NORTH PENN WATER AUTHORITY

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

2015

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."

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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from EPA's Safe Drinking Water Hotline at **1-800-426-4791** or visiting their website at **www.epa.gov/safewater**.

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. 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 EPA's Safe Drinking Water Hotline or at **www.epa.gov/safewater/lead**.

Below is a list of parameters which NPWA monitored for in 2015 but DID NOT DETECT:

Microbiological Parameters

E. Coli

Total Coliform Bacteria

Cryptosporidium - monitored in source water at Forest Park Water

Giardia – monitored in source water at Forest Park Water

Synthetic Organic Chemicals (SOCs)

Atrazine	Pentachlorophenol

Inorganic Chemicals (IOCs)

Antimony	Nickel
Beryllium	Nitrite
Cadmium	Selenium
Cyanide	Thallium
Mercury	

Volatile Organic Compounds (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

UNREGULATED CONTAMINANT MONITORING

Unregulated contaminants are those for which EPA has not yet 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. In 2015, unregulated contaminant assessment monitoring was conducted at the Forest Park Water (FPW) Treatment Plant, NPWA wells and distribution system. The results of this assessment monitoring are presented below. For more information concerning unregulated contaminant monitoring, visit these websites: **https://www.epa.gov/dwucmr** or **http://www.drinktap.org/water-info/whats-in-my-water/unregulated-contaminant-monitoring-rule.aspx**

UNREGULATED CONTAMINANTS – Monitoring Conducted January – October 2015

	Units	Average Level Detected	Range of Results	Sample Location	Use or Environmental Source
Chlorate	ppb	119	33 – 190	FPW and Sellersville Well 6	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide
		66	22 – 110	Distribution System	
Chromium-6	ppb	0.03	0 – 0.07	FPW and Sellersville Well 6	Naturally-occurring element; used in making steel and other alloys; chromium-3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
		0.04	0 – 0.08	Distribution System	
1,1-Dichloroethane	ppb	0	0 – 0.05	FPW and Sellersville Well 6	Used as a solvent
1,4-Dioxane	ppb	0.08	0 – 0.27	FPW and Sellersville Well 6	Used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos
Molybdenum	ppb	1.0	0 – 1.4	FPW and Sellersville Well 6	Naturally-occurring element found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide used as a chemical reagent
		0	0 – 1.1	Distribution System	
Strontium	ppb	1092	93 – 3300	FPW and Sellersville Well 6	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions
		2100	1900 – 2300	Distribution System	
Vanadium	ppb	0	0 – 0.3	FPW and Sellersville Well 6	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
		0.5	0.4 – 0.6	Distribution System	

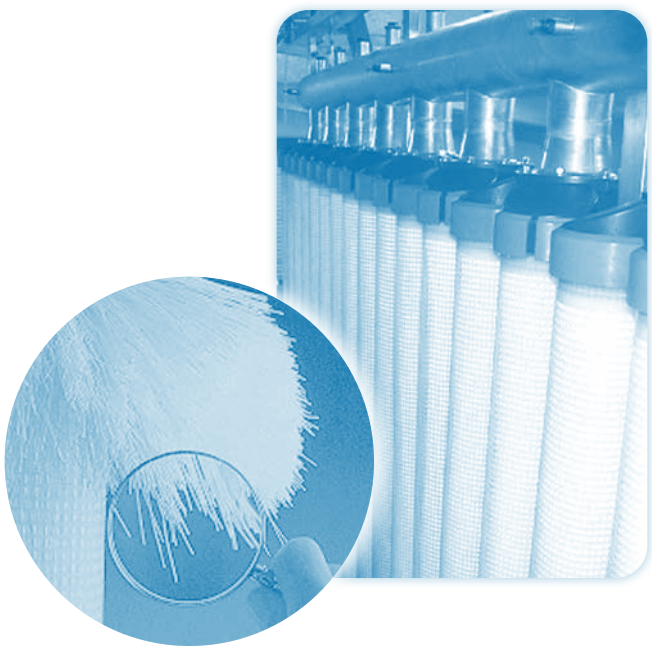
Unregulated Contaminants NOT DETECTED in the January – October 2015 Monitoring

1,2,3-Trichloropropane
1,3-Butadiene
Bromochloromethane (Halon1011)
Bromomethane
Chlorodifluoromethane (HCFC-22)
Chloromethane (methyl chloride)
Cobalt
Perfluorobutanesulfonic acid (PFBS)
Perfluoroheptanoic acid (PFHpA)
Perfluorohexanesulfonic acid (PFHxS)
Perfluorononanoic acid (PFNA)
Perfluorooctanesulfonic acid (PFOS)
Perfluorooctanoic acid (PFOA)

FOREST PARK WATER

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.

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 2015, for the 8th 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℠

NORTH PENN WATER AUTHORITY

2015 ANNUAL DRINKING WATER QUALITY REPORT

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.

About the 2015 Annual Drinking Water Quality Report

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.

safe

quality

tested

economical

NPWA routinely monitors for constituents in your drinking water according to EPA, PA DEP and Safe Drinking Water Regulations. The monitoring results shown in this report includes information from the **2015 calendar year**. While NPWA tests for over 100 parameters to ensure water quality, the tables in this report summarize the monitoring results for parameters found at detectable levels. A list of parameters that NPWA monitored for but were not detected is in a separate portion of this report. Annual testing is not required for all parameters because the concentrations of these parameters do not change frequently. Some are on multi-year cycles based on schedules determined by state and federal regulations. Therefore, some of our data, though representative, are more than one year old.

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.**

Where Your Water Comes From

In 2015, 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.

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.

SOURCE WATER ASSESSMENT

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.

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. If you are interested in obtaining information concerning Source Water Assessments, please contact the Authority or the state **PA DEP** at **484-250-5980** or you may obtain copies of these Assessments at **http://www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/SrceProt/SourceAssessment/default.htm.**

North Penn Water Authority serves over 33,000 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

WHY NPWA NEEDS TO TREAT YOUR WATER

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 PA DEP prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) and PA 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 EPA's Safe Drinking Water Hotline at **1-800-426-4791** or visiting their website at **www.epa.gov/safewater**.

DETECTED SAMPLE RESULTS

PWSID # 1460034

DISINFECTANT RESIDUALS - Tested at FPW, Sellersville Well 6, Hilltown Township Wells (H) and Telford Borough Wells (T)

	Violation Yes/No	Units	Average Level Detected	Range of Results	MRDL	MRDLG	Use or Environmental Source
Chlorine (Leaving FPW)	No	ppm	1.32	0.98 – 1.70	4	4	Water additive used to control microbes
Chlorine (Leaving Wells)	No	ppm	1.00	0 – 1.52 0.41 – 2.45 (H) 0.40 – 1.82 (T)	4	4	Water additive used to control microbes

DISINFECTANT RESIDUALS - Tested Throughout Distribution System

	Violation Yes/No	Units	Average Level Detected	Range of Monthly Averages	MRDL	MRDLG	Use or Environmental Source
Chlorine	No	ppm	0.76	0.68 – 0.83	4	4	Water additive used to control microbes

DISINFECTION BY-PRODUCTS - Tested at FPW

	Violation Yes/No	Units	Average Level Detected	Range of Results	MCL	MCLG	Use or Environmental Source
Bromate	No	ppb	1.9	1.4 – 2.8	10	0	By-product of drinking water disinfection

DISINFECTION BY-PRODUCTS - Tested Throughout Distribution System

	Violation Yes/No	Units	Average Level Detected	Range of Results	MCL	MCLG	Use or Environmental Source
Haloacetic Acids (HAAs)	No	ppb	7.35	2.86 – 13.2	60	N/A	By-product of drinking water disinfection
Total Trihalomethanes (TTHMs)	No	ppb	27.0	6.80 – 61.3	80	N/A	By-product of drinking water disinfection

INORGANIC CHEMICALS (IOCs) - Tested at FPW, Sellersville Well 6, Hilltown Township Wells (H) and Telford Borough Wells (T)

	Violation Yes/No	Units	Average Level Detected	Range of Results	MCL	MCLG	Use or Environmental Source
Arsenic	No	ppb	2.0 5.0 (H) 5.4 (T)	0 – 4.0 0 – 10 (H) 3.0 – 6.2 (T)	10	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes

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.

Barium	No	ppm	0.06 0.072 (H) 0.21 (T)	0.02 – 0.09 0.071 – 0.073 (H) 0.07 – 0.33 (T)	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium	No	ppb	1.0 2.8 (H) 2.0 (T)	0 – 2.0 2.8 – 2.8 (H) 2.0 – 2.0 (T)	100	100	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride	No	ppm	0.23 (H) 0 (T)	0.22 – 0.23 (H) 0 – 0.15 (T)	2	2	Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Nickel	No	ppb	3.1 (H)	0 – 6.1 (H)	100	100	Erosion of natural deposits; By-product of various industrial processes
Nitrate	No	ppm	0.50 2.1 (T)	0 – 0.89 1.1 – 3.2 (T)	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

LEAD AND COPPER - Tested at Customers' Taps - Most recent tests were done in 2013

	Violation Yes/No	Units	90th Percentile Results	Action Level (AL)	MCLG	# of Sites Above AL of Total Sites	Use or Environmental Source
Copper	No	ppm	0.59	1.3	1.3	0 out of 33	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead	No	ppb	3.9	15	0	0 out of 33	Corrosion of household plumbing systems; Erosion of natural deposits

RADIONUCLIDES - Tested at FPW, Sellersville Well 6, Hilltown Township Wells (H) and Telford Borough Wells (T) - Most recent tests were done in 2011 -2014

	Violation Yes/No	Units	Average Level Detected	Range of Results	MCL	MCLG	Use or Environmental Source
Alpha Emitters	No	pCi/L	1.25 0 (H) 4.60 (T)	0 – 2.50 0 – 3.27 (H) 0 – 8.33 (T)	15	0	Erosion of natural deposits
Combined Radium	No	pCi/L	0.97 0 (H)	0 – 1.94 0 – 0.27 (H)	5	0	Erosion of natural deposits
Uranium	No	µg/L	0.96 0.70 (H) 5.19 (T)	0 – 1.91 0 – 2.19 (H) 3.05 – 7.30 (T)	30	0	Erosion of natural deposits

TURBIDITY - Tested at FPW

	Violation Yes/No	Units	Average Level Detected	Range of Results	MCL	MCLG	Use or Environmental Source
Turbidity	No	NTU	0.02	0.02 – 0.04	TT	N/A	Soil runoff

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 2015, we accomplished this. 100% of all samples were <0.1 NTU.

VOLATILE ORGANIC CHEMICALS (VOCs) - Tested at FPW, Sellersville Well 6, Hilltown Township Wells (H) and Telford Borough Wells (T)

	Violation Yes/No	Units	Average Level Detected	Range of Results	MCL	MCLG	Use or Environmental Source
cis-1,2-Dichloroethylene	No	ppb	1.6	0 – 4.0	70	70	Discharge from industrial chemical factories
Tetrachloroethylene	No	ppb	0	0 – 0.94	5	0	Discharge from factories and dry cleaners
Trichloroethylene	No	ppb	0	0 – 1.3	5	0	Discharge from metal degreasing sites and other factories

In the above 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.
- Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
- N/A: Not Applicable
- 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.
- pCi/L: picocuries per liter (a measure of radioactivity in water)
- ppb: parts per billion, or micrograms per liter (µg/L)
- ppm: parts per million, or milligrams per liter (mg/L)