



Bucks County Water & Sewer Authority

2017 Water Quality Report

Main Lower South System – Serving Middletown/Southampton

PWSID # 1090079

Este informe contiene información importante acerca de su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

BCWSA is committed to providing customers with a reliable supply of high quality drinking water that meets or surpasses state and federal standards for quality and safety. Our water is tested using certified labs that use advanced procedures. We are pleased to provide this Water Quality Report as required by the Safe Drinking Water Act (SDWA) with results of our 2017 water testing. In addition to results of laboratory testing, this report also includes details regarding the source of our drinking water and how it compares to Environmental Protection Agency (EPA) and state standards. Any questions or concerns may be directed to Erin Rapp at 215-343-2538 x112 or visit us online at www.bcwsa.net.

Water Source

BCWSA's Main Lower South System is supplied water from both North Wales Water Authority and Lower Bucks County Joint Municipal Authority. North Wales Water Authority supplies us with surface water from the Delaware River that has been treated at Forest Park Water Treatment Plant. Lower Bucks County Joint Municipal Authority supplies us with a combination of surface water from the Delaware River that has been treated at their water treatment plant and ground water from 5 wells.

Under Section 1453 of the U.S. Environmental Protection Agency's 1996 Safe Drinking Water Act, states must evaluate all drinking water sources that serve public systems and provide a mechanism for development of local protection programs. In accordance with the Pennsylvania Department of Environmental Protection's Source Water Assessment and Protection Program (SWAP), a source water assessment has been completed for Forest Park Water Treatment Plant and Lower Bucks County Joint Municipal Authority. A summary report of the Assessment's for each source is available on the Source Water Assessment & Protection web page at www.dep.state.pa.us/dep/deputate/watermgmt/wc/Subjects/SrceProt/SourceAssessment/default.htm. The complete Assessment is available for public review at the Southeast Regional DEP office in Norristown, PA.

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 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 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 prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. We treat your water according to EPA's regulations.

Food and Drug Administration (FDA) 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 EPA's Safe Drinking Water Hotline at 800-426-4791.

Customer Participation

Residents can help ensure the safety of our water supply by reporting any suspicious activities near any water tank, reservoir, or hydrants to our office at 215-343-3946, 24 hours a day, 7 days a week.

The Board of Directors of BCWSA meets on the second Tuesday of each month at 8:30am and the fourth Monday of each month at 7:00pm in the public meeting room at the Authority office located at 1275 Almshouse Road in Warrington, PA. Please feel free to attend and participate in these meetings.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers – a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save up to 750 gallons a month.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

Special Warning

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 at 800-426-4791.

Water Quality Data

The tables on the following pages list all of the drinking water contaminants that were detected during the 2017 calendar year. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented is from testing done January 1 – December 31, 2017. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Level Detected	Range		Sample Date	Violation	Typical Source
				Low	High			
Chemical Contaminants								
Chlorine (ppm)	4	4	0.779	0.429	0.779	2017	No	Water additive used to control microbes
Barium (ppm)	2	2	0.0181	NA	NA	2017	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (ppm)	10	10	1.2	NA	NA	2017	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Haloacetic Acids (HAA5) (ppb)	NA	60	38.1	5.7	157	2017	Yes*	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs) (ppb)	NA	80	46.5	10.6	105	2017	No	By-product of drinking water disinfection
Bromate (ppb)	0	10	3.0	2.3	3.7	2017	No	By-product of drinking water disinfection
Chromium (ppb)	100	100	2.4	NA	NA	2017	No	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	2	2	0.60	ND	0.72	2017	No	By-product of drinking water disinfection
Gross Alpha (pCi/L)	0	15	3.35	ND	3.35	2014	No	Erosion of natural deposits
Combined Radium (pCi/L)	0	5	0.7427	ND	0.7427	2014 & 2015	No	Erosion of natural deposits

* See Violation Information Section on next page

Contaminant	MCLG	MCL	Level Detected	Sample Date	Violation	Typical Source
Turbidity						
Turbidity (NTU)	0	TT = 1 NTU for a single measurement	0.09	2017	No	Soil runoff
		TT = at least 95% of monthly samples \leq 0.3 NTU	100%		No	

Contaminants	MCLG	AL	Level Detected	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Lead and Copper							
Lead – AL at consumer taps (ppb)	0	15	1.2	2017	2 out of 64	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper – AL at consumer taps (ppm)	1.3	1.3	0.149	2017	0 out of 64	No	Corrosion of household plumbing systems; erosion of natural deposits

Additional Testing

Tests were performed in 2017 for Synthetic and Volatile Organic Compounds. No compounds were detected.

Tests were performed in 2017 for Inorganic Compounds and no compounds other than barium, chromium, and fluoride (listed in the previous tables) were detected in any of these tests.

All microbiological testing for 2017 did not show any violations.

Violation Information

In November 2017, test results for haloacetic acids (HAA) showed a portion of the water system exceeded the MCL. Compliance is based on a locational running annual average (LRAA) of quarterly samples. To meet the HAA standard, that average must be 60 ppb or less. The results for November caused the LRAA for two locations in the system to exceed the MCL at 69.7ppb and 62.1ppb. A Tier II Public Notice for a non-emergency drinking water violation was issued and additional samples were collected. The results of these samples showed that the level of HAAs were less than 60ppb, however the LRAA continues to remain above 60ppb for the two locations. Additional information can be found on our website at www.bcwsa.net.

Additional Information for 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. BCWSA 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 at 800-426-4791 or at www.epa.gov/safewater/lead.

Additional Monitoring

Contaminants	Recommended Limits or Range	Level Detected	Typical Source
Total Alkalinity		43.5 ppm	Secondary Drinking Water Standards refer to recommended limits on compounds that might pose a nuisance to the customer. These compounds affect aesthetic quality (appearance, taste and odor) but do not pose a health risk.
Aluminum	0.05 to 0.2 ppm	< 0.010 ppm	
Calcium Hardness		69.8 ppm	
Chloride	250 ppm	50.7 ppm	
Color	15 Color Units	< 5 Color Units	
Corrosivity	-1 to +1 Langelier Index	-1.09 Langelier Index	
Foaming Agents (MBAS)	0.5 ppm	< 0.05 ppm	
Hardness	50 to 250 ppm	85.5 ppm	
Iron	0.3 ppm	0.163 ppm	
Manganese	0.05 ppm	< 0.010 ppm	
Odor	3 TON	<1 TON	
pH	6.5 to 8.5	7.12	
Sulfate	250 ppm	15.6 ppm	
Total Dissolved Solids	500 ppm	188 ppm	
Zinc	5 ppm	0.06 ppm	

Terms and Abbreviations

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

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 the 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.

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) – Highest level of disinfectant allowed in drinking water. There is convincing evidence that additional 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 contamination.

Nephelometric Turbidity Unit (NTU) – A measure of water clarity.

Picocuries per liter (pCi/L) – A measure of radioactivity.

Parts per million or milligrams per liter (ppm or mg/L) – One part per million equals about 1 minute in 2 years.

Parts per billion or micrograms per liter (ppb or µg/L) – One part per billion equals about 1 second in 32 years.

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