									
Iron	ppb	300	-	-	-	24	20	90	Naturally occurring; Chemical additive to treat the water; Corrosion of pipes; Can cause discoloration in water
Manganese	ppb	50	11	6	29	13	6	20	Naturally occurring; Can cause discoloration and objectionable taste in water
Zinc	ppm	5	0.145	0.090	0.220	0.139	0.110	0.200	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)[19]	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

SURVEY!

STILL NEED TO DO YOUR SURVEY?

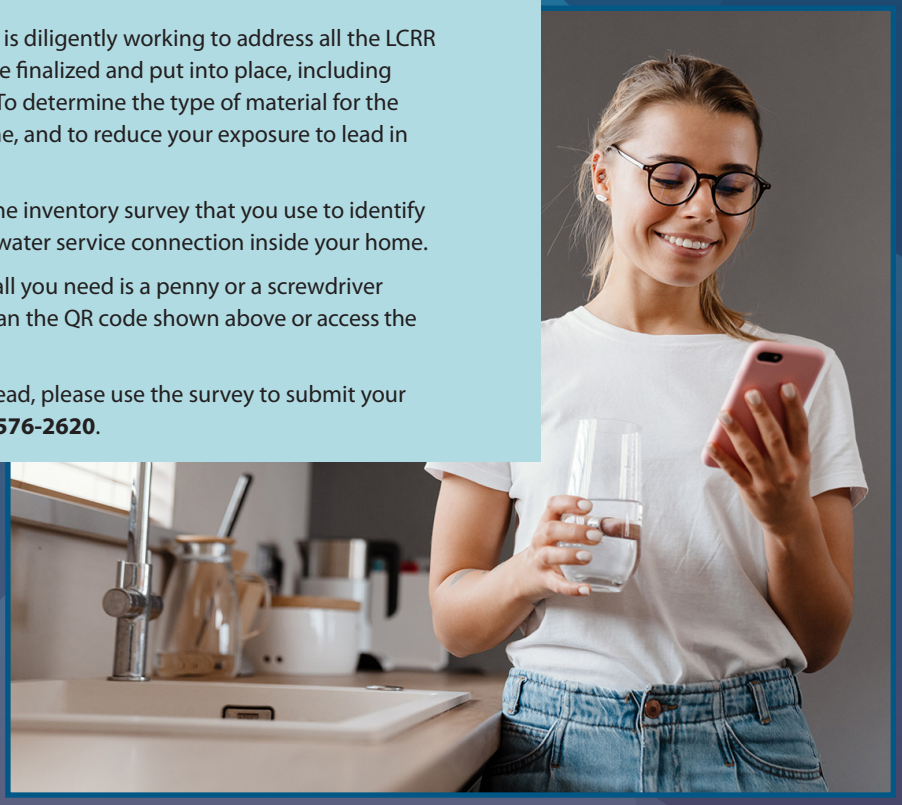
arcg.is/0za9OL

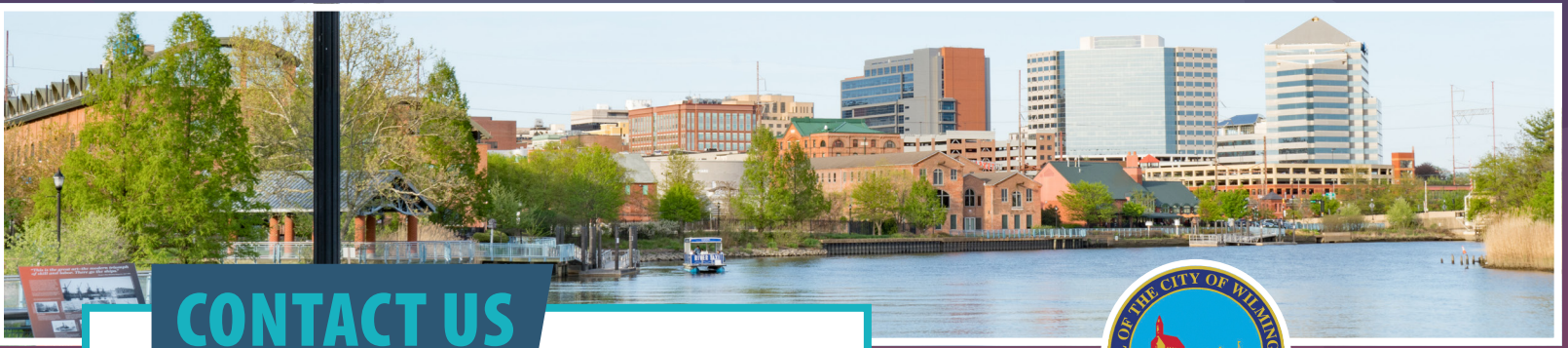
The City of Wilmington is diligently working to address all the LCRR requirements as they are finalized and put into place, including developing a water service line inventory. To determine the type of material for the portion of the service line within your home, and to reduce your exposure to lead in drinking water, we need your help!

The City of Wilmington created a service line inventory survey that you use to identify the service line material by checking your water service connection inside your home.

The survey is quick and easy to complete; all you need is a penny or a screwdriver and your phone. To take the survey, just scan the QR code shown above or access the survey **here**.

If you believe your service line material is lead, please use the survey to submit your results, call **Wilmington 311**, or call (**302) 576-2620**.





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**.

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Kelly A. Williams, Commissioner
Department of Public Works
Louis L. Redding City/County Bldg.
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