South Whitehall Township Annual Water Quality Report 2018

SWT Main System
PWSID #3390065

SWT Consecutive System PWSID #3390087

ESTE INFORME CONTIENE INFORMACION MUY IMPORTANTE SOBRE SU AGUA POTABLE. TRADUZCALO O HABLE CON ALGUIEN QUE LO ENTIENDA BIEN .

2018 Drinking Water Quality Report for South Whitehall Township

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. It outlines information concerning the *SWT Main System* (*PWSID #3390065*), and *SWT Consecutive System* (*PWSID #3390087*).

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.

South Whitehall Township Board of Commissioners meet the first and third Wednesday of every month at 7pm.

- **Where your water comes from:**

South Whitehall Township has nine active wells located within *South Whitehall Township*. Four draw from the Beekmantown Group of aquifers and five draw from the Allentown Formation aquifers. In addition, we purchase treated surface water from Lehigh County Authority Allentown Division, who took over operation of *City of Allentown* in *August 2013*, and have an emergency interconnection with Lehigh County Authority Suburban Division.

- **What is in this report:**

South Whitehall Township Water Department routinely monitors for contaminants in your drinking water according to Federal and State laws. This report shows the results of our monitoring and Lehigh County Authority Allentown Division's monitoring for the period of *January 1st to December 31st, 2018*. The *LCA's* test results (*Table 1 – 6)* are included because their water quality will effect our system's due to our interconnections.

- **EPA Disclaimer:**

All sources of drinking water are subject to potential contamination by constants that are naturally occurring or man made. Those contaminants can be microbes, pesticides, herbicides, organic or inorganic chemicals, or radioactive materials. All drinking water, including 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. The presence of contaminants does not necessarily indicate that the water poses a health risk. 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. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling *the Environmental Protection Agency's Safe Drinking Water Hotline* at **1-800-426-4791.**

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 septic systems.

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.

IMPORTANT INFORMATION

- **Why this report is important:**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune systems 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**.

2018 Water Quality Test Results

Abbreviations and Definitions

MCL	Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs (definition below) as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal. 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.
MinRDL	Minimum Residual Disinfectant Level. The minimum level of residual disinfectant required at the entry point to the distribution system.
MaxRDL	Maximum Residual Disinfectant Level. 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.
MaxRDLG	Maximum Residual Disinfectant Goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MaxRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
AL	Action Level. The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
TT	Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.
mg/L	Milligrams per liter.
NTU	Nephelometric turbidity units. (measure of water's cloudiness)
pCi/L	Picocuries per liter. (a measure of radiation)
ug/L	Micrograms per liter.
N/A	Not applicable.
< or >	< = Less than. > = Greater than.
Range of Detections	The lowest test result recorded and the highest test result recorded.

2018 Water Quality Test Results

Additional Abbreviations and Definitions

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.

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

2018 Water Quality Test Results

Table 1: LCA Unregulated Contaminant Monitoring

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. All Results are from the 2015 Unregulated Contaminant Monitoring Rule 3 testing.

Contaminant Name	Reported Level (Average)	Range of results
Hexavalent Chromium (ppb)	0.64	0.39 – 0.91
Chlorate (ppb)	143	53 – 270
Strontium (ppb)	141	100 – 201
Vanadium (ppb)	0.13	0.0 – 0.25
1,4 Dioxane (ppb)	0.07	0.0 – 0.11

2018 Water Quality Test Results

Table 2: LCA Entry Point Disinfectant Residual

Contaminant Name	MCL (Maximum Allowed)	MCLG (Goal)	LCA's Water Test Results	Range of LCA's Test Results	Sample Date	Pass or Fail	Typical Source
Chlorine (as Cl_2) (ppm)	MinRDL = Not less than 0.40 for more than 4 hours	N/A	Lowest Detected Level = 0.26	0.26 – 1.18	2018	Pass	Water additive used to kill bacteria

2018 Water Quality Test Results

South Whitehall Township

Table 3: LCA Chemical Contaminants

Contaminant Name	MCL (Maximum Allowed)	MCLG (Goal)	LCA's Water Test Results	Range of LCA's Test Results	Sample Date	Pass or Fail?	Typical Source
Chlorine (as Cl_2) (ppm)	MaxRDL = 4	MaxRDLG = 4	0.02	0.02 – 1.41	2018	Pass	Water additive used to kill bacteria
Total Trihalomethanes (ppb)	80	N/A	33.7 (running annual average)	11.0 – 54.8	2018	Pass	By-product of water chlorination
Haloacetic Acids (ppb)	60	N/A	15.1 (running annual average)	5.83 – 26.8	2018	Pass	By-product of water chlorination
Barium (ppm)	2	2	0.035	0.034 – 0.035	2018	Pass	Erosion of natural deposits
Chromium (ppb)	100	100	1	1	2018	Pass	Erosion of natural deposits; discharge from steel and pulp mills

2018 Water Quality Test Results

Table 4: LCA Chemical Contaminants (Cont'd)

Contaminant Name	MCL (Maximum Allowed)	MCLG (Goal)	LCA's Water Test Results	Range of LCA's Test Results	Sample Date	Pass or Fail?	Typical Source
Nitrate (ppm)	10	10	3.72	3.66 – 3.72	2018	Pass	Fertilizer runoff; Leaching from septic tanks
Fluoride (ppm)*	2	2	0.44	0.38 – 0.44	2018	Pass	Water additive which promotes strong teeth
Combined Radium (pCi/l)	5	0	2.2	1.4 – 2.2	2014	Pass	Erosion of natural deposits

** Fluoride: LCA adds fluoride to its drinking water as a requirement of the lease of the water system from the City of Allentown. LCA's water typically contains fluoride levels between 0.5 and 0.6 ppm to promote strong teeth. Test results shown above were a result of specific monitoring completed to meet regulatory reporting requirements.*

2018 Water Quality Test Results

Table 5: LCA Other Contaminants

Contaminant Name	MCL (Maximum Allowed)	MCLG (Goal)	LCA's Water Test Results	Range of LCA's Test Results	Sample Date	Pass or Fail?	Typical Source
Turbidity (NTU)	$TT = 1$ $TT = at\ least\ 95\%\ of\ monthly\ sample \leq 0.3\ NTU$	0	$\frac{0.228}{100\%}$	N/A	2018	Pass	Measure of water cloudiness, caused by soil runoff. An indicator of filter performance

2018 Water Quality Test Results

South Whitehall Township

Table 6: LCA Lead & Copper Testing

Contaminant Name	MCL (Maximum Allowed)	MCLG (Goal)	LCA's Water Test Results	Range of LCA's Test Results	Sample Date	Pass or Fail?	Typical Source
Copper (ppm)	AL = 1.3	1.3	0.24	All samples were < AL	2016	Pass	Corrosion of household plumbing
Lead (ppb)	AL = 15	0	9	1 out of 50 samples were > AL	2016	Pass	Corrosion of household plumbing

2018 Water Quality Test Results

Notice: 2018 Monitoring & Reporting Violation

LCA's water system faced no water quality violations in your water system in 2018.

2018 Water Quality Test Results

South Whitehall Township Statement:

PADEP Conducted a Source Water Assessment in 2004 and found that our water sources are potentially susceptible to contamination from several sources including Auto repair shops, gas service stations and underground storage tanks. A summary of the source water report along with reports of other water supplies in the Lehigh Valley can be found at http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-10089

South Whitehall Township Water Department routinely monitors for constituents in your drinking water according to Federal and State Laws. The following tables show results of our monitoring for the period of January 1st to December 31st , 2018. All 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.

2018 Water Quality Test Results

SWT Unregulated Contaminant Monitoring
All results for Unregulated Contaminant Monitoring Rule 3 is for 2015

Contaminant Name	Reported Level (Average)	Range of Results
Chlorate (ppb)	97.95	23.2 to 604
Hexavalent Chromium (ppb)	0.32	0.14 to 0.78
Chromium (ppb)	0.565	0.27 to 1.2
Strontium (ppb)	139.9	66.3 to 269
Molybdenum, Total (ppb)	1.18	1.1 to 1.9
Vanadium (ppb)	0.24	0.24
1,4-Dioxane (ppb)	0.089	0.076 to 0.099

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.

2018 Water Quality Test Results

SWT Entry Point Disinfectant Residual

Contaminant Name	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation YES/NO	Typical Source
Chlorine (EP 111)	0.2	1.05	1.05 to 2.72	ppm	2018	NO	Water additive used to control microbes.

2018 Water Quality Test Results

South Whitehall Township

Contaminant (Units)	Level Detected	Range of Detections	MCL	MCLG	Violation (Yes/No)	Typical Source
Barium (ppm) Sampled in 2018	0.067	0.013 to 0.067	2	2	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb) Sampled in 2018	1.0	0.3 to 1.0	100	100	NO	Discharge from steel and pulp mills; Erosion of natural deposits
Chlorine (ppm)	1.62	1.52– 1.62	4	4	NO	Water additive used to control microbes
Fluoride (ppm) Sampled in 2015 through 2018	0.604	ND to 0.604	2	2	NO	Water additive to promote strong teeth
Nickel (ppb) Sampled in 2018	0.4	ND to 0.4	NA	NA	NO	Leaching from metals in contact with drinking water. The MCL for Nickel was remanded by EPA.
Nitrate (ppm)	3.94	1.26 – 4.53	10	10	NO	Fertilizer runoff; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb) Sampled in 2015	1.2	ND to 1.2	50	50	NO	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines

2018 Water Quality Test Results
SWT Detected Inorganic Contaminants

Contaminant (Units)	Level Detected	Range of Detections	MCL	MCLG	Violation (Yes/ No)	Typical Source
Arsenic (ppb) Sampled in 2018	0.4	ND to 0.4	10	0	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production waste
Cyanide (ppb) Sampled in 2018	1	ND to 1	200	200	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Thallium (ppb) Sampled in 2018	0.03	ND to 0.03	2	0.5	No	Leaching from ore-processing sites; Discharge from electronics, glass and drug factories

2018 Water Quality Test Results

SWT Detected Organic Contaminants

Contaminant (Units)	Level Detected	Range of Detections	MCL	MCLG	Violation (Yes/No)	Typical Source
TTHM Total Trihalomethanes (ppb)	32.6	11.5 to 52.6	80	NA	NO	By-product of drinking water chlorination
Haloacetic Acids (HAA) (ppb)	12.8	6.7 to 17.0	60	NA	NO	By-product of drinking water chlorination
1,1,1 – Trichloroethane (ppb) Sample in 2018	0.5	ND TO 0.5	200	NA	NO	Discharge from metal degreasing sites and other factories

2018 Water Quality Test Results

SWT Detected Radiological Contaminants

Contaminant (Units)	Level Detected	Range of Detections	MCL	MCLG	Violation (Yes/No)	Typical Source
Combined Radium (pCi/L) (sampled in 2014)	1.89	ND to 1.89	5	0	NO	Erosion of natural deposits
Combined Uranium (ppb) (sampled in 2014)	1.03	ND to 1.03	30	0	NO	Erosion of natural deposits

2018 Water Quality Test Results

SWT Lead and Copper (Sampled in 2016)

Contaminant	Action Level (AL)	MCLG	90th Percentile Value	Units	# of Sites Above AL of Total Sites	Violation (Yes/No)	Typical Source
Copper	1.3	1.3	0.15	ppm	0	NO	Corrosion of household plumbing materials
Lead	15	0	4.8	ppb	0	NO	Corrosion of household plumbing materials

2018 WATER QUALITY TEST RESULTS CONSECUTIVE SYSTEM

C0NTAMINANT (UNITS)	Violation Yes/No	Level Detected	Range	MCL	MCLG	Major Sources in Drinking Water
Inorganic Contaminants						
Chlorine (ppm)	**No**	**1.23**	**0.83 to 1.23**	**4**	**4**	**Water additive used to control microbes.**
Fluoride (ppm) Sampled in 2015 and 2018	**No**	**0.55**	**0.3 to 0.55**	**2**	**2**	**Water additive to promote strong teeth.**
Organic Contaminants						
TTHM Total Trihalomethanes (ppb)	**No**	**39.6**	**Only 1 sample taken**	**80**	**N/A**	**By-product of drinking water chlorination.**
Haloacetic Acids (HAA) (ppb)	**No**	**10.2**	**Only 1 sample taken**	**60**	**N/A**	**By-product of drinking water chlorination.**

2018 Water Quality Test Results

SWT Consecutive System Lead and Copper (Sampled in 2016)

Contaminant	Action Level (AL)	MCLG	90th Percentile Value	Units	# of sites Above AL of Total Sites	Violation of TT Yes/No	Sources of Contamination
Copper	1.3	1.3	0.15	ppm	0	No	Corrosion of household plumbing.
Lead	15	0	2.94	ppb	0	No	Corrosion of household plumbing.

2018 Water Quality Test Results

- SWT Consecutive System Unregulated Contaminants (Sampled in 2016)

Unregulated Contaminants Sampled in 2014	Reported Level (Average)	Range of Results
Chlorate	0.565	0.27 TO 1.2
Hexavalent Chromium (ppb)	0.32	0.14 TO 0.78
Strontium (ppb)	139.9	66.3 TO 269
Vanadium (ppb)	0.24	0.24
1,4 Dioxane (ppb)	0.089	0.076 TO 0.099
Metachlor Ethane Sulfonic Acid (ppb)	97.95	23.2 TO 604

2018 Water Quality Test Results

Notice: Monitoring & Reporting Violation

South Whitehall Township's water systems had no monitoring or reporting violations in 2018!

Protecting Your Drinking Water

The Pennsylvania Department of Environmental Protection (PA-DEP) completed an initial Source Water Assessment of the springs and surface water sources that supply water to your water system in 2004. An update to this assessment was completed in 2011 through PA-DEP's Source Water Protection Technical Assistance Program. Public meetings were held in 2011 to review the assessment, and completed reports are available for review by LCA customers, municipalities served by LCA's water systems, and local planning agencies.

The assessment found that LCA's sources of water are located within residential, commercial and industrial areas and, therefore, are susceptible to potential sources of contamination from related activities. Examples include leaking underground storage tanks, wintertime road salt applications and household activities such as lawn fertilizing and improper disposal of household hazardous wastes. Please contact LCA if you are interested in learning more about the Source Water Protection plan.

A summary of the report is available by contacting LCA, and additional information is available on the PA-DEP web site at **www.dep.state.pa.us (use Keyword "Source Water Protection")**

❖ Water Hardness Info

Water "*hardness*" is a measure of the mineral content in your water. These minerals, such as calcium and magnesium, are essential to human health and do not need to be removed from your drinking water. However, some customers prefer to remove these mineral with a water softener to avoid mineral deposits on faucets and other fixtures.

❖ Hardness Scale:

0 – 5 grains per gallon = *Soft Water*

6 – 10 grains per gallon = *Moderately Hard Water*

>11 grains per gallon = *Hard Water*

South Whitehall Township water averages between 13 – 15 grains per gallon.

IMPORTANT INFORMATION

Water loss per quarter at 60 PSI water pressure

There are occasions when your water bill may seem high. The high readings may be caused by a small leak in your plumbing system or equipment. The following chart received from *the Pennsylvania Rural Water Association* shows how much water you can lose from these small leaks. If you suspect there is a leak in your home, notify a plumber to inspect your system.

Diameter of stream	Gallons	Cubic Feet	Cubic Meters
1/4”	1,181,500	158,000	4,475
3/16”	666,000	89,031	2,521
1/8”	296,000	39,400	1,115
1/16”	74,000	9,850	280

A continuous leak from a hole on the chart above would over a three month period, amount to water loss as shown on chart.

OTHER IMPORTANT INFORMATION

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. *South Whitehall Township* 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* (**1-800-426-4791**) or at **http://www.epa.gov/safewater/lead**

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

If you have any questions about this report or concerning your water utility, please contact *the South Whitehall Township Water Department/Jerry Charvala* at **(610) 398-0401**, we want our valued customers to be informed about their water utility.