



BALTIMORE CITY
**DEPARTMENT OF
PUBLIC WORKS**

2024



Water
Quality
Report

STINKY WATER TINNY NOZZY COOL

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MESSAGE FROM THE DIRECTOR

Delivering the cleanest, healthiest drinking water to Baltimore area residents is no easy task. It takes rigorous, around-the-clock work from hundreds of scientists, engineers, plant operators, environmental police officers and utility workers, some of whom are featured in this report. These talented and dedicated individuals strive every day to ensure Baltimore's drinking water sets the standard. We are up against aging infrastructure, which we are working hard to rebuild. While some water mains can be repaired, some century-old pipes must be fully replaced.

One of our biggest successes of the past year was the repair of a 140-year-old storm drain that collapsed near Lake Montebello. This project, which was completed thanks to the due diligence of DPW's engineers and maintenance workers, helped keep water flowing to nearly 300,000 people in eastern Baltimore City and County. We are also pleased to share that we had no violations related to regulated contaminants during our water quality testing last year.

As you read this report, you will meet and learn more about our unsung heroes, each vital in protecting Baltimore's drinking water supply. I hope this report will help you understand and learn just how much work and pride goes into delivering safe, high-quality drinking water. Please reference the "Stay Connected" section of this report if you have any questions.

Yours in service,



Khalil Zaied

Director, Baltimore City Department of Public Works



About the Report

This Annual Water Quality Report covers January 1, 2024, to December 31, 2024, for the DPW water system (PWSID#:MD0300002) and contains data on the quality of drinking water in the Baltimore metropolitan region, educational information, and important public health notices and contacts. This document, also known as the Consumer Confidence Report (CCR), is being provided as required by the U.S. Environmental Protection Agency (EPA).

Look out for the icon below to help you better understand the information in this report.



Look out for this icon to read a helpful fast fact.

Sharing this Report

DPW invites you to share this 27th edition of the DPW Annual Water Quality Report with your neighbors, friends, colleagues, and family members. To view this report online, scan the QR code below or visit the Department's website: publicworks.baltimoreCity.gov/waterreport. To request a printed copy of this report, please call us at:

311: Baltimore City Residents

443-263-2220: Baltimore County Residents

Questions about this report, drinking water quality and information on source water assessments should be directed to one of the City's Water Quality Laboratories:

Montebello: 410-396-6040

Ashburton: 410-396-0150

To view this report online, scan this QR code



Why We Test Your Water

DPW's rigorous, around-the-clock testing process ensures each drop of water that goes to your tap meets or exceeds EPA standards. To accomplish this, it takes a team of scientists, chemists, and engineers working together to ensure the delivery of high-quality drinking water.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS and other immune system disorders, and some elderly citizens and infants can be particularly at risk from infections. Immuno-compromised people should seek advice from their health care providers about drinking public water.



Each year, DPW performs over 100,000 analyses of Baltimore's drinking water to ensure it is of the highest possible quality.

Employee Highlights



Amanda Oxendine

Water Quality Assurance Manager, Bureau of Water and Wastewater

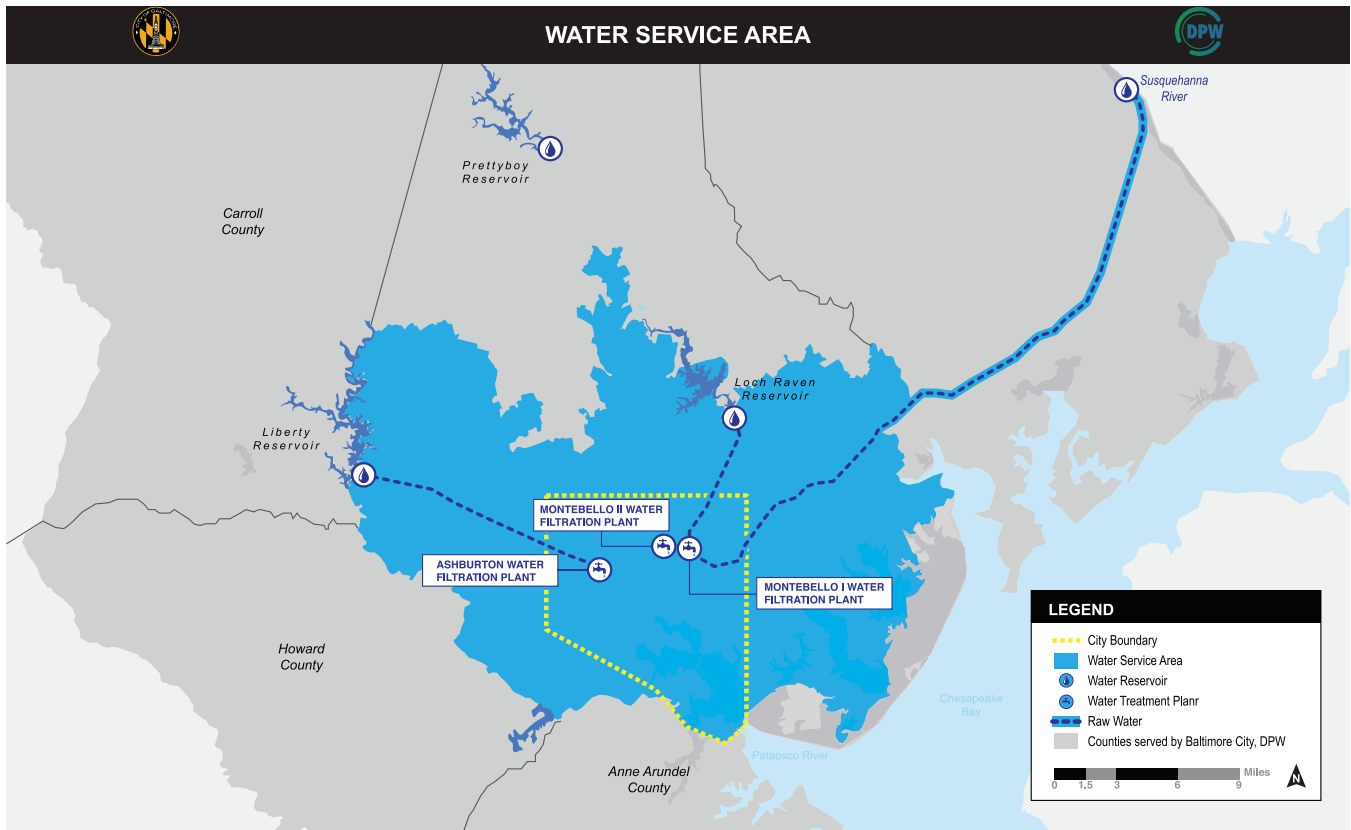
"We are the main driver in knowing what our water quality looks like."

Amanda Oxendine keeps a watchful eye on everything, ensuring DPW's chemists and microbiologists perform daily tests and analyses to ensure compliance with standards. She oversees the quality assurance programs for our laboratories at the Montebello and Ashburton treatment plants as well as the environmental labs at the Patapsco and Back River plants.

To ensure the labs remain in compliance with all regulations, Oxendine performs routine internal audits so the Maryland Department of the Environment (MDE) can perform its own external audits. "The main thing is making sure that when somebody comes in to inspect the lab, we are up to par with the standards and expectations being set forth by the state of Maryland," Oxendine says.

"It means a lot to work in an environment that protects our resources—whether for drinking, the environment, or recreation. Knowing that this work safeguards future generations makes it especially meaningful," she says.

Where Does Your Water Come From?



Baltimore's primary water source is surface water from rainfall and snowmelt, amounting to a capacity of approximately 84 billion gallons. This water is collected and stored in the City's Liberty, Loch Raven, and Prettyboy reservoirs. The Baltimore City water supply is also linked to the Susquehanna River, which flows from Cooperstown, N.Y., to Havre de Grace, MD. Water from the Susquehanna River is only used in times of drought.

The reservoirs are surrounded mainly by native woodlands, which filter out pollutants and prevent soil erosion and runoff. These watershed lands were established solely to protect our drinking water supply. Although the reservoirs are the City's property, all surrounding jurisdictions have a stake in their well-being.



Several organizations are committed to enhancing and preserving the areas around Baltimore's drinking water supply, including Friends of Liberty Reservoir, Baltimore Harbor Waterkeeper, Waterfront Partnership of Baltimore, Friends of Druid Hill Park, and more!

Employee Highlights



Herbert Naylor Chief of Water Facilities

With 38 years at DPW, Herbert Naylor knows it takes diligence to keep clean water running smoothly. Every day, he personally walks through and inspects all three Baltimore City water treatment facilities (Montebello I, Montebello II, and Ashburton) to ensure everything is running as it should.

“I really take it seriously. I know that the city and surrounding counties are relying on me to make sure that the water you get is meeting all federal and state regulations,” Naylor says.

He also knows that delivering clean, healthy drinking water to Baltimore area residents is not a 9-to-5 job; he is always on call. “I can get a call at 7 in the evening or 2 in the morning.”



Daniel Sullivan Engineer

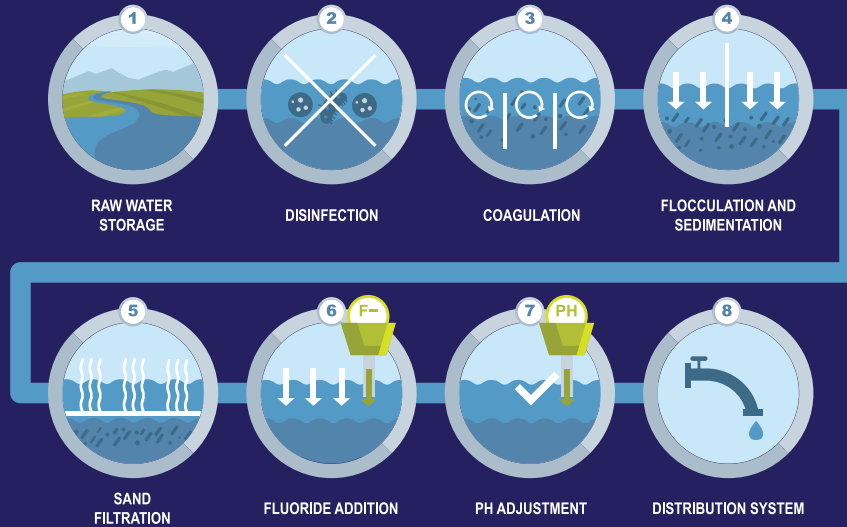
When a water main breaks, Daniel Sullivan is part of the team that makes sure it is repaired before it causes peripheral damage.

As an engineer in the Office of Engineering and Construction, he helps orchestrate water main repairs and responds to other emergencies.

“We are directly responsible for repairing water main breaks, so we are the ones making sure the water is not going to waste. We are the ones who fix it as fast as possible, so residents continue

to have water or have as little downtime without water as possible. I like that I am able to serve the residents of Baltimore, making sure we provide clean water to everyone in our area.”

Water Treatment Process



STEP 1: Raw Water Storage – DPW stores raw water at one of three City-owned reservoirs (Loch Raven Reservoir, Prettyboy Reservoir, and Liberty Reservoir).

Step 2: Disinfection – Treatment plant staff disinfect the raw water by adding Sodium Hypochlorite or Chlorine.

STEP 3: Coagulation – Treatment plant staff add aluminum sulfate, commonly known as alum, to the water to form tiny, sticky particles called floc, which attract and trap suspended particles.

STEP 4: Flocculation and Sedimentation – Water is gently mixed to promote the growth of larger flocs. After flocculation, the water moves to a sedimentation basin where heavier flocs settle to the bottom due to gravity, forming a layer of sludge.

STEP 5: Sand Filtration – The clarified water flows through layers of sand and gravel, which

removes fine particles and microorganisms that may have escaped during earlier treatment stages.

STEP 6: Fluoride Addition – Fluoride is added to drinking water in the form of fluorosilicic acid, sodium fluoride, or sodium fluorosilicate to help prevent tooth decay and promote dental health.

STEP 7: pH Adjustment –When aluminum sulfate is added to the water, the acidity (corrosiveness) of the water increases. pH adjustment ensures that the water maintains a suitable pH level for consumption and prevents corrosion in the distribution system. The ideal pH range for drinking water is between 6.5 and 8.5.

STEP 8: Distribution System – After treatment, the water is pumped into the distribution system, which consists of pipes, pumps, and storage tanks, for delivery to homes, businesses, and other consumers.



Liberty Reservoir has a capacity of 40 billion gallons; Prettyboy Reservoir has a capacity of 20 billion gallons; and Loch Raven Reservoir has a capacity of 24 billion gallons. That is enough water to fill more than 80 Baltimore Ravens football stadiums!

Employee Highlights



Danyel Cromartie Water Pumping Assistant Manager

Danyel Cromartie oversees the discharge of water from the system’s 19 pumping stations, structures that “pump” water to higher elevations throughout the system.

“We make sure all the tanks and reservoirs have clean water so that it can be consumed by the public. Without water, you can’t do anything. You can’t survive.”

One of her main jobs is to make sure the amount of chlorine in our drinking water stays at a safe level – enough to kill harmful germs, but not so much that it could cause health problems.

“Through the pumping stations, I make sure we meet the requirement for the consumer. I like knowing that I’m providing an essential service to people.”



Mohammed Almafrachi Engineering Supervisor

Mohammed Almafrachi describes himself as a troubleshooter. By “providing engineering support systemwide,” he makes sure everything works in the water treatment facilities and that nothing stands in the way of delivering quality water to the public.

Almafrachi’s division provides engineering support to the water distribution system, from design to upgrades and repairs. Engineers play a “vital” role in running the water system, he says. “The water treatment process is all engineering. We help the end-user of the system (the consumer). Engineering is

about solving problems, finding solutions, so the people get safe drinking water. The optimum goal is to provide high-quality drinking water to the city and surrounding counties 24/7.”

Water Delivery Process

The distribution system conveys water through a network of pump stations, storage tanks, water mains and large transmission mains. The distribution system consists of five major pressure zones to maintain proper water pressure and supply for 1.8 million consumers.



The water distribution system stretches over 4,500 miles—about the same distance as driving from Baltimore City to Miami, Florida and back, 2.5 times.

Employee Highlights



Bryan Samuels Chief of Utility Maintenance

With 25 years of experience in the water and wastewater industry, Bryan Samuels serves as DPW’s Chief of Utility Maintenance, where he plays a critical role in keeping Baltimore’s water infrastructure running smoothly. He oversees the teams that respond to water main breaks and sewer line repairs—work that is essential to the daily health and safety of residents.

Samuels’ job demands a high level of coordination and organization. From managing crews and prioritizing tasks to maintaining a safe work environment, he ensures that emergency repairs and routine maintenance are handled efficiently and effectively.

In addition to infrastructure maintenance, Samuels helps address concerns related to residents’ water, stormwater, and sewer service lines. He also works closely with the Mayor’s Office and other city officials to investigate and resolve customer claims.

“I think water is the lifeline of everything that we do,” Samuels says. “Water is the number one commodity of life.”

Strengthening Our Infrastructure

We are upgrading the City’s water infrastructure to maintain reliable access to clean, high-quality drinking water throughout the Baltimore region. This includes enhancing the aging pipes and facilities that are critical to our water systems. The following photos reflect the massive – and successful – effort to repair and bolster our infrastructure around Lake Montebello.

In 2022, a sinkhole developed beneath a water pipe between Lake Montebello and the

Montebello Water Filtration Plant, forcing the closure of Whitman Drive and the loop around Lake Montebello, a popular recreational destination for residents throughout the city.



In 2022, a sinkhole near Lake Montebello forced the closure of Whitman Drive. Crews are shown beginning repairs.

The culprit was a then 145-year-old storm drain that had collapsed beneath the water pipe and threatened the infrastructure of both the lake and the water treatment plant. The ruptured storm drain spurred calls for infrastructure improvements systemwide.

An aging storm drain collapsed beneath a water pipe, leading to a sinkhole and concerns about possible impacts to the nearby lake and water treatment plant.



Crews installed a massive bypass to keep water flowing to thousands in northeast Baltimore.



Crew members work to connect the new structure to the old.



By late fall, crews were making the final touches on the repair.



Following the repair, the cavern was covered, and Whitman Drive was reopened.



Employee Highlights



Theo Abiog

Engineer – DPW Montebello and Ashburton

Theo Abiog is a chemical engineer who helps manage projects at the Montebello and Ashburton water treatment facilities.

He helps review designs for plant upgrades – like the massive 54’ x 24’ upgraded filter at the Montebello Water Filtration Plant – and enjoys browsing through old drawings to understand how plant designers worked a century ago.

“I like knowing about the future projects and reviewing old drawings to see how engineering minds worked back then.”

He says designing helps with “plant efficiency and overall quality of the water.”



Robert Conley

Utility Repair and Install Supervisor II for Valve Operations

Robert Conley has a new appreciation for how critical a healthy drinking water supply is for the community.

Some of his duties include identifying, isolating, and repairing water main breaks and handling matters such as discolored water in service lines, noisy pipes, back flushes, and turn-on/turn-off requests.

He also knows the importance of balancing the right amount of drinking water with minerals, so residents get the right level of drinking water and the marine ecosystem is protected when water is flushed into storm drains and the ocean. “Quality of water is everything,” he says.

6,000 Pounds of Litter Removed Volunteers Keep Liberty Reservoir Clean



To learn more
about FoLR, scan
this QR code

The Baltimore region has dozens of volunteers dedicated to keeping the areas around our drinking water supply clean.

One of the groups, the Friends of Liberty Reservoir (FoLR), is committed to enhancing and preserving the area around Liberty Reservoir to safeguard our drinking water and maintain nearby fire roads and trails.

FoLR organizes monthly recycling/trash pick-up events and keeps DPW informed about necessary repairs and invasive plant species in the area.

These activities help ensure that Liberty Reservoir remains a clean, safe, and vibrant resource. In 2024 alone, FoLR collected an estimated 6,070 pounds of litter and dedicated 193 hours of volunteer service. FoLR President

Stephanie Brennan says the most rewarding part has been “witnessing the collective impact of our efforts — seeing volunteers come together, watching the reservoir thrive, and knowing that we are making a lasting difference.

Whether it is a cleaner shoreline, an informed family discovering the trails for the first time, or a strengthened sense of community, the fulfillment comes from knowing our work is preserving something truly special for generations to come.”

Learn how you can get involved with FoLR and other organizations dedicated to protecting our drinking water and natural resources. Follow them on their Facebook page (Friends of Liberty Reservoir) or visit their website: <https://friendsoflibertyreservoir.org/>



In 2024 alone, FoLR collected an estimated 6,070 pounds of litter and dedicated 193 hours of volunteer service.

Employee Highlights



Brittany Hoerl Microbiologist Supervisor

Brittany Hoerl and her team of microbiologists conduct countless analyses of water samples every day. These include algae samples from the Liberty watershed, intake samples, and plant samples using both raw and treated water.

She and her team also receive several main and bypass samples when a water service line is installed or isolated. Hoerl believes water quality assurance often gets taken for granted.

“Just because your water looks clean doesn’t mean it actually is. I feel like a lot of people don’t know what goes into water quality. Nobody really knows the depths that everybody undergoes to treat water. There are so many different parts that come into it, so many people behind the scenes.”



Tyrone Bennett Supervisor of Investigations

Thanks to DPW’s Utilities Maintenance Investigations Unit, emergency calls related to water, sewer, and stormwater now go through a one-stop shop – ensuring callers are quickly directed to the right division and their issues are resolved faster.

“Any complaint that’s water, sewer and storm, we’ll streamline,” says Supervisor Tyrone Bennett.

Bennett’s division has 10 investigators who respond to complaints throughout the system. Those investigators then help decide whether water, sewer or stormwater teams are responsible for the issue and help to quickly dispatch the appropriate crew.

One inspector cleared 2,713 water-related complaints last year alone.

“Our unit is the direct contact with the consumer. With the investigative unit, we give you personal contact. Our main focus is that we get quality water to the residents. We make the repairs in a timely fashion and shorten the repair time to make sure we get quality water to the people.”

Testing for Water Quality

To ensure tap water is safe to drink, the EPA prescribes regulations that limit the number of contaminants in water provided by public water systems. Federal Food and Drug Administration regulations establish limits for contaminants in bottled water. 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 (1-800-426-4791).

Microbiological Contaminants: Contaminants such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural and livestock operations, and wildlife.

Fluoride: A mineral added to water to prevent tooth decay.

Turbidity: A measure of the cloudiness of the water. It is used to indicate water quality and filtration excessiveness (such as whether disease-causing organisms are present).

Inorganic Contaminants: These include salts and metals that may occur naturally or result from human activities such as urban stormwater runoff, industrial and domestic wastewater discharges, oil and gas production, mining, or agricultural practices.

Arsenic: A gray, semi-metallic element that occurs naturally and can be found in certain types of rock and soil. Arsenic can also enter the environment through agricultural and industrial processes.



Chemist Israel Olaopa conducts critical tests at the Montebello Water Filtration Plant

Radioactive Contaminants: These are substances that may occur naturally in the environment or result from activities such as oil and gas production or mining operations.

Lead and Copper: Enter drinking water primarily through plumbing materials. Exposure to lead and copper may cause health problems, ranging from stomach distress to brain damage.

Chlorine: Added to water to control the growth of bacteria and viruses.

Volatile Organic Chemicals: Byproducts of industrial processes and petroleum production. They come from gas stations, urban stormwater runoff, and septic systems.

Employee Highlights



Eric Merchant

Operations Technician Supervisor

“We (operators and supervisors) are the front line in water treatment,” says Eric Merchant, who has over a decade of experience in water treatment. “I am part of a team of supervisors and operators that safeguard public health by providing safe drinking water for the Baltimore Metropolitan area. If we make a mistake, a lot of people can get sick.”

Merchant oversees and guides DPW operators on his shift, ensuring adherence to protocols in areas such as sampling, chemical dosing, troubleshooting, and recording data for required monthly state reports.



Victoria Black

Engineering Intern – DPW Lead and Copper Program

Victoria Black, an Environmental Engineering student at Johns Hopkins University, has been interning with DPW’s Lead and Copper Program since December 2023. As part of this EPA-led effort to improve drinking water safety, she’s helped raise awareness across Baltimore, visiting schools and engaging with families.

“I’ve had the opportunity to inform students and parents about the program, how they can advocate for it, and how they can use the information we provide to protect themselves,” she says.

Victoria also works with a tool called “Swordfish,” which uses low-voltage conductivity to detect lead pipes without digging, cutting both cost and disruption.

“My job feels like the start of something new,” she adds. “Not just in the program, but in the city, bringing the community together.”



The Swordfish uses a low-voltage conductivity probe to quickly and efficiently detect lead pipes without the need for digging. This reduces both the cost and disruption typically involved in inspections.

How to Read the Water Quality Table

The EPA establishes safe drinking water regulations that limit the number of contaminants in tap water. The table on the following pages shows the concentration of detected substances, in comparison to regulatory limits. Substances not detected are not included in the data table.

Key Water Quality Terms

The following are definitions of key terms referring to standards and goals of water quality noted on the data table.

MCL: Maximum Contaminant Level. The highest level of a contaminant allowed by health regulations established by the EPA.

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.

MRL: Minimum Reporting Level. The lowest concentration of a substance that a laboratory can reliably measure. Results below the MRL are typically reported as “not detected” or “less than.”

AL: Action Level. The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a system must follow.

PPM: Parts per million. (or 1 drop in 1 million gallons of water).

PPB: Parts per billion; (or 1 drop in 1 billion gallons of water).

PPT: Parts per trillion; (or 1 drop in 1 trillion gallons of water).

HLD: Highest Level Detected of a substance.

NTU: Nephelometric Turbidity Units. A unit of measurement used to report the level of turbidity or “cloudiness” in the water.

ND: Non-Detection. The concentration of a substance could not be detected at or above the minimum detection limit of that substance.

pCi/L: Picocuries per Liter. A measure of the level of radioactivity in the water.

Total COLIFORMS/E. COLI Indicator bacteria. This type of bacteriological test is routinely used to determine if contamination has occurred in a drinking water system.

LRAA: Locational Running Annual Average. Calculated by averaging the results of all samples collected at a single site within a quarter and then averaging this quarterly average for the last four quarters at the same site.

HAAs: Haloacetic Acids. A group of chemicals known as disinfection byproducts. These form when a disinfectant reacts with naturally occurring organic and inorganic matter in the water.

HAL: Health Advisory Level. The EPA establishes a non-regulatory human health-based level of protection from drinking water contaminants that are not regulated under the Safe Drinking Water Act.

TTHMs: Total Trihalomethanes. A group of chemicals that can form when organic matter in water is treated with halogen disinfectants such as chlorine. The most common of these chemicals is trichloromethane (also called chloroform), but others, such as dibromochloromethane, bromodichloromethane, or bromoform can also be found. The sum of these four chemicals is referred to as total trihalomethanes (TTHMs).

Water Quality Results



2024 Consumer Confidence Report (CCR) Detected Regulated Contaminants Table



City of Baltimore Annual Water Quality Report | Baltimore City Department of Public Works
Reporting Period: January 1, 2024 - December 31, 2024

The Baltimore City Department of Public Works (DPW) provides drinking water to 1.8 million people throughout the region. DPW's 2024 Water Quality Report provides information on the quality of your drinking water. The report's data provides information on the most recent testing in compliance with U.S. Environmental Protection Agency requirements. A summary of the 2024 testing results is listed below.

LEAD AND COPPER – Tested at customers' taps. Testing is done every 3 years. 2024 was a compliance year for testing. Next round of compliance testing will take place in 2027.

Contaminant	EPA's Action Level	Ideal Goal (EPA's MCLG)	90% of Test Levels Were Less Than	# of Tests with Levels Above EPA's Action Level	Range of Tap Sampling	Violation	Typical Sources
Lead	90% of homes less than 15 ppb	0 ppb	2.74 ppb	0	<2 - 7.09 ppb	No	Corrosion of household plumbing
Copper	90% of homes less than 1,300 ppb	1,300 ppb	112 ppb	0	14.4 - 402 ppb	No	Corrosion of household plumbing

INORGANIC CHEMICALS

Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Ashburton Plant		Montebello Plants		Violation	Typical Sources
			Highest Result	Range	Highest Result	Range		
Arsenic	10 ppb	0 ppb	ND	<3 ppb	ND	<3 ppb	No	Erosion of natural deposits
Antimony	6 ppb	6 ppb	ND	<2 ppb	2.87 ppb	<2-2.87	No	Erosion of natural deposits
Barium	2 ppm	2 ppm	0.0250	0.0184-0.0250	0.0395	0.0297-.0395	No	Discharges from drilling wastes
Chlorine	4 ppm	4 ppm	1.15	0.50-1.15	1.24	0.42-1.24	No	Water additive to disinfect supply
Fluoride	4 ppm	4 ppm	0.83	0.05-0.83	1.17	0.05-1.17	No	Water additive that promotes strong teeth
Nitrate	10 ppm	10 ppm	1.58	0.70-1.58	1.70	0.62-1.70	No	Runoff from fertilizer use

PFAS CONTAMINANTS

Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Ashburton Plant	Montebello Plants	Violation	Typical Sources
			Highest Level Detected	Highest Level Detected		
PFOA	4 ppt	0 ppt	2.17 ppt	1.93 ppt	No	Man-made chemicals in a range of products
PFOS	4 ppt	0 ppt	2.43 ppt	1.80 ppt	No	Man-made chemicals in a range of products
PFBS	Used to calculate Hazard Index	Used to calculate Hazard Index	1.64 ppt	1.63 ppt	No	Man-made chemicals in a range of products
PFHxS	Used to calculate Hazard Index	Used to calculate Hazard Index	2.45 ppt	<1.50 ppt	No	Man-made chemicals in a range of products
PFNA	Used to calculate Hazard Index	Used to calculate Hazard Index	<1.64 ppt	<1.64 ppt	No	Man-made chemicals in a range of products
HFPO-DA	Used to calculate Hazard Index	Used to calculate Hazard Index	<1.64 ppt	<1.64 ppt	No	Man-made chemicals in a range of products
PFBS + PFHxS + PFNA + HFPO-DA	1.0 Hazard Index	1.0 Hazard Index	0.25 HI	0.0008 HI	No	Man-made chemicals in a range of products

UNREGULATED CONTAMINANTS (UCMR5)

Contaminant	Minimum Reporting Level (MRL)	Ashburton Plant	Montebello Plants	Violation	Typical Sources
PFPeA	3 ppt	3 ppt	<3 ppt	No	Man-made chemicals in a range of products

RADIOACTIVE CONTAMINANTS

Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Highest Level Detected	Range of Levels Detected	Violation	Major Source
*Combined Radium 226/228	5pCi/L	0	1.6	0.2-16	No	Erosion of natural deposits

VOLATILE ORGANIC CHEMICALS

Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	City of Baltimore Distribution System		Violation**	Major Sources
			Highest Result (Locational Annual Average)	Range		
Total THMs	80 ppb	NA	72	28- 90	No	By-product of drinking water chlorination
HAA (5)	60 ppb	NA	54	6 - 86	No	By-product of drinking water chlorination

TURBIDITY

Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Ashburton Plant		Montebello Plants		Violation	Major Sources
Turbidity	Treatment Technique (TT)	None	Highest Result	Lowest %	Highest Result	Lowest %	No	Soil Run-off
			Filtration	NA	0.08 NTU	100%		

BACTERIA IN TAP WATER						
Contaminant	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Highest Monthly Percentage of Samples with Total Coliform Present	Running Annual Average of Samples Computed Quarterly	Violation	Typical Sources
Total Coliform (for systems that collect ≥40 samples per month)	5% of monthly samples are positive	0	0.33%	-	No	Naturally present in the environment
CHLORINE	4 ppm	4 ppm	-	0.46 ppm (based on 4,907 distributed system samples collected in 2024)	No	Water additive to disinfect supply

How to read the Water Quality Data Table

EPA establishes the safe drinking water regulation that limits the amount of contaminants allowed in drinking water. The table shows the concentrations of detected substances in comparison to regulatory limits. Substances not detected are not included in the table.

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 using the best available treatment technology.

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.

Minimum Reporting Level (MRL): The lowest concentration of a substance that a laboratory can reliably measure. Results below the MRL are typically reported as "non detected" or "less than."

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

Non-Detection (ND): The concentration of a substance could not be detected at or above the minimum detection limit of that substance.

Units in the Table: ppm is parts per million (or 1 drop in 1 million gallons), ppb is parts per billion (or 1 drop in 1 billion gallons), ppt is parts per trillion (or 1 drop in 1 trillion gallons); NTU is Nephelometric Turbidity Units which is a unit of measure used to report the level of turbidity or "cloudiness" in the water.

****Violations for Stage 2 THMs and HAAs:** are based on a locational annual average. Therefore, unless this exceeds the MCL, there is no violation. THMs and HAAs are based on a locational annual average. Therefore, unless this exceeds the MCL, there is no violation.

***Radioactive Contaminants:** are monitored on a 9-year schedule. Gross Alpha radioactive contaminant is monitored on a 6-year schedule for Montebello. 2019 was a compliance year for testing radioactive contaminants. The state allows monitoring of some contaminants less than once per year due to infrequent contaminant concentration level changes. Radioactive contaminants data, though representative, is more than one year old.

Health Effects, Barium: Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Cryptosporidium Results Range: Liberty: 0.00 – 0.09 Oocyst/Liter; Loch Raven: 0.00 – 0.00 Oocyst/Liter; Susquehanna River: 0.00 – 0.29 Oocyst/Liter

Secondary Contaminants: Sodium levels in the water supply are often of concern to consumers who contact our facilities. Sodium naturally occurs in raw waters, but the concentration can be increased due to the influence of run-off from road surfaces treated with rock salt during snow and ice removal efforts. During the year 2024, the average sodium concentrations measured in the finished water from the Ashburton and Montebello Water Treatment Plants were 18.3 ppm and 17.9 ppm respectively.

PFAS Monitoring: The Environmental Protection Agency (EPA) finalized regulations for 6 PFAS compounds in drinking water in April 2024. The MCLs for PFOA and PFOS are each 4.0 parts per trillion (ppt). The MCLs for HFPO-DA (GenX), PFNA and PFHxS are 10 ppt. Additionally, a mixture of two or more of the following chemicals (PFNA, PFHxS, HFPO-DA, and PFBS) will be regulated with a Hazard Index of 1.0 (unitless) to determine if the combined levels of these PFAS pose a risk and require action. The 5th Unregulated Contaminant Monitoring Rule (UCMR5) began testing for 29 PFAS compounds and lithium in 2023, and testing will run through 2025. The UCMR5 should test all community water systems with populations of at least 3,300 people. Three randomly selected systems in Maryland with populations less than 3,300 people will also be tested under the UCMR5. Detections greater than the minimum reporting levels for each constituent should be reported in the CCR. Data collected under UCMR5 improves understanding of the prevalence and amount of each constituent in the nation's drinking water systems. The City of Baltimore began testing for the 5th Unregulated Contaminant Monitoring Rule in August 2024 and concluded testing in May 2025.

Baltimore's Service Line Inventory is located on the home page of the program website: Baltimore Service Line Partnership or www.servicelinepartnership.baltimorecity.gov.

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 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.

Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. 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 and Ashburton Laboratory at 410-396-0150. 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>.

Hemlock Gorge at Prettyboy Reservoir

Joins National Old-Growth Forest Network

Hemlock Gorge, a six-acre forest within Prettyboy Reservoir in Baltimore County, has been added to the national Old-Growth Forest Network (OGFN). This marks the 12th forest in Maryland and the first in Baltimore County to receive this recognition.

The OGFN is a nonprofit organization that identifies and protects old-growth forests across the United States, ensuring they remain

accessible to the public and free from logging. Founded in 2012, the network aims to have at least one protected forest in every U.S. county where forests naturally grow.

Hemlock Gorge is at the meeting point of Gunpowder Falls and Walker Run. The area features towering eastern hemlock trees, including several state champions, and a variety of native wildflowers such as pink lady's slipper and Canada mayflower. Visitors can explore the gorge via a natural surface trail.

The inclusion of Hemlock Gorge in the OGFN highlights the importance of preserving old-growth forests, which play a crucial role in carbon storage, providing wildlife habitat, and improving water quality by filtering stormwater.

For more information or to get involved, visit the Old-Growth Forest Network at www.oldgrowthforest.net.



The national Old-Growth Forest Network (OGFN) has grown to include 279 forests across 39 states.



For more
information on the
OGFN, scan this
QR code



Monitoring PFAS

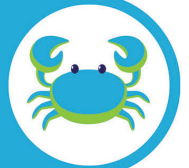
DPW takes protective measures to detect organic and human-made contaminants in your drinking water, including what are called per- and poly-fluoroalkyl substances (PFAS).

What are PFAs?

PFAS are a large group of more than 4,000 human-made chemicals that have been used since the 1940s in a range of products, such as stain- and water-resistant fabrics and carpeting; cleaning products; paints; cookware; food packaging; and fire-fighting foams.



Over time, these PFAS have entered the environment, where they have been detected by authorities in several states in soil, surface water, groundwater, and seafood. Some PFAS can accumulate in the food chain and thrive for long periods of time in the environment and human body.



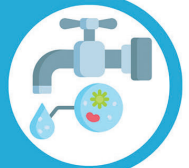
EPA Finalized Regulations

for six PFAS compounds in drinking water in April 2024.



The Maximum Contaminant Levels (MCLS)

for Perfluorooctanoic Acid (PFOA) and Perfluorooctanoic Sulfonic Acid (PFOS) are each 4.0 ppt.



The MCLS for HFPO-DA (GEN X), PFNA, & PFHXS are 10 ppt

Additionally, a mixture of two or more of the following chemicals (PFNA, PFHxS, HFPO-DA, and PFBS) will be regulated with a Hazard Index of 1.0 (unitless) to determine if the combined levels of these PFAS pose a risk and require action.



The 5th Unregulated Contaminant Monitoring Rule (UCMR5)

began testing for 29 PFAS compounds and lithium in 2023. The City of Baltimore began testing for the UCMR5 in August 2024; testing will run through 2025.



The UCMR5 Should Test

all community water systems serving populations of at least 3,300 people. Three randomly selected systems in Maryland with populations less than 3,300 people will also be tested under the UCMR5. Detections greater than the minimum reporting levels for each constituent should be reported in the CCR.



Additional information about PFAS can be found on the MDE website:
[mde.maryland.gov PublicHealth/Pages/PFAS-Landing-Page.aspx](https://mde.maryland.gov/PublicHealth/Pages/PFAS-Landing-Page.aspx)

Help Us Identify Your Water Service Line Material

In October 2024, the Baltimore City Department of Public Works (DPW) and the Baltimore County Department of Public Works and Transportation (DPWT) submitted an initial inventory of water service lines to the Maryland Department of the Environment (MDE). This effort is part of a nationwide initiative led by the U.S. Environmental Protection Agency (EPA) to identify and eliminate lead and galvanized service lines in the country’s drinking water system.

Despite this progress, many service lines remain of unknown material. To ensure the safety of your drinking water, we need your help to identify these lines.

HOW YOU CAN HELP

If your property has been identified as having unknown service line material, please complete the self-reporting survey. This simple process involves:

LOCATING YOUR SERVICE LINE

- Find where the water line enters your home, typically in the basement or utility area.
- Identifying the Material of Your Service Line
- Scratch Test: Use a key or coin to gently scratch the pipe.
- Magnet Test: Check if a magnet sticks to the pipe.
- Based on these tests:
 - Lead Pipes: Dull gray, soft, easily scratched to reveal a shiny surface, and non-magnetic.
 - Galvanized Steel: Dull gray, harder surface, magnetic.
 - Copper: Reddish-brown, non-magnetic.
 - Plastic: White or colored, non-metallic, non-magnetic.

SUBMIT YOUR FINDINGS

Take a photo of the pipe and upload it along with your observations to the self-reporting survey. Your participation is crucial in helping us identify and replace service lines that may pose health risks. To view our inventory findings and access more information, please visit the Baltimore Service Line Partnership portal.

Visit the link to take the water line survey. <https://bit.ly/BaltimoreSelfReportingSurvey>

IDENTIFYING SERVICE LINE MATERIAL				
				
	COPPER	GALVANIZED	LEAD	PLASTIC/HDPE/PVC
SCRATCH RESULT	Copper or orange Result	Dull gray	Shiny silver	Matches pipe surface
MAGNET RESULT	No	Yes	No	No
TAPPING RESULT	Metallic, ringing noise	Metallic, ringing noise	Dull noise	Dull, plastic noise

Stay Connected

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@BaltimoreDPW

NEXTDOOR:

Nextdoor.com/gov/BaltimoreDPW

Filtration Plant Tours

Interested in learning more about how we treat water that comes out of your pipes?

The Baltimore City Department of Public Works provides free tours for our consumers, students, businesses, or anyone interested in the water filtration plants. For a tour at the Montebello Plant, call **410-396-6040**, and for a tour at the Ashburton Plant, call **410-396-0150**.



GLOSSARY

TERM	DEFINITION
AL Arsenic	Action Level A gray, semi metallic element that occurs naturally, which can be found in certain types of rock and soil.
CCR Chlorine	Consumer Confidence Report Added to water to control the growth of bacteria and viruses.
DPW	Department of Public Works
E. coli EPA	Escherichia coli Environmental Protection Agency
Fluoride FOG	A mineral added to water to prevent tooth decay. Fats, Oils, and Grease
HAL HLD	Health Advisory Level Highest Level Detected
Inorganic Contaminants	Contaminants such as salts and metals that can be either naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
LCRR Lead and Copper LRAA	Lead and Copper Rule Revisions Enter drinking water primarily through plumbing materials. Locational Running Annual Average
MCL MCLG MDE MDH	Maximum Contaminant Level Maximum Contaminant Level Goal Maryland Department of the Environment Maryland Department of Health
Microbiological Contaminants	Viruses and bacteria that come from sewage treatment plants, septic systems, agricultural and livestock operations, and wildlife.
ND NTU	Non-Detection Nephelometric Turbidity Units
pCi/L PFAS PFOA PFOS pH PPB PPM PPT	Picocuries per Liter Per- and Poly-fluoroalkyl Substances Perfluorooctanoic Acid Perfluorooctanoic Sulfonic Acid Potential of Hydrogen Parts per billion Parts per million parts per trillion
Radioactive Contaminants	Contaminants that can be naturally occurring, or the result of oil and gas production and mining activities.
SOCs	Synthetic Organic Contaminants
Turbidity	A measure of the cloudiness of the water, used to indicate water quality and filtration effectiveness.
UCMR5	5th Unregulated Contaminant Monitoring Rule
Volatile Organic Chemicals	Byproducts of industrial processes and petroleum production, which come from gas stations, urban stormwater runoff, and septic systems.

Resources



PromisePay Payment Plans

To learn more about our flexible and interest-free PromisePay payment plans, please visit us online at <https://baltimore.promise-pay.com/>, scan the QR code, or call us at 410-779-9808.



Water4All

Water4All is a water bill discount program designed to **reduce the monthly water bill** for eligible Baltimore City residents. To learn more about this program, eligibility requirements, and how to enroll, please visit us online at <https://cityservices.baltimorecity.gov/water4all/>, scan the QR code, or call us at 410-396-5555.



Paperless Billing

Customers will receive their bills **faster and more securely** with the ability to view and access their bill **anytime and anywhere**. You can sign up for paperless billing in the **DPW Customer Service Portal** – <https://waterbillportal.baltimorecity.gov/#Login>

If you believe in our mission to provide clean, healthy drinking water, scan the QR code below and join our team.



