NORTH PENN WATER AUTHORITY

300 Forty Foot Road • Lansdale, PA 19446
Ph: 215-855-3617
This report is also available online at
www.npwa.org

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NPWA water meets or exceeds all State and Federal Safe Drinking Water Act standards.

2017

ANNUAL DRINKING WATER QUALITY REPORT

SELLERSVILLE

PWSID#1460034

This report is being mailed to you as a requirement of the Federal Safe Drinking Water Act.

"A dedicated, professional workforce committed to providing the community with a safe, reliable, and economical water supply."

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 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 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 DEP prescribe regulations which limit the amount 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. North Penn 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 **www.epa.gov/safewater/lead**.

INFORMATION ABOUT ARSENIC

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

CRYPTOSPORIDIUM AND GIARDIA

Cryptosporidium and Giardia are microbial pathogens found in surface water throughout the U.S. Monitoring of our source water (before treatment) at Forest Park Water (FPW) indicated the presence of Cryptosporidium in 6 out of 12 samples collected. Giardia was detected in 7 out of 12 samples collected. FPW treatment processes are designed to remove or inactivate Cryptosporidium and Giardia cysts with a high level of certainty. Current available test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. NPWA encourages immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium and Giardia must be ingested to cause disease, and it may be spread through means other than drinking water.

Below is a list of parameters which NPWA monitored for in 2016 but DID NOT DETECT:

Inorganic Chemicals (IOCs)

Antimony	Mercury
Beryllium	Nickel
Cadmium	Nitrite
Cyanide	Selenium
Fluoride	Thallium

Perfluorinated Compounds (PFCs)

- Perfluorooctanesulfonic acid (PFOS)
- Perfluorononanoic acid (PFNA)
- Perfluorobutanesulfonic acid (PFBS)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorohexanesulfonic acid (PFHxS)

Coliform Bacteria

E. Coli	Total Coliform Bacteria

Synthetic Organic Chemicals (SOCs)

Atrazine	Pentachlorophenol

Volatile Organic Chemicals (VOCs)

1,1,1-Trichloroethane	1,2-Dichloropropane	Ethylbenzene
1,1,2-Trichloroethane	o-Dichlorobenzene	Styrene
1,1-Dichloroethylene	Benzene	Toluene
1,2,4-Trichlorobenzene	Carbon tetrachloride	trans-1,2-Dichloroethylene
p-Dichlorobenzene	Chlorobenzene	Vinyl Chloride
1,2-Dichloroethane	Dichloromethane	Xylenes, total

HOW NPWA IS PROTECTING THE WATER YOU DRINK

To enhance water quality, NPWA performs an annual hydrant flushing program which takes place in the spring of each year. This flushing program helps improve water quality by removing any possible build-up of mineral deposits from the inside of water distribution pipes. NPWA also has an aggressive water main replacement program to improve the quality of water that we deliver to our customers. Old unlined cast iron mains, that can affect water quality and restrict flow, are replaced on a regular basis. These projects are scheduled when Penn DOT or our member municipalities are doing work on the roads to reduce inconvenience to the community.

In 2011, NPWA became the first water utility in Pennsylvania to join American Water Works Association's (AWWA) Distribution System Optimization Program. This program is part of AWWA's Partnership for Safe Water whose objective is to identify opportunities for improvement in system operations and to empower system operators with knowledge to recognize and apply procedures that result in water quality and system reliability improvements. NPWA's participation in this voluntary program demonstrates our commitment to providing the best quality water to our customers.

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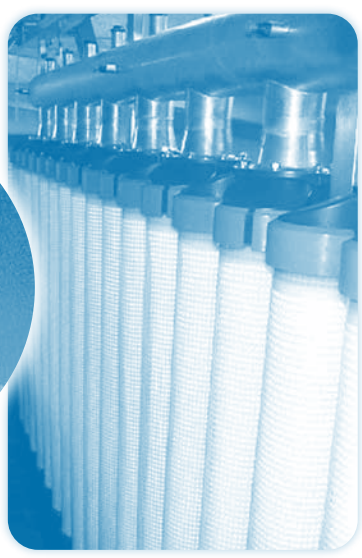
FOREST PARK WATER

Forest Park is a state of the art water treatment facility that combines conventional treatment processes with advanced techniques, which include ozone disinfection and membrane filtration. Membrane filtration is a leading-edge technology capable of consistently producing very high quality water and ensures the plant can safely meet the more stringent federal and state water quality regulations that will be required in the near future. This combination of traditional and innovative water treatment allows Forest Park to produce the safest, highest quality water possible. In 2016, for the 9th consecutive year, Forest Park Water received the prestigious Area Wide Optimization Program (AWOP) Award presented by the PA DEP. The award recognizes outstanding efforts toward optimizing turbidity removal performance. AWOP is a national filter plant optimization effort among 22 states, the EPA, and the Association of State Drinking Water Administrators. The AWOP Award and Forest Park Water's on-going participation in the "Partnership for Safe Water", a voluntary program administered by the American Water Works Association, demonstrate Forest Park Water's continuing commitment to operational excellence.



PARTNERSHIP FOR SAFE WATER℠

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**Este informe contiene información importante acerca de su agua potable.
Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda.**

Owners of multiple family dwellings, commercial businesses, public housing, or similar situations, are encouraged to post and/or distribute this report. Additional copies are available and can be obtained at North Penn Water Authority's operations center or by calling (215) 855-3617.

This report is also available online at www.npwa.org.

NPWA water meets or exceeds all State and Federal Safe Drinking Water Act standards.

Water System Information

safe

quality

tested

economical

North Penn Water Authority (NPWA) is pleased to present to you this year's Annual Drinking Water Quality Report. This brochure is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and Pennsylvania Department of Environmental Protection (PA DEP) state standards. We are committed to providing you with information because informed customers are our best allies. The Authority's staff of professionals is dedicated to ensuring that our customers receive a safe, economical, and continuous supply of water.

It is important for our valued customers to be informed about their water quality. If you have any questions about this report or regarding your water utility, please contact Lindsay Hughes, Community Relations Coordinator, at **(215) 855-3617** or visit our website at **www.npwa.org**. If you want to learn more about NPWA, please attend any of our regularly scheduled Board of Directors meetings. Meetings are held on **the fourth Tuesday of every month at the Authority's operations center located at 300 Forty Foot Road, near the intersection of Forty Foot and Allentown Roads in Towamencin Township. Meetings begin at 7:30 p.m.**

Sources of Water

In 2016, the sources of water that NPWA delivered to its customers in Sellersville Borough came from Well 6, the well located in West Rockhill Township and treated surface water from the Forest Park Water (FPW) Treatment Plant located in Chalfont. As the water leaves FPW and travels through the distribution system, a small percentage of groundwater from wells located within Hilltown Township and Telford Borough at times can also contribute to the source of water that serves Sellersville. Water from all groundwater supplies is chlorinated before it is delivered to our customers' homes.

The source of water that is treated at Forest Park Water is the North Branch Neshaminy Creek. The North Branch Neshaminy Creek originates as a small stream near Route 413 in Central Bucks County. The creek then flows into Lake Galena, which is the reservoir for Forest Park Water. Water released from Lake Galena flows down the Neshaminy Creek to where it is then drawn into the Forest Park Water Treatment Plant, in Chalfont, Pennsylvania. At times throughout the year, water is pumped from the Delaware River at Point Pleasant and diverted into the North Branch Neshaminy Creek near Gardenville, Pennsylvania. This diversion controls the level of Lake Galena for recreational purposes, ensures a sufficient drinking water supply, and maintains baseflow in the stream.

SOURCE WATER ASSESSMENT

In 2003, a Source Water Assessment of the North Branch Neshaminy Creek Intake, which supplies water to the Forest Park Water Treatment Plant, was completed and prepared by Spotts, Steven & McCoy, Inc. for the PA DEP. The Assessment found that the North Branch Neshaminy Creek Intake is potentially most susceptible to point sources of pollution from auto repair shops, wastewater treatment plants, boating, quarries, on-lot septic systems and gas stations. Non-point sources of potential contamination include major transportation corridors and runoff from areas of urban development, livestock farming, and industrial parks. The most serious potential sources are related to accidental release of a variety of materials along transportation corridors and high nutrients from Lake Galena. The Forest Park Water Treatment Plant has the capability to treat a wide array of contaminants and minimize any negative impacts from such sources. Regular and frequent monitoring of the water supply allows us to identify any concerns and remediate any problems in a timely manner. Contingency plans and emergency response plans are in place to deal with any release of contaminants or accidental occurrences that could compromise the integrity of your drinking water quality.

A Source Water Assessment of Sellersville's groundwater source was completed in 2005 by the PA DEP. The area around the well is primarily forested and agricultural/undeveloped land with moderate development. The Assessment found that the well was most susceptible to contamination from transportation corridors, agricultural activities, and abandoned landfills. Potential pollutants used or found in residential areas, auto repair shops, cemeteries, and an electroplater also pose a high threat to the well.

Summary reports of the Assessments are available on the Source Water Assessment Summary Reports eLibrary web page: **http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-10045**. Complete reports were distributed to municipalities, water supplier, local planning agencies and PA DEP offices. Copies of the complete reports are available for review at the PA DEP Southeast Regional Office, Records Management Unit at **(484)250-5910**.

North Penn Water Authority serves over 34,000 customers in the following municipalities:

Hatfield Borough
Lansdale Borough
Sellersville Borough
Souderton Borough
Franconia Township
Hatfield Township
Lower Salford Township
Skippack Township
Towamencin Township

and portions of:
East Rockhill Township
Hilltown Township
Montgomery Township
New Britain Borough
New Britain Township
Salford Township
Upper Gwynedd Township
Upper Salford Township
West Rockhill Township
Worcester Township

PEOPLE WITH SPECIAL HEALTH CONCERNS

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

NPWA routinely monitors 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, 2016. 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

In the following tables 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:

- 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 contamination.
- Minimum Residual Disinfectant Level (MinRDL): The minimum level of residual disinfectant required at the entry point to the distribution system.
- Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
- NTU: Nephelometric turbidity unit is a measure of the clarity of water.
- N/A: Not Applicable
- pCi/L: picocuries per liter (a measure of radioactivity)
- ppm: parts per million, or milligrams per liter (mg/L)
- ppb: parts per billion, or micrograms per liter (µg/L)
- ppt: parts per trillion, or nanograms per liter (ng/L)

DETECTED SAMPLE RESULTS

North Penn Water Authority – PWSID # 1460034

Tested at Forest Park Water (FPW), Sellersville Well 6, Hilltown Township Wells (H) and Telford Borough Wells (T)

CHEMICAL CONTAMINANTS

Contaminant	MCL	MCLG	Highest Level Detected	Range of Detections	Units	Sample Date	Violation Yes/No	Sources of Contamination
Bromate	10	0	3.8	1.8 – 3.8	ppb	2016	No	By-product of drinking water disinfection
Chlorine (In distribution system)	MRDL=4	MRDLG=4	1.00	0.63 – 1.00	ppm	2016	No	Water additive used to control microbes
Arsenic	10	0	4 7 (T)	0 – 4 3 – 7 (T)	ppb	2015 and 2016	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium	2	2	0.090 0.33 (T) 0.073 (H)	0.020 – 0.090 0.07 – 0.33 (T) 0.071 – 0.073 (H)	ppm	2015 and 2016	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium	100	100	2 2 (T) 2.8 (H)	0 – 2 2 – 2 (T) 2.8 – 2.8 (H)	ppb	2015 and 2016	No	Discharge from steel and pulp mills; Erosion of natural deposits
Nickel	100	100	6.1 (H)	0 – 6.1 (H)	ppb	2015	No	Erosion of natural deposits; By-product of various industrial processes
Fluoride	2	2	0.148 (T) 0.23 (H)	0 – 0.148 (T) 0.22 – 0.23 (H)	ppm	2015	No	Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Nitrate	10	10	0.760 3.16 (T)	0 – 0.760 1.09 – 3.16 (T)	ppm	2016	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
1,1-Dichloroethylene	7	7	0.71 (T)	0 – 0.71 (T)	ppb	2016	No	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene	70	70	4.06	0 – 4.06	ppb	2016	No	Discharge from industrial chemical factories
Trichloroethylene	5	0	0.881	0 – 0.881	ppb	2016	No	Discharge from metal degreasing sites and other factories
Tetrachloroethylene	5	0	0.651	0 – 0.651	ppb	2016	No	Discharge from factories and dry cleaners
Alpha Emitters	15	0	6.17 (T) 3.27 (H)	0 – 6.17 (T) 0 – 3.27 (H)	pCi/L	2012, 2014 and 2016	No	Erosion of natural deposits
Combined Radium	5	0	0.4 (T) 0.27 (H)	0 – 0.4 (T) 0 – 0.27 (H)	pCi/L	2012, 2014 and 2016	No	Erosion of natural deposits
Uranium	30	0	7.30 (T) 1.30 (H)	3.05 – 7.30 (T) 0 – 1.30 (H)	µg/L	2012, 2014 and 2016	No	Erosion of natural deposits
Haloacetic Acids (HAAs)	60	N/A	7.80*	2.49 – 14.1	ppb	2016	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHMs)	80	N/A	28.5*	6.93 – 50.4	ppb	2016	No	By-product of drinking water chlorination

*Since compliance is based on a running annual average, this value represents the highest running annual average result.

ENTRY POINT DISINFECTANT RESIDUAL

Contaminant	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Yes/No	Sources of Contamination
Chlorine – Wells	0.4	0.08* 0.4 (T) 0.47 (H)	0.08 – 1.24 0.4 – 1.34 (T) 0.47 – 2.73 (H)	ppm	2016	No	Water additive used to control microbes
Chlorine – FPW Treatment Plant	0.2	1.00	1.00 – 1.65	ppm	2016	No	Water additive used to control microbes

*Chlorine levels did not drop below the minimum residual level required for more than 4 hours.

TURBIDITY AT FOREST PARK WATER TREATMENT PLANT

Contaminant	MCL	MCLG	Highest Level Detected	Range of Detections	Sample Date	Violation Yes/No	Sources of Contamination
Turbidity	TT=1 NTU for a single measurement	N/A	0.04	0.01 – 0.04	2016	No	Soil runoff
	TT= at least 95% of monthly samples ≤0.3 NTU	N/A	100%	N/A	2016	No	

Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system. As a member of the Partnership for Safe Drinking Water, our goal is to achieve <0.1 NTU. In 2016, we accomplished this. 100% of all samples were <0.1 NTU.

LEAD AND COPPER

Contaminant	Action Level (AL)	MCLG	90th Percentile Value	Units	# of Sites Above AL of Total Sites	Sample Date	Violation Yes/No	Sources of Contamination
Lead	15	0	1.9	ppb	0 out of 31	2016	No	Corrosion of household plumbing
Copper	1.3	1.3	0.951	ppm	0 out of 31	2016	No	Corrosion of household plumbing

Perfluorinated Compounds (PFCs):

There are some contaminants for which the EPA develops health advisories, but has not yet established regulatory limits for compliance by public water suppliers. The health advisories provide technical information on health effects. Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) are included in those contaminants that have no regulatory limit but are associated with a health advisory. Currently, PFOA and PFOS have a combined health advisory level (HAL) of 70 ppt. These chemicals are among a family of manmade chemicals that have been used for decades as an ingredient to make products that resist heat, oil, stains, grease and water, and are used in foam products for firefighting.

Due to recent health concerns in the region regarding PFOA and PFOS (PFCs), Forest Park Water Treatment Plant voluntarily elected to monitor water at the plant for PFCs.

FOREST PARK WATER TREATMENT PLANT

Contaminant	Average Level Detected	Range of Detections	Units	Sample Date
Perfluorooctanesulfonic acid (PFOS)	0	0	ppt	2016
Perfluorooctanoic acid (PFOA)	0.55	0 – 2.2	ppt	2016
PFOS + PFOA*	0.55	0 – 2.2	ppt	2016

***PFOS + PFOA have a combined HAL (Health Advisory Level) of 70 ppt**