



Portland Water System 2019 Water Quality Report

Is my drinking water safe?

Yes, our water meets all of EPA's health standards. The six 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, such as a drought, we purchase water from WHUD. Our goal is to protect our water from contaminants, and we are working with the State to determine the vulnerability 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 Department at (615)325-5338 or the Water Treatment Plant at (615)325-3915.

How can I get involved?

The Portland City Council meets the 1st & 3rd Monday of the month @ 6:00 p.m. The City Council also hosts a work study @ 4:30 p.m. prior to each council meeting. 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:

- 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 and the Tennessee Department of Environment and Conservation prescribe 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.

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, but food preparation, personal hygiene, and precautions in handling infants and pets 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>

Cryptosporidium

Cryptosporidium is a microbial parasite which is found in surface water throughout the U.S. Although Cryptosporidium can be removed by filtration, the most commonly used filtration methods cannot guarantee 100% removal. Monitoring of our source water indicated the presence of Cryptosporidium in 1 out of 9 samples tested. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks. However, immuno-compromised people have more difficulty and are at greater risk of developing severe, life threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. For more information on Cryptosporidium contact the Safe Drinking Water Hotline (800-426-4791)

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 2019

Contaminant	Violation Yes/No	Level Detected	Range of Detection	Date of Sample	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria ³ (RTCR)	No	0		25 per month		0	TT Trigger	Naturally present in the environment
Turbidity ¹	No	.23	.02-.23	Daily	NTU		TT	Soil runoff
Copper ⁴	No	90 th %= 0.0181		2017	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	No	0.69	0.59-0.69	Qtrly 2019	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead ⁴	No	90 th %= 0.5		2017	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	No	1.17	N/A	3/14/19	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium	No	9.96	N/A	3/14/19	ppm			Erosion of natural deposits; used in water treatment
TTHM(Total Trihalomethanes)	No	46	18-92	Qtrly 2019	ppb		80 ppb	By-product of drinking water chlorination
HAA5(Haloacetic Acids)	No	35	13-56	Qtrly 2019	ppb		60 ppb	By-product of drinking water disinfection.
Total Organic Carbon ²	No	Avg. 24% TOC removal	1.1-1.59	Qtrly 2019	ppm		TT	Naturally present in the environment.

Contaminant	Violation Yes/No	Level Detected	Range of Detection	Date of Sample	Unit Measurement	MRDLG	MRDL	Likely Source of Contamination
Disinfectant	No	2.3	0.6-2.3	Daily	ppm	4	4	Water additive used to control microbes.

The Portland Water System received a score of 99% on our most recent Sanitary Survey conducted by the Tennessee Department of Environment and Conservation, which occurred on May 28, 29 and June 3, 2019.

¹We 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.

²We have met all treatment technique requirements for Total Organic Carbon removal.

⁴During the most recent round of lead and copper testing. 0 out of 37 households sampled contained concentrations exceeding the action level.

On 7/4/2019, the Portland Water Plant received a Tier 2 monitoring violation from the Tennessee Dept. of Environment and Conservation. You should have already received a notification with the details of this violation. If you did not receive a notification, you can access it online at www.cityofportlandtn.gov/notice-category/publicnotice/

2019 UCMR4 Monitoring Results (4th Unregulated Contaminant Monitoring Rule)

Contaminant	Level Detected (Average)	Range of Detection	Date of Sample	Unit Measurement
Bromochloroacetic Acid	1.525	1.2-2.1	2019	ug/L
Bromodichloroacetic Acid	2.55	2.2-3.1	2019	ug/L
Chlorodibromoacetic Acid	0.36	0.31-0.40	2019	ug/L
Dichloroacetic Acid	8.3	5.4-11.3	2019	ug/L
HAA9 group	24.1	16.9-31.3	2019	ug/L
Total Brominated HAA's	4.43	3.8-5.6	2019	ug/L
Total HAA's	19.6	13.1-26.8	2019	ug/L
Trichloroacetic Acid	11.4	7.7-15.5	2019	ug/L
Manganese ¹	5.6	5.6	2019	ug/L

"Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. For additional information call the Safe Drinking Water Hotline at (800) 426-4791.

¹On 10/7/2019, the Portland WTP experienced an incident which allowed the manganese level in the finished water leaving the plant to be in excess of the MCL. The MCL was exceeded for a short period of time, and was back under the MCL within a few hours. Manganese is a secondary contaminant with no known health effects. We monitor it for aesthetic purposes.

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.
- **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 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 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: <http://tn.gov/environment/article/sp-unwanted-pharmaceuticals>



Your local drop off site is:

**Portland Police Dept
433 North Broadway
Portland TN 37148**

Portland Water System Personnel

Water Treatment Facility

Tim Suddarth-Chief Operator, WT4 Certified
Courtney Dulaney-Lead Operator, WT4 Certified
Kevin Owen-Operator, WT4 Certified
Jeff High- Operator, WT4 Certified
Carol Hanley- Operator, WT4 Certified
Joel Long- Operator, WT4 Certified
Charla Archie-Operator, WT4 Certified

Water Distribution Department

**Ron Key-Distribution Dept. Supervisor, Grade 2 Distribution and Backflow Cross
Connection Certified**
**Chris Bowers-Distribution Dept. Asst. Supervisor, Grade 2 Distribution and Backflow
Cross Connection Certified**
Jimmy Tidwell- Field Crew Worker and TN One Call Locator
James Perry-Field Crew Worker
Chris Greer- Field Crew Worker
Austin Gregory-Filed Crew Worker
Chase McCrory- Field Crew Worker
Calvin Vaughn- Field Crew Worker
Steve Forbis- P/T field Crew Worker, Backflow Cross Connection Certified
Tracy Keen- Distribution Department Administrative Assistant