

Petersburg Water System Water Quality Report for 2022

Is my drinking water safe?

Yes, our water meets all of EPA's health standards. We have conducted numerous tests for contaminants that may be in drinking water. We found all of these contaminants at safe levels.

What is the source of my water?

Your water, which is surface water, comes from the Elk River. Our goal is to protect our water from contaminants and we are working with the State to determine the vulnerability of our water source to **potential** contamination. The Tennessee Department of Environment and Conservation (TDEC) has prepared a Source Water Assessment Program (SWAP) Report for the untreated water sources serving water to 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 Elk River source was rated as slightly 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 can contact FPU.

A wellhead protection plan is available for your review by contacting FPU to obtain copies of specific assessments and the Wellhead Protection Plans.

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 muy importante. Tradúscalo o hable con alguien que lo entienda bien.

For more information about your drinking water, please call Jack Atchley at 1-931-659-9826.

How can I get involved?

The Board of Mayor and Alderman meets on the first Tuesday after the first Monday at 6:00 pm at Petersburg Town Hall. 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 stormwater 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 stormwater 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 stormwater 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.

Cross Connection

We are required to have a cross connection and backflow prevention inspection program ongoing each year. Never submerge hoses in buckets, pools, tubs, or sinks. Always keep the end of the hose clear of possible contaminants. Never use spray attachments for poison or cleaning without a backflow prevention device. Buy and install inexpensive backflow prevention devices for threaded faucets around your house or business if you do this. When a water line breaks or the main is drained for repairs, back siphonage and backflow can occur when the pressure drops causing bacteria or poisons to enter the water lines.

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. Petersburg 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 <https://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, tanks, fire hydrants, etc to Petersburg Water at 1-931-659- 9826



Water Quality Data

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.
- **Non-Detects (ND)** - laboratory analysis indicates that the contaminant is not present.
- **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** - 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.
- **Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water.
- **Millirems per year (mrem/yr)** - measure of radiation absorbed by the body.
- **Million Fibers per Liter (MFL)** - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.
- **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.
- **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.
- **TT** - Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

| Contaminant | Violation Yes/No | Level Found | Range of Detections | Date of Sample | Unit Measurement | MCLG | MCL | Likely Source of Contamination |
|---|------------------|----------------------------|---------------------|--------------------|------------------|------|---------------------|--|
| Total Coliform Bacteria | No | 0 | 0-1 | 2022 | | 0 | <2 positive samples | Naturally present in the environment |
| Total Coliform Bacteria (RTCR) | No | 0 | 0 | 2022 | | 0 | TT Trigger | Naturally present in the environment |
| E-coli Bacteria footnote 1 | No | 0 | 0 | > 10 sample /month | | 0 | See footnote 1 | Human or animal wastes |
| Turbidity footnote 2 | No | .64 | .03-0.21 | Daily | NTU | N/A | TT | Soil runoff |
| Copper footnote 3 | No | 90 th %= 0.0149 | | 2022 | ppm | 1.3 | AL=1.3 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead footnote 3 | No | 90 th %= (ND) | | 2022 | ppb | 0 | AL=15 | Corrosion of household plumbing systems, erosion of natural deposits |
| Nitrate- as Nitrogen footnote 7 | No | 1.11 | | 2022 | ppm | 10 | 10 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Sodium | No | 1.87 | | 2022 | ppm | N/A | N/A | Erosion of natural deposits; used in water treatment |
| TTHM [Total trihalomethanes] footnote 4 | No | 51 Ave. | 16-86 | Every 3 months | ppb | N/A | 80 | By-product of drinking water chlorination |
| Haloacetic Acids (HAA5) footnote 4 | No | 49 Ave. | 23-84 | Every 3 months | ppb | N/A | 60 | By-product of drinking water disinfection. |

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|---------------------------------|----|--------|-----------|----------------|-----|----|----|--|
| Barium | No | 0.0175 | | 2020 | ppm | 2 | 2 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Total Organic Carbon footnote 5 | No | 1.31 | .848-1.53 | Every 3 months | ppm | TT | TT | Naturally present in the environment. |
| Atrazine | No | 2.73 | 0-2.73 | Yearly | ppb | 3 | 3 | Runoff from herbicide used on crops |
| | | | | | | | | |

| | | | | | | | | |
|--|----|------------|-----------|----------------|---------|-----|----------|---|
| Chlorine | No | 1.2 Ave. | 0.4-2.2 | 2022 | ppm | 4 | 4 | Water additive used to control microbes. |
| Chlorine Dioxide | No | 380 | 0-380 | Daily | ppb | 800 | MRDL-800 | Water additive to control microbes |
| Chlorite | No | .931 | .015-.931 | Daily | ppm | .8 | 1.0 | By-product of drinking water chlorination |
| Fluoride | No | 0.502 Avg. | 0 -0.540 | Every 3 months | ppm | 4 | 4 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Elk River water Cryptosporidium footnote 6 | No | .13 Ave. | 0.40 | 2018 | Oocysts | N/A | N/A | Human or animal wastes |

FOOTNOTES:

1.* E coli: A system is in compliance with the MCL for E coli for samples unless any of the conditions identified in part one through four, listed below, occur.

- The system has an E coli positive sample following a total coliform positive routine sample.
- The system has a total coliform positive repeat sample following an E coli positive routine sample.
- The system fails to take all the required repeat samples following an E coli positive routine sample.
- The system fails to test for E coli when any repeat samples tests positive for total coliform.

2. 100 % of our monthly turbidity samples were below the turbidity limit of 0.30 NTU We met the treatment technique requirement for turbidity. Turbidity is a measurement of the cloudiness of the water. We monitor turbidity because it is a good indicator of the effectiveness of our system.

3. *During the most recent round of Lead and Copper testing of 10 households sampled none contained concentrations exceeding the action level.

4. **TTHM** (Total Trihalomethanes) While your drinking water meets EPA standards for Trihalomethanes it does contain low levels. Some people who drink containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous system, and may have an increased risk of getting cancer.

5. We have met all treatment technique requirements for Total Organic Carbon removal in 2022.

6. **FPU** is required to monitor their source water for Cryptosporidium as a part of the Long Term 2 Enhanced Surface water rule for 24 consecutive months beginning July 2016. Cryptosporidium is a microbial parasite found in surface water throughout the United States. Although Cryptosporidium can be removed by filtration, but cannot guarantee 100 % removal. Monitoring of our source water indicated the presence Cryptosporidium in 3 of the 6 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, immune-compromised people have more difficulty and are a 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 at 800-426-4791.

7. **Nitrate:** Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 months of age.

High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short period of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health provider. Results for Petersburg were well below the 10 ppm limit. Petersburg water tested at 0.615 ppm.

*** IRON:** Iron occurs naturally in our raw water and occasionally accumulates in the distribution system. Iron shows up as "red" water or "rusty" water at your tap. Although you do not want to drink water that is not clear, Iron is not considered to be a hazard to your health. FPU test for iron daily and their finished water is usually .01 ppm or less. The aesthetic limit for iron is .30 ppm.

FLUSHING MEDICATIONS CONTAMINATES WATER SUPPLY

Flushing unused or expired medicines can be harmful to your drinking water. Proper disposal of medicines helps protect you and the environment. Keep medications out of Tennessee waterways by disposing of them in a permanent

pharmaceutical take-back bin. There are nearly 100 take-back bins across the state, including one at the Lincoln County Sheriff's Department. **Visit: <http://tdeonline.tn.gov/rxtakeback/>**