



Annual Drinking Water Quality Report 2016

Township Of Falls Authority

PWSID 1090022

We're pleased to present to you this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. All of our water is purchased from the Lower Bucks County Joint Municipal Authority and the Morrisville Municipal Authority. The Delaware River serves as the source for both agencies with Lower Bucks drawing from the tidal area near Franklin Cove in Tullytown and Morrisville's intake is just north of the Calhoun Street Bridge in the non-tidal area.

The Pennsylvania DEP has conducted a source water assessment of the Delaware River and found that it has a moderate risk of significant contamination. A summary report of the assessment is available on the *Source Water Assessment & Protection* web page at (<http://www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/SrceProt/SourceAssessment/default.htm>).

The sources of drinking water (both tap 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 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 byproducts of industrial processes and petroleum production and mining activities.

If you have any questions about this report or concerning your water utility, please contact us at 215-946-6062. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled board meetings. They are held on the fourth Wednesday of the month at our office, 557 Lincoln Highway, Fairless Hills, PA 19030.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

In the test result table, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the contaminant is not present at a detectable level.

Parts per million (ppm) or Milligrams per liter (mg/l) - 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 - 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.

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.

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

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

Maximum Contaminant Level – the “Maximum Allowed” (MCL) 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.

Maximum Contaminant Level Goal – the “Goal” (MCLG) 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.

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

Maximum Residual Disinfectant Level Goal (MRDLG) – the level of 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 contamination.

TTHM (Total Trihalomethanes) – compounds formed during the chlorination (disinfection) of drinking water.

Haloacetic Acids (HAA) – a group of disinfection by-products formed during chlorination.

The Township of Falls Authority routinely monitors for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2016. Drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

TEST RESULTS							
Contaminant (Unit of Measurement)	Violation Y/N	Level Detected	Range	MCLG	Sample Year	MCL	Likely Source of Contamination
Microbiological Contaminants							
Turbidity (NTU)	N	0.12 (b)	0.07---0.16	N/A	2016	TT	Soil Runoff
Total Coliform Bacteria	N	2		0	2016	5% of monthly samples	Naturally present in the environment
Fecal Coliform Bacteria or E.Coli	N	0		0	2016	0	Human and Animal Fecal Waste
Inorganic Contaminants							
Copper (ppm)	N	0.141 **	.0268---.787	1.3	2016	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride (ppm)	N	0.68 (b)	0.37---1.06	2	2016	2	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (ppb)	N	0.66 **	0---4.7	0	2016	AL = 15	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen) (ppm)	N	1.3		10	2015	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Barium (ppm)	N	0.014		2	2016	2	Discharge of drilling wastes; Discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	N	1.5		100	2016	100	Discharge from steel and pulp mills; erosion of natural deposits
Volatile Organic Contaminants							
TTHM, Total Trihalomethanes (ppb)	N	48.08 (b)	31.5---68.8	0	2016	80	By-product of drinking water chlorination
HAA5, Haloacetic Acids (ppb)	Y	28.44 (b)	1.2---52.5	0	2016	60	By-product of drinking water chlorination
Radionuclides							
Combined Radium (pCi/L)		0.7427		0	2015	5	
Disinfectants							
Contaminant (Unit of Measurement)	Violation Y/N	Level Detected	Range	MRDL	Sample Year	MRDLG	Likely Source of Contamination
Chlorine (ppm)	N	0.75 (b)	0.03---1.83	4	2016	4	Water additive used to control microbes
Other Chemicals							
Total Organic Carbon (ppm)	N	1.60 (b)	1.3---1.8	N/A	2016	TT	Leaching from vegetation
Total Dissolved Carbon (ppm)	N	1.80 (b)	1.5---1.9	NR	2016	NR	Leaching from vegetation
Alkalinity (ppm)	N	49 (b)	27---66	NR	2016	NR	Erosion of natural deposits

(b) Year Average

** 90th percentile

NR – Not Regulated

Health Effects: Coliform are bacteria that are naturally present in the environment and are used as an indicator that other potentially-harmful bacteria may be present. The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio.

Some people who drink water containing trihalomethanes or haloacetic acids 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.

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 Township of Falls 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>.

About Iron: While there is no health-based maximum contaminant level for iron, EPA has established a secondary maximum contaminant level (SMCL) for iron of 0.3 mg/L. This SMCL is based on aesthetic issues (red water, staining of clothing). To address concerns about these aesthetic issues the Township of Falls Authority has boosted the levels of a treatment additive used by its water supplier and it has planned water main lining projects. Both actions are measures commonly used to reduce levels of iron in drinking water.

Electronic Report: This report is available online using the following URL: <http://www.tofa-pa.com/pdf/2016-CCR.pdf>. A hard copy of this report is also available at the TOFA office located at 557 Lincoln Highway, Fairless Hills, PA 19030, or upon request at 215-946-6062

Violations: TOFA received a MCL violation for Haloacetic Acids (HAAS) at sample site 702 for the 1st quarter of 2016. The HAAS level detected in 1st quarter sampling at the site was below the MCL, however, the level detected triggered an MCL violation for the running yearly average for the site. An evaluation of our service system showed that high water age at the site of the violation, and at the nearest storage tank, contributed to the higher-than-normal HAAS levels in our system. We have since installed mixers in our storage tank and automatic flushing devices in our system to help reduce water age in this area. We have also begun monthly non-regulatory monitoring of our whole system for HAAS levels to ensure compliance with regulatory standards. Please note this is a summary report of past events. Public notifications were previously distributed for this violation and TOFA has been within regulatory limits since the violation.

TOFA had one violation of the Revised Total Coliform Rule (RTCR). The violation was due to a missed deadline in submitting TOFA's routine total coliform sampling site plan. The sampling site plan was immediately submitted upon TOFA's learning of the violation, and TOFA has been in compliance with all of the requirements of the RTCR since then. Please note this violation was a procedural issue and did not have any negative effect on public health or safety.