

**2019 ANNUAL DRINKING WATER QUALITY REPORT  
FREDERICKSBURG SEWER & WATER AUTHORITY  
PWSID# 7380035**

*Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda.* (This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.)

**WATER SYSTEM INFORMATION:**

This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please contact Brandon Nye at 717-865-0774. We want you to be informed about your water supply. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the first and third Monday of the month at 6:30 PM in the offices of the Fredericksburg Sewer & Water Authority (FSWA).

**SOURCE(S) OF WATER:**

The FSWA water system is fed by three (3) wells which are located on the west end of Fredericksburg near the water plant and airport. Water is also provided by the City of Lebanon Authority water system interconnect which is located on Airport Road near the Northern Lebanon High School.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the *Safe Drinking Water Hotline* (800-426-4791).

**MONITORING YOUR WATER:**

We routinely monitor for contaminants in your drinking water according to federal and state laws. The following tables show the results of our monitoring for the period of January 1 to December 31, 2019. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data is from prior years in accordance with the Safe Drinking Water Act. The date has been noted on the sampling results table.

**DEFINITIONS:**

*Action Level (AL)* - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

*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.

*Maximum Residual Disinfectant Level (MRDL)* - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

*Maximum Residual Disinfectant Level Goal (MRDLG)* - 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.

**Minimum Residual Disinfectant Level (MinRDL)** - The minimum level of residual disinfectant required at the entry point to the distribution system.

**Level 1 Assessment** – A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

**Level 2 Assessment** – A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

**Treatment Technique (TT)** - A required process intended to reduce the level of a contaminant in drinking water.

*Mrem/year* = millirems per year (a measure of radiation absorbed by the body)

*pCi/L* = picocuries per liter (a measure of absorbed radioactivity)

*ppb* = parts per billion, or micrograms per liter (µg/L)

*ppm* = parts per million, or milligrams per liter (mg/L)

*ppq* = parts per quadrillion, or picograms per liter

*ppt* = parts per trillion, or nanograms per liter

**DETECTED SAMPLE RESULTS:**

<b>Chemical Contaminants</b>								
<b>Contaminant</b>	<b>MCL in CCR Units</b>	<b>MCLG</b>	<b>Level Detected</b>	<b>Range of Detections</b>	<b>Units</b>	<b>Sample Date</b>	<b>Violation Y/N</b>	<b>Sources of Contamination</b>
Total Chlorine (Distribution System)	MRDL = 4	MRDLG = 4	1.61	0.10 – 3.34	ppm	2019	N	Water Additive to Control Microbes
Free Chlorine (Distribution System)	MRDL = 4	MRDLG = 4	1.18	0.02 – 3.19	ppm	2019	N	Water Additive to Control Microbes
Fluoride	2*	4	0.5		ppm	2015	N	Erosion of Natural Deposits, Water Additive for Strong Teeth
HAA5	60	N/A	16.4	12.0 – 26.3	ppb	2019	N	By-Product of Water Disinfection
TTHM	80	N/A	37.6	15.7 – 50.0	ppb	2019	N	By-Product of Water Distribution
Nitrate	10	10	3.2		ppm	04/11/19	N	Runoff from Fertilizer Use
Nitrite	1	1	0		ppm	04/11/19	N	Runoff from Fertilizer Use
Antimony (Inorganic Compound)	6	6	0.9		ppm	2018	N	Discharge from petroleum refineries; Fire retardants; Ceramics; Solder; Electronics
Arsenic (Inorganic Compound)	10	0	2		ppm	2018	N	Erosion of natural deposits; Runoff from orchards; Runoff from Glass and electronics production waste
Barium (Inorganic Compound)	2	2	0.159		ppm	2018	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits

\*EPA's MCL for fluoride is 4 ppm. However, Pennsylvania has set a lower MCL to better protect human health.

**Microbial (related to Assessments/Corrective Actions regarding TC positive results)**

Contaminants	TT	MCLG	Assessments/ Corrective Actions	Violation Y/N	Sources of Contamination
Total Coliform Bacteria	Any system that has failed to complete all the required assessments or correct all identified sanitary defects, is in violation of the treatment technique requirement	N/A	See detailed description under "Detected Contaminants Health Effects Language and Corrective Actions" section	N	Naturally present in the environment.

**Lead and Copper**

Contaminant	Action Level (AL)	MCLG	90 <sup>th</sup> Percentile Value	Units	# of Sites Above AL of Total Sites	Violation Y/N	Sources of Contamination
Lead	15	0	0	ppb	0 out of 10	N	Corrosion of household plumbing.
Copper	1.3	1.3	0.386	ppm	0 out of 10	N	Corrosion of household plumbing.

**Entry Point Disinfectant Residual**

Contaminant	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine	1.0	0.91	0.91 – 3.99	ppm	10/16/19	Y	Water additive used to control microbes.

**DETECTED CONTAMINANTS HEALTH EFFECTS LANGUAGE AND CORRECTIVE ACTIONS:**

Analysis of the water throughout 2019 resulted in one Notice of Violation for a chlorine residual at the entry point which fell slightly below the required Minimum Disinfectant Residual level on one day. All other lab test results in 2019 were within acceptable limits. There were no positive results for Total Coliform or E. coli. Lead and Copper results were within acceptable limits. Volatile Organic Compounds (VOCs) and Synthetic Organic Compounds (SOCs) were not required to be tested in 2019. In 2017, there were no detections of VOCs or SOCs.

**OTHER VIOLATIONS:** The FSWA also received a Notice of Violation for not notifying the public in a timely manner about the low chlorine residual described above. The FSWA has since made the proper notifications. The FSWA received an additional Notice of Violation in 2019 because the testing lab submitted test results to the DEP late.

**EDUCATIONAL 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 include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater run-off, 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.

To ensure that tap water is safe to drink, EPA and DEP prescribes regulations which limit the amounts of certain contaminants in water provided by public water systems. FDA and DEP regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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).

***INFORMATION ABOUT LEAD:***

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Fredericksburg Sewer & Water Authority 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>.

***OTHER INFORMATION:***

If you notice any issues with the water quality in your home or business, be it taste, odor or color, please contact Brandon Nye of the Fredericksburg Sewer & Water Authority at 717-865-0774.