

2022 ANNUAL DRINKING WATER QUALITY REPORT

PWSID #: 1460042 NAME: Schwenksville Borough Authority

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda. (This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.)

WATER SYSTEM INFORMATION:

This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please contact John Scully at 610-287-7772 or schwenksvillebaws@gmail.com. We want you to be informed about your water supply. If you want to learn more, please attend any of our regularly scheduled meetings. Meetings are held at 7pm, the second Wednesday of each month.

SOURCE(S) OF WATER:

Our water source(s) are five (5) Municipal wells located throughout Schwenksville Borough and Lower Frederick Township, and Interconnections with Aqua PA and The North Penn Water Authority. Both the Aqua PA and The North Penn Water Authority Consumer Confidence report are available at <https://sbawspa.org/water-reports>

A Source Water Assessment of our source(s) was completed by the PA Department of Environmental Protection (Pa. DEP). The Assessment has found that our source(s) are potentially most susceptible to volatile organic compounds. Schwenksville's wells were determined to be most susceptible to contamination from transport corridors and agricultural activities ("A" ratings). Potential pollutants used in residential areas and at auto repair shops also pose a high threat to these wells ("B" ratings). The other potential contaminants in the protection area received "C" and "E" protection ratings. Although these potential sources of contamination (PSOCs) have lower protection priorities, the cumulative effect of the PSOCs on the systems wells should be taken into consideration.

A summary report of the Assessment is available on the Source Water Assessment Summary Reports eLibrary web page: www.elibrary.dep.state.pa.us/dsweb/View/Collection-10045. Complete reports were distributed to municipalities, water supplier, local planning agencies and PADEP offices. Copies of the complete report are available for review at the Pa. DEP Southeast Regional Office, Records Management Unit at (484)250-5900.

EDUCATIONAL INFORMATION:

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)

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 storm water run-off, 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 storm water 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 storm water 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).

MONITORING YOUR WATER:

We routinely monitor 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, 2020. 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. Not all items are required to be sampled every year according to PA DEP regulations. Items are shown with the most recent year of sampling by the SBA and the 2020 sampling.

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 contaminants.

Mrem/year = millirems per year (a measure of radiation absorbed by the body)

ppm = parts per million, or milligrams per liter (mg/L)

pCi/L = picocuries per liter (a measure of radioactivity)

ppq = parts per quadrillion, or pictograms per liter

ppb = parts per billion, or micrograms per liter (µg/L)

ppt = parts per trillion, or nanograms per lit

DETECTED SAMPLE RESULTS:

Chemical Contaminants								
Contaminant	MCL	MC LG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
ARSENIC	10	0	5	0 - 5	ppb	2022	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
NITRATE	10	10	1.40	1.05-1.40	ppm	2022	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
THALLIUM	2	.5	2	1-2	ppb	2018	N	Leaching from ore-processing sites. Discharge from electronics, glass and drug factories
HALOACETIC ACIDS	60	N/A	7.28	2.54-7.28	ppb	2022	N	By-product of drinking water chlorination
DICHLOROACETIC ACID	60	N/A	3	1-3	ppb	2022	N	By product of drinking water disinfection
TRIALO METHANES	80	N/A	46.8	7.28-46.8	ppb	2022	N	By-product of drinking water chlorination
CHLOROFORM	80	70	24.4	N/A	ppb	2022	N	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
BROMOFORM	80	N/A	1.5	.6-1.5	ppb	2022	N	By-product of drinking water chlorination
BROMODICHLORO METHANE	80	N/A	1.36	.25-1.36	ppb	2022	N	By-product of drinking water chlorination
CHLORODIBROMO METHANE	80	N/A	7.3	2-7.3	ppb	2022	N	By-product of drinking water chlorination
GROSS ALPHA	15	15	6.7	1.07-6.7	pCi/L	2022	N	Erosion of natural deposits
COMBINED URANIUM	20	0	1.9	N/A	pCi/L	2019	N	Erosion of natural deposits
RADIUM-226	5	5	.34	N/A	pCi/L	2022	N	Erosion of natural deposits
RADIUM-228	5	5	.74	.71-.74	pCi/L	2020	N	Erosion of natural deposits
CHLORINE-DISTRIBUTION	4	4	1.51	.97-1.51	ppm	2022	N	Water additive to control microbes
IRON	.3	N/A	.37	0-.37	ppm	2022	N	weathering of iron bearing minerals and rocks.
MANGANESE	.05	N/A	.01	0-.01	ppm	2022	N	weathering of manganese bearing minerals and rocks.

Contaminant	MCL	MC LG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
TRICHLOROACETIC ACID	60	N/A	4	N/A	ppb	2022	N	By product of drinking water disinfection

Entry Point Disinfectant Residual							
Contaminant	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine (EP 101)	0.40	.41	.41- 2.85	ppm	2022	N	Water additive used to control microbes.
Chlorine (EP 102)	0.40	.51	.51-2.91	ppm	2022	N	Water additive used to control microbes.
Chlorine (EP 103)	0.40	.44	.44-2.26	ppm	2022	N	Water additive used to control microbes.
Chlorine (EP 106)	0.40	.49	.49-2.87	ppm	2022	N	Water additive used to control microbes.

*Some of these sample residuals appear to be below the Minimum Disinfectant Residual due to monthly changing of buffers, when the chlorine analyzer is cleaned. The residual then rises above the minimum within the 4-hour timeframe established by DEP regulations.

Lead and Copper								
Contaminant	Action Level (AL)	MCLG	90 th Percentile Value	Units	# of Sites Above AL of Total Sites	Sample Date	Violation Y/N	Sources of Contamination
Lead	15	0	0	ppb	0 of 23	2022	N	Corrosion of household plumbing.
Copper	1.3	1.3	.241	ppm	0 of 23	2022	N	Corrosion of household plumbing.

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. Schwenksville Borough 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>.

OTHER VIOLATIONS: July 2022: SBA was required to sample a second location for TTHM/HAA5, quarterly. When the violation was brought to our attention, we rectified the situation immediately and updated procedures to avoid any further violation.

The Schwenksville Borough Authority thanks you for the opportunity of providing your family with cost effective, quality water. The Authority is proud of the outstanding water and service it provides to its customers by our State licensed water works operators. Manager John Scully wishes to assure you that the Board of Directors has taken the necessary steps to guarantee a safe and plentiful water supply for you, well into the future. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.



An Essential Utilities Company

2022 Water Quality Report*

Perkiomen Township, PWSID # PA1460069

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

About Your Drinking Water

Aqua Pennsylvania, Inc. (Aqua) is pleased to provide you with important information about your drinking water in this 2022 Water Quality Report for the Perkiomen Township Division (public water supply ID-PA1460069). The report summarizes the quality of water Aqua Pennsylvania provided in 2022 including details about water sources, what the water at your tap contains, and how it compares to standards set by regulatory agencies. We are pleased to report that we were in compliance with all water quality regulations in 2022. Although the report lists only those regulated substances that were detected in your water, we test for more than what is reported. This report is only a summary of our testing during 2022. If you have any questions about the information in this report, please call 610.645.4248 or visit our website at AquaWater.com.

Sources of Supply

Water for the Perkiomen Township Division comes from six wells.

The sources of drinking water (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 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 storm 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, stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, 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. Radon is not regulated in drinking water. It is a radioactive gas that you cannot see, taste or smell. Most radon enters homes directly from underground. Radon can be released into the air from tap water. Generally, tap water is a small source of radon in indoor air.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. 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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 800.426.4791.

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).

The following table lists contaminants that were detected in your water system. The state allows monitoring for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data below, though representative, are more than one year old.

Aqua Pennsylvania, Inc., Perkiomen Township Division, PWSID# PA1460069

Contaminants	Average Detection	Range of Detections	MCL	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Disinfectant Residual – Chlorine values below reflect results from routine monthly distribution sampling at multiple sites.							
Chlorine, ppm	1.47	1.24 – 1.74	MRDL = 4	MRDLG = 4	2022	N	Water additive used to control microbes
Inorganic Contaminants							
Arsenic, ppb	3	2.4 – 3.3	10	0	2022	N	Erosion of natural deposits
Barium, ppm	0.17	0.09 – 0.3	2	2	2021	N	Erosion of natural deposits
Fluoride, ppm	0.02	ND – 0.1	2	2	2021	N	Erosion of natural deposits; water additive to promote strong teeth
Nitrate, ppm	2.7	2.2 – 3.3	10	10	2022	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radiological Contaminants							
Alpha emitters, pCi/L	5.2	3.0 – 7.4	15	0	2021	N	Erosion of natural deposits
Combined Uranium, ppb	4.3	3.7 – 4.9	30	0	2018	N	
Disinfection Byproducts							
Haloacetic acids, ppb	9	7 - 10	60	NA	2022	N	Byproducts of drinking water disinfection
Total Trihalomethanes, ppb	29	28 - 31	80	NA	2022	N	

Contaminants	Entry Point #	Minimum Residual Level Required	Lowest Level Detected	Range of Detections	Sample Date	Violation Y/N	Major Sources in Drinking Water
Entry Point Disinfectant Residual – <i>PA Ground Water Rule</i> : This rule requires that no well station operate below specific minimum free chlorine levels for more than 4 hours.							
Chlorine, ppm	101, 102, 104	0.4	0.01 ^(a)	0.01 – 2.44	2022	N	Water additive used to control microbes
	103	0.54	0.06 ^(a)	0.06 – 2.18			
	105	0.80	0.73 ^(a)	0.73 – 2.32			

(a) Disinfectant levels did not drop below minimum required level for more than 4 hours.

Tap water samples were collected from homes in the service area for lead and copper testing.

Lead and Copper	90th Percentile	Total Number of Samples	Samples Exceeding Action Level	Action Level	MCLG	Sample Date	Violation Y/N	Major Sources in Drinking Water
Copper, ppm	0.54	20	0	1.3	1.3	2022	N	Corrosion of household plumbing
Lead, ppb	ND	20	0	15	0	2022	N	

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. Aqua 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 cold water 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>.

Voluntary PFAS (Forever Chemicals) Entry Point Sampling from 2022

Name	Chemical Name	Range of Detections (ppt)
PFOA	Perfluorooctanoic acid	4.6-7.6
PFOS	Perfluorooctane sulfonate	ND-8.7
PFBS	Perfluorobutane sulfonic acid and Perfluorobutane sulfonate	3-4.9
PFHxS	Perfluorohexanesulfonic acid	ND-15
PFNA	Perfluorononanoic acid	ND

Notes: For additional information, please refer to our website: AquaWater.com/pfas
 ND = Not Detected

Notes:

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.

Fluoride: Fluoride may help prevent tooth decay if administered properly to children but can be harmful in excess. Customers in the Perkiomen Township Division receive water from unfluoridated supplies. For more information about fluoride in your tap water, call Aqua at 610.645.4248 or visit our website at AquaWater.com. This information may be helpful to you, your pediatrician or your dentist in determining whether fluoride supplements or treatment are appropriate.

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 contaminants.

NA: Not applicable.

ND: Not detected.

Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

pCi/L, picoCuries/Liter: A unit of concentration for radioactive contaminants.

ppb: A unit of concentration equal to one part per billion.

ppm: A unit of concentration equal to one part per million.

PWSID: Public water supply identification number.

Turbidity: Monitored as a measure of treatment efficiency for removal of particles. Plant Performance Level: 0.3 NTU.

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

Our water systems are designed and operated to deliver water to our customers' plumbing systems that complies with state and federal drinking water standards. This water is disinfected using chlorine, but it is not necessarily sterile. Customers' plumbing, including treatment devices, might remove, introduce or increase contaminants in tap water. All customers, and in particular operators of facilities like hotels and institutions serving susceptible populations (like hospitals and nursing homes), should properly operate and maintain the plumbing systems in these facilities. You can obtain additional information from the EPA's Safe Drinking Water Hotline at 800.426.4791.

*This notice contains required or recommended regulatory language, and nothing herein is, is intended as, nor should be construed as, a promise of or contract for payment or reimbursement of expenses incurred for any action you take on account of this notice.



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

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

2023

ANNUAL DRINKING WATER QUALITY REPORT

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

PWSID#1460034

"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, the US 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 United States Environmental Protection Agency's Safe Drinking Water Hotline at **1-800-426-4791**.



NORTH PENN WATER AUTHORITY

2023 ANNUAL DRINKING WATER QUALITY REPORT

North Penn Water Authority – PWSID # 1460034

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 at **1-800-426-4791** or go to US EPA's website at: <http://www.epa.gov/safewater/lead>.

INFORMATION ABOUT ARSENIC

While your drinking water meets US EPA's standard for arsenic, it does contain low levels of arsenic. US EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water.

US 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.

INFORMATION ABOUT NITRATE

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of

rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

CRYPTOSPORIDIUM AND GIARDIA

Cryptosporidium and *Giardia* are microbial pathogens found in surface water throughout the United States. In 2022, Forest Park Water monitored the North Branch Neshaminy Creek source water (before treatment) for *Cryptosporidium* and *Giardia*. Four rounds of sampling were conducted. *Cryptosporidium* was detected in 2 out of 4 samples collected. *Giardia* was detected in 1 out of 4 samples collected. Although Forest Park Water treatment process includes filtration to remove *Cryptosporidium* and *Giardia*, the most commonly-used filtration methods cannot guarantee 100 percent removal. Current test methods do not allow us to determine if the organisms are dead or if they are capable of

causing disease. Ingestion of *Cryptosporidium* may cause *cryptosporidiosis*, an abdominal infection. 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 a 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* must be ingested to cause disease, and it may be spread through means other than drinking water.

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 2022, the American Water Works Association's Partnership for Safe Water Program awarded the Forest Park Water Treatment Plant (FPWTP) with the highly prestigious 20-year Directors Award and the 10-year Presidents Award. The Presidents Award recognizes the achievement of very stringent performance goals over a 10-year period, signifying the outstanding operations and maintenance practices at this high performing water treatment plant.

In 2022, for the 15th consecutive year, Forest Park received the prestigious Area-Wide Optimization Award (AWOP) presented by the Pennsylvania Department of Environmental Protection (PA DEP). The award recognizes outstanding efforts toward optimizing water treatment performance. AWOP is a national filter plant optimization effort among numerous states, the US EPA, and the Association of State Drinking Water Administrators (ASDWA).



NORTH PENN WATER AUTHORITY

2023 ANNUAL DRINKING WATER QUALITY REPORT

North Penn Water Authority – PWSID # 1460034

Below is a list of parameters which NPWA monitored for in 2022 but DID NOT DETECT:

Coliform Bacteria

E. Coli

Inorganic Chemicals (IOCs)

Antimony Cadmium Mercury Nitrite Selenium Thallium

Synthetic Organic Chemicals (SOCs)

Atrazine Di(2-ethylhexyl) phthalate Simazine
Di(2-ethylhexyl) adipate Pentachlorophenol

Volatile Organic Chemicals (VOCs)

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

HOW NPWA IS PROTECTING THE WATER YOU DRINK

Lead in drinking water typically comes from the corrosion of drinking water service lines and household plumbing materials. Lead is typically not present in drinking water sources like rivers and groundwater. NPWA and FPWTP add orthophosphate to the water during the treatment process. Orthophosphate acts as a corrosion inhibitor by forming a protective film on the interior of pipes. This film protects the pipe material from the corrosive effects of water, which reduces/eliminates the potential for lead leaching into the water. The typical phosphate levels found in a liter of drinking water are about one hundred times lower than the phosphate levels found in the average American diet. For example, a person would have to drink ten to fifteen liters of water to equal the amount of phosphates in just one can of soda. People concerned about their health and phosphates added as a corrosion inhibitor to the drinking water, should contact their medical care provider.

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 the Pennsylvania Department of Transportation (Penn DOT) or our member municipalities are doing work on the roads to reduce inconvenience to the community.

NPWA's Wellhead Protection (WHP) Program, approved by the PA DEP, meets the requirements for a local WHP Program in accordance with the Pennsylvania Safe Drinking Water Regulations.

The WHP Program provides valuable information to the Authority such as: identifying the protection zone around each well, identifying potential sources of contamination for each well, identifying the land areas around our wells, and the underground geologic layers, that are within the pumping zones of influence. This information will greatly assist the Authority in dealing with emergency response in case of a hazardous spill event that could threaten the well, so that remedial measures could be put in place. Also, implementation of contingency planning could involve revisions to local land use practices, if necessary, to protect the integrity of the groundwater supply.

Since 2011, NPWA has voluntarily participated in the American Water Works Association's (AWWA) Distribution System Optimization Program (DSOP). This program is part of AWWA's Partnership for Safe Water whose objective is to implement preventative programs that focus on optimizing treatment performance and distribution system operations. In 2022, NPWA was honored with the 5-year Directors Award for its efforts with the DSOP. NPWA received the award for successfully completing a comprehensive self-assessment of water distribution system operations for the last five years. The assessment involves an evaluation of distribution system operations and performance, including factors such as chlorine residuals, pressure levels and frequency of water main breaks, which on average, are much lower than the national average and the DSOP requirements. NPWA became the first public water utility in Pennsylvania and among the first in North America to receive the Directors Award in 2017. NPWA works hard to go above and beyond the required regulatory standards for drinking water and is proud to provide our customers with reliable, high quality water 24 hours a day, seven days a week.



NORTH PENN WATER AUTHORITY

2023 ANNUAL DRINKING WATER QUALITY REPORT

North Penn Water Authority – PWSID # 1460034

Este informe contiene información importante acerca de su agua potable.

Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda.

This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.

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 npwa.org.

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

Water System Information

North Penn Water Authority (NPWA) is pleased to present to you this year's Annual Drinking Water Quality Report. This report summarizes the quality of water NPWA provided in 2022. Included are details about where your water comes from, what it contains, and how it compares to United States Environmental Protection Agency (US 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 Shana Constanzer, Public Relations Coordinator, at **(215) 855-3617** or visit our website at **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 2022, approximately 95% of the water that NPWA delivered to its customers was treated surface water from the Forest Park Water Treatment Plant (FPWTP) located in Chalfont. 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 flows into Lake Galena, which is the reservoir for Forest Park Water. Water released from Lake Galena continues to flow down the Neshaminy Creek to the FPWTP, in Chalfont, Pennsylvania. Due to the high demand of water from Forest Park, 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 base flow in the stream.

The remaining 5% of water came from 6 groundwater supply wells that NPWA operates. These wells are located throughout our service territory, in Bucks and Montgomery Counties. The water from these wells is chlorinated before it is delivered to our customers' homes.

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. United States Environmental Protection Agency (US 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 the **Safe Drinking Water Hotline at 1-800-426-4791**.

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, 2022**. As you review these tables, you will notice that NPWA water meets or exceeds all primary state and federal Drinking Water

Act standards. The US EPA and PA DEP allow 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.

PHONE: 215-855-3617 • npwa.org



SOURCE WATER ASSESSMENT

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. FPWTP 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 our groundwater sources was completed by the PA DEP. Most of the land that surrounds NPWA wells is highly developed commercial and residential areas, with a small amount of forested or agricultural/undeveloped land. The Assessment found that our groundwater sources are potentially most susceptible to transportation corridors, residential and agricultural activities, railroad transportation, auto repair shops, machine/metal working businesses, National Priorities List (NPL) sites, industrial wastewater disposal, golf courses, a recycling center and a print shop. Summary reports of the Assessments are available on the Source Water Assessment Summary Reports eLibrary web page: <http://www.depgreenport.state.pa.us/elibrary/GetFolder?FolderID=4490>. Complete reports were distributed to municipalities, water suppliers, 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 35,000 customers in the following municipalities:

Hatfield Borough	Hatfield Township	<i>and portions of:</i>	Salford Township
Lansdale Borough	Lower Salford Township	Hilltown Township	Upper Gwynedd Township
Sellersville Borough	Skippack Township	Montgomery Township	Upper Salford Township
Souderton Borough	Towamencin Township	New Britain Borough	West Rockhill Township
Franconia Township		New Britain Township	Worcester Township

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) – 1 ppm corresponds to 1 second in 11.5 days
- ppb: parts per billion, or micrograms per liter (µg/L) – 1 ppb corresponds to 1 second in 32 years
- ppt: parts per trillion, or nanograms per liter (ng/L) – 1 ppt corresponds to 1 second in 32,000 years

DETECTED SAMPLE RESULTS

North Penn Water Authority – PWSID # 1460034

CHEMICAL CONTAMINANTS

Contaminant	MCL	MCLG	Highest Level Detected	Range of Detections	Units	Sample Date	Violation Yes/No	Sources of Contamination
Bromate	10	0	2.8	1.1 – 2.8	ppb	2022	No	By-product of drinking water chlorination
Arsenic	10	0	6.0	0 – 6.0	ppb	2021 & 2022	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium	2	2	0.329	0.018 – 0.329	ppm	2021 & 2022	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium	100	100	1	0 – 1	ppb	2021 & 2022	No	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide	200	200	7	0 – 7	ppb	2021 & 2022	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride	2	2	0.151	0 – 0.151	ppm	2021 & 2022	No	Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Nickel	N/A	N/A	1	0 – 1	ppb	2021 & 2022	No	Erosion of natural deposits; By-product of various industrial processes
While many water suppliers continue to monitor nickel levels in water, there is currently no EPA maximum contaminant level (MCL) for nickel in drinking water. EPA is reconsidering the limit on nickel.								
Nitrate	10	10	4.98	0.308 – 4.98	ppm	2022	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Tetrachloroethylene	5	0	0.800	0 – 0.800	ppb	2022	No	Discharge from factories and dry cleaners
Haloacetic Acids (HAAs) ^b	60	N/A	17.6 ^a	7.53 – 23.4	ppb	2022	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHMs) ^c	80	N/A	35.7 ^a	9.38 – 63.6	ppb	2022	No	By-product of drinking water chlorination
Alpha Emitters	15	0	4.71	2.93 – 4.71	pCi/L	2020	No	Erosion of natural deposits
Combined Radium (Radium 226 and 228)	5	0	1.81	0.49 – 1.81	pCi/L	2020	No	Erosion of natural deposits
Uranium	30	0	3.99	1.28 – 3.99	µg/L	2020	No	Erosion of natural deposits

^a Compliance is based on a running annual average of quarterly results. This value represents the highest running annual average result, not a single sample result.

^b HAAs = sum of - dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, and trichloroacetic acid

^c TTHMs = sum of - bromoform, bromodichloromethane, chlorodibromomethane, and chloroform

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DETECTED SAMPLE RESULTS (CONTINUED)

North Penn Water Authority – PWSID # 1460034

DISTRIBUTION DISINFECTANT RESIDUAL

Contaminant	MRDL	MRDLG	Highest Monthly Average Result	Range of Monthly Average Results	Units	Sample Date	Violation Yes/No	Sources of Contamination
Chlorine	4	4	1.23	1.03 - 1.23	ppm	2022	No	Water additive used to control microbes

As a member of the Partnership for Safe Water's Distribution System Optimization Program (DSOP), our goal is to achieve distribution chlorine residual levels ≥ 0.20 mg/L and ≤ 4.0 mg/L. In 2022, we accomplished this. 100% of all samples met this goal.

ENTRY POINT DISINFECTANT RESIDUAL

Contaminant	Minimum Disinfectant Residual Required	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Yes/No	Sources of Contamination
Chlorine – NPWA Wells	0.40	0.42	0.42 – 2.00	ppm	2022	No	Water additive used to control microbes
Chlorine – FPWTP	0.20	1.20	1.20 – 1.67	ppm	2022	No	Water additive used to control microbes

TURBIDITY AT FOREST PARK WATER TREATMENT PLANT (FPWTP)

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	0.05	0.03 – 0.05	2022	No	Soil runoff
	TT= at least 95% of monthly samples less than or equal to 0.3 NTU	N/A	100%	N/A	2022	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 2022, we accomplished this. 100% of all samples were <0.1 NTU.

LEAD AND COPPER – Tested at Customers' Taps

Contaminant	Action Level (AL)	MCLG	90th Percentile Value	Units	# of Samples Above AL	Sample Date	Violation Yes/No	Sources of Contamination
Lead	90% of homes must test less than 15 ppb	0	1.0	ppb	0 out of 31	6/1/22 to 9/30/22	No	Corrosion of household plumbing systems
Copper	90% of homes must test less than 1.3 ppm	1.3	0.278	ppm	0 out of 31	6/1/22 to 9/30/22	No	Corrosion of household plumbing systems

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DETECTED SAMPLE RESULTS (CONTINUED)

North Penn Water Authority – PWSID # 1460034

PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

PFAS chemicals are among a family of man-made compounds that have been used for decades as ingredients to make products resistant to heat, oil, stains, grease and water. PFAS chemicals can be found in industrial and consumer products such as clothing, carpeting, food packaging, non-stick cookware, firefighting foam, personal care products, adhesives, metal plating, wire manufacturing and many other uses. In 2022, these compounds were not included on either the US EPA's or PA DEP's Safe Drinking Water Act Primary or Secondary listing of contaminants. In January 2023, PA DEP set new drinking water standards for PFOA and PFOS, two contaminants that are part of the larger group of PFAS chemicals. The new regulations set a MCL of 14 ppt for PFOA and a MCL of 18 ppt for PFOS. In March 2023, the US EPA proposed the first national drinking water standard for PFOA and PFOS. The proposal would regulate PFOA and PFOS, at an MCL of 4.0 ppt. EPA anticipates finalizing the rule by the end of 2023. Water systems will then be required to meet the MCLs after a specified implementation time frame, which EPA has not yet determined. NPWA is being proactive to ensure that we meet any existing and future proposed regulations related to PFAS. Since 2016, PFAS monitoring has been conducted at the Forest Park Water Treatment Plant (FPWTP). The following tables include FPWTP monitoring results from 2022.

Per- and polyfluoroalkyl Substances (PFAS) at Forest Park Water Treatment Plant (FPWTP)

Contaminant	Average Level Detected	Range of Detections	Units	Sample Date
Perfluorooctanoic acid (PFOA)	2.5	2.1 – 3.2	ppt	2022
Perfluorooctanesulfonic acid (PFOS)	0.5 (less than reporting limit)	0 – 2.1	ppt	2022

Per- and polyfluoroalkyl Substances (PFAS) NOT DETECTED at Forest Park Water Treatment Plant (FPWTP)

Perfluorobutanesulfonic acid
(PFBS)

Perfluoroheptanoic acid
(PFHpA)

Perfluorohexanesulfonic acid
(PFHxS)

Perfluorononanoic acid
(PFNA)