Portland Water System 2023 Water Quality Report

Is my drinking water safe?
Yes, our water meets all of EPA's health standards. The seven certified operators at our water treatment facility perform over 100 tests daily, including microbiological testing, during operational hours to ensure that your water quality meets or exceeds the parameters set forth by the EPA and TDEC.

What is the source of my water?
Your water comes from Drakes Creek and the City Lake and is classified as surface water. On rare occasions, we purchase water from White House Utility District and the Westmoreland water system. Our goal is to protect our water from contaminants, and we are working with the State to determine the vulnerability of contamination. The Tennessee Department of Environment and Conservation (TDEC) has prepared a Source Water Assessment Program (SWAP) Report for the untreated water sources serving this water system. The SWAP Report assesses the susceptibility of untreated water sources to ***potential*** contamination. To ensure safe drinking water, all public water systems treat and routinely test their water. Water sources have been rated as reasonably susceptible, moderately susceptible or slightly susceptible based on geologic factors and human activities in the vicinity of the water source. The Portland Water System sources are rated as moderately susceptible to potential contamination.

An explanation of Tennessee's Source Water Assessment Program, the Source Water Assessment summaries, susceptibility scorings and the overall TDEC report to EPA can be viewed online at **https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/source-water-assessment.html** or you may contact the Portland City Hall and file a public records request to obtain copies of specific assessments.

Why are there contaminants in my water?
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 Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

For more information about your drinking water, please contact the Water Treatment Plant Chief Operator at (615)325-6776, ext. 192

How can I get involved?
The Portland City Council meets the 1st & 3rd Monday of the month @ 5:00 p.m. at City Hall, located at 100 South Russell Street, Portland TN. Please feel free to participate in these meetings.

Is our water system meeting other rules that govern our operations?
The State and EPA require us to test and report on our water on a regular basis to ensure its safety. We have met all of these requirements. Results of unregulated contaminant analysis are available upon request. We want you to know that we pay attention to all the rules.

Other Information
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.
Contaminants that may be present in source water:

i. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
ii. 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.
iii. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
iv. 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.
v. Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA and the Tennessee Department of Environment and Conservation prescribe regulations that 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.

Do I Need to Take Special Precautions?
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 under-gone 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 not only their drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Lead in Drinking Water
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. Portland Water System is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead

Water System Security Following the events of September 2001, we realize that our customers are concerned about the security of their drinking water. We urge the public to report any suspicious activities at any utility facilities, including treatment plants, pumping stations, storage tanks, fire hydrants, etc. to 325-3434.

Portland Water System
Water Quality Data 2023

Test Parameter	Violation Yes/No	Level Detected	Range of Detection	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (RTCR)	No	0		25 per month		0	TT Trigger	Naturally present in the environment
Turbidity[1]	No	0.17	0.02-0.17	Daily	NTU		TT	Soil runoff
Copper[3]	No	90th%= 0.0157		2023	ppm	1.3	AL=1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	No	0.38	0.23-0.38	Qtrly 2023	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead[3]	No	90th%= none detected		2023	ppb	0	AL=15 ppb	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	No	1.06	N/A	2/9/23	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium	No	10	N/A	2/9/23	ppm			Erosion of natural deposits; used in water treatment
TTHM (Total Trihalomethanes)	No	LRAA 49	15-88	Qtrly 2023	ppb		80 ppb	By-product of drinking water chlorination
HAA5(Haloacetic Acids)	No	LRAA 35	8-59	Qtrly 2023	ppb		60 ppb	By-product of drinking water disinfection.
Total Organic Carbon[2]	No	1.02 Avg 49% removal achieved	0.61-1.02 (25% removal required)	Qtrly 2023	ppm		TT	Naturally present in the environment.

Test Parameter	Violation Yes/No	Level Detected	Range of Detection	Date of Sample	Unit Measurement	MRDLG	MRDL	Likely Source of Contamination
Disinfectant(chlorine)	No	1.8	0.3-2.2	Daily	ppm	4	4	Water additive used to control microbes.

The Portland Water System received a score of 98% on our most recent Sanitary Survey conducted by the Tennessee Department of Environment and Conservation, which occurred on February 20,21, and 22, 2024.

[1]We met the treatment technique for turbidity with 100% of our samples below the turbidity limit of 0.3 NTU. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

[2]We have met all treatment technique requirements for Total Organic Carbon removal during the 2023 calendar year.

[3]During the most recent round of lead and copper testing 0 out of 31 households sampled contained concentrations exceeding the lead action level of 15 ppb. No copper samples exceeded the action level of 1.3 ppm

What does this chart mean?

- **MCLG** - Maximum Contaminant Level Goal, or 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.
- **MCL** - Maximum Contaminant Level, or 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. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.
- **MRDL**: Maximum Residual Disinfectant Level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.
- **MRDLG**: Maximum residual disinfectant level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **AL** - Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **Below Detection Level (BDL)** - laboratory analysis indicates that the contaminant is not present at a level that can be detected.
- **Parts per million (ppm) or Milligrams per liter (mg/l)** – explained as a relation to time and money as one part per million corresponds to one minute in two years or a single penny in $10,000.
- **Parts per billion (ppb) or Micrograms per liter (ug/L)** - explained as a relation to time and money as one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
- **ND**- None detected.
- **LRAA**- Locational running annual average-the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.
- **Nephelometric Turbidity Unit (NTU)** - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **TT** - Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

Health Effects

Microbiological Contaminants:

Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present.
Turbidity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Inorganic Contaminants:

Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.
Fluoride. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.
Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
TTHMs [Total Trihalomethanes]. Some people who drink water containing trihalomethanes in excess of the MCL of 80 ppb (parts per billion) over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
HAA [Haloacetic Acids]. Some people who drink water containing haloacetic acids in excess of the MCL of 60 ppb (parts per billion) over many years may have an increased risk of getting cancer.

Think before you flush! Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of Tennessee's waterways by disposing in one of our permanent pharmaceutical take back bins. There are nearly 100 take back bins located across the state, to find a convenient location please visit: https://tdeconline.tn.gov/rxtakeback/ or https://safe.pharmacy/drug-disposal/

Your local drop off sites are:

Portland Police Dept
433 North Broadway
Portland TN 37148

CVS Pharmacy
304-A South Broadway
Portland TN 37148

The City of Portland purchased water from White House Utility District and the City of Westmoreland water system in 2023 to help meet customer demand. When we purchase water from other water systems, we are required to provide their testing data as an addendum to our water quality report. The WHUD and City of Westmoreland testing data for the 2023 calendar year is on the next two pages.

City of Westmoreland Water System

W a t e r Q u a l i t y D a t a

What does this chart mean?

- MCLG - Maximum Contaminant Level Goal, or 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.
- MCL - Maximum Contaminant Level, or 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. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.
- MRDL: Maximum Residual Disinfectant Level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.
- MRDLG: Maximum residual disinfectant level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- AL - Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. Non-Detects (ND) - laboratory analysis indicates that the contaminant is not present.
- Parts per million (ppm) or Milligrams per liter (mg/l) – explained in terms of money as a single penny in $10,000.
- Parts per billion (ppb) or Micrograms per liter - explained in terms of money as a single penny in $10,000,000.
- Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- TT - Treatment Technique or a required process intended to reduce the level of a contaminant in drinking water.
- RTCR – Revised Total Coliform Rule. This rule went into effect on April 1, 2016 and replaces the MCL for total coliform with a Treatment Technique Trigger for a system assessment.

Contaminant	Violation Yes/No	Level Detected	Range of Detections	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (RTCR)	No	0		2023		0	TT Trigger	Naturally present in the environment
Turbidity[1]	No	0.22	0.02- 0.22	2023	NTU	N/A	TT	Soil runoff
Copper*	No	90th%= 0.0237		2021	ppm	1.3	AL=1.3	Corrosion of household plumbing systems.
Lead*	No	90th%= < 0.5 ND		2021	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Fluoride	No	0.64 AVG	0.50 – 0.85	2023	ppm	4	4	Water additive, which promotes strong teeth.
Sodium	No	12.6		2023	ppm	N/A	N/A	Erosion of natural deposits; used in water treatment.
Nitrate (as Nitrogen)	No	0.38		2023	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	No	65.20 LRAA	37.50-64.60	2023	ppb	N/a	80	By-product of drinking water chlorination
Haloacetic Acids (HAA5)[3]	No	40.67 LRAA	26.70-39.70	2023	ppb	N/A	60	By-product of drinking water disinfection.
Total Organic Carbon[2]	No			2023	ppm	TT	TT	Naturally present in the environment.
Chlorine	No	0.83 avg.	0.20 – 1.30	2023	ppm	MRDLG =4	MRDL =4	Water additive used to control microbes.

*During the most recent round of Lead and Copper testing, 0 out of 20 households sampled contained concentrations exceeding the action level.

[1]100% of our samples were below the turbidity limit.

[2]We met the treatment techniques requirements for Total Organic Carbon (TOC).

White House Utility District

Consumer Confidence Report Requirements

2023 Water Quality Data

Contaminant	Violation Yes/No	Level Detected	Range of Detections	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Chlorine	No	1.79	1.0 – 2.8	2023	ppm	MRDLG = 4	MRDL = 4	Added as a disinfectant to control microbes
Copper[1]	No	0.107 90th percentile		2023	ppm	1.3	AL - 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	No	0.57	0.45 – 0.71	2023	ppm	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
HAA5 (Haloacetic acids)	No	42	20 - 50	2023	ppb		60	By-product of disinfection
Lead[1]	No	0.001 90th percentile		2023	ppb	0	AL - 15	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate	No	0.163		2023	Ppm	10	10	Soil run-off; Leaching from septic tanks; Erosion of natural deposits
Radionuclides Gross Alpha Radium 226 Radium 228	No	.156 pCi/l .135 pCi/l .349 pCi/l		2023	pCi/L	0	15 pCi/l 5 pCi/l 5 pCi/l	A radioactive substance found in nature
Sodium	No	7.23		2023	ppm			Erosion of natural deposits
TOC[2]	No	51% Removal Achieved	25% Removal Required	2023	ppm		TT	Naturally present in the environment
Total Coliform Bacteria	No	0.33%		2023		0	<5% Positive Samples Per Month	Naturally present in the environment
TTHM (Total trihalomethanes)[3]	No	61	27-59	2023	ppb		80	By-product of drinking water chlorination
Turbidity[4]	No	0.12	0.02 - 0.12	2023	NTU		TT	Soil runoff

[1] During the most recent round of lead testing, 0 out of 50 households sampled contained concentrations exceeding the action level of 15 ppb. No copper samples exceeded the action level of 1.3 ppm.

[2] Treatment technique requirements were met for Total Organic Carbon in 2023.

[3] Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

[4] WHUD met the treatment technique for turbidity with 100% of monthly samples being below the limit set by the EPA of 0.3 NTU. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Interpreting the 2023 Water Quality Data

The 2023 Water Quality Data chart contains information about contaminants detected in your drinking water. Maximum allowable levels and goals for levels set by the EPA are listed along with the units of concentration. Also, the concentration of each contaminant detected in your drinking water is listed. Data contained in the chart is from sampling performed in the 2023 calendar year. Below are some important terms used in the data.

Important Definitions

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 for a margin of safety.

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 treatment technology. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

MRDLG – Maximum Residual Disinfectant Level Goal is the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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 the control of microbial contaminants.

AL - Action Level is the concentration of a contaminant that, when exceeded, triggers treatment or other requirements a water system must follow.

pCi/L – Picocuries per liter

ppm - Parts per million or milligrams per liter (mg/l) can be explained as a relation to time and money as one part per million corresponds to one minute in two years or a single penny in $10,000.

ppb - Parts per billion or micrograms per liter can be explained as a relation to time and money as one part per billion corresponds to one minute in 2,000 years or a single penny in $10,000,000.

NTU - Nephelometric turbidity units measure the turbidity, or clarity, of water. Turbidity in excess of 5 NTUs is just noticeable to the average person.

TT - Treatment technique is a required process intended to reduce the level of a contaminant in drinking water.