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**2022 ANNUAL DRINKING WATER  
QUALITY REPORT**

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**TELFORD BOROUGH AUTHORITY  
WATER SYSTEM  
PWS 1460050**

**BUCKS AND MONTGOMERY COUNTIES  
PENNSYLVANIA**

May 2023

*Prepared by:*

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**REFERENCE NO. 5700-59 [C0003035.00]**

# 2022 CONSUMER CONFIDENCE REPORT

## Telford Borough Authority (PWS1460050)

### ***Espanol (Spanish)***

*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.)*

### **A Message from the Telford Borough Authority Manager:**

Telford Borough Authority is committed to ensuring each of our customers has safe, high-quality drinking water that is also compliant with all government standards. We are proud to serve each of our customers and inform you about the quality and safety of your drinking water.

The Consumer Confidence Report summarizes the quality of water Telford Borough Authority (TBA) provided in 2022, including details about our water sources and volume, what the water at your tap contains, and how it compares to standards set by our regulating agencies. We are pleased to report that TBA was in complete compliance with all water quality criteria in 2022.

We want our customers to be informed about their water quality. If you want to learn more, please attend any of our regularly scheduled meetings. We appreciate the opportunity to continue providing your family with clean, quality drinking water.

Kyle Detweiler, Telford Borough Authority Manager

### **Need More Information?**

If you have any questions about this report or concerns about your water/sewer utility, please contact:

Kyle Detweiler, Manager – Telford Borough Authority

50 Penn Avenue, Telford, PA 18969

Phone: 215-723-5000 • Email: [manager@telfordborough.org](mailto:manager@telfordborough.org)

The Telford Borough Authority's Public Water Supply Identification Number (PWSID) is 1460050.

### **Opportunities for Public Participation:**

The Telford Borough Authority has several opportunities for public participation. The Authority holds meetings on the 3<sup>rd</sup> Thursday of every month at 6:00 p.m. at the Borough Public Works Building. A workshop meeting is also held at the Borough Public Works Building on the 1<sup>st</sup> Thursday of every month at 6:00 p.m.

## Times of Testing:

TBA routinely monitors for contaminants in your drinking water according to Federal and State laws. The table included in this report shows the results of our monitoring for the period of January 1, 2022 to December 31, 2022, except as noted. These tests are performed to help ensure you are receiving safe drinking water from the tap.

DURING 2022, TBA DID NOT VIOLATE ANY DRINKING WATER STANDARDS. However, we are required to monitor your drinking water for specific contaminants on a regular basis. Results of required monitoring are an indicator of whether or not your drinking water meets health standards. During the second quarter of Disinfectants/Disinfection Byproducts (DBPs) monitoring, we did not complete all monitoring or testing for Haloacetic acids (five) and therefore, cannot be sure of the quality of your drinking water at that time.

## Test Results Chart – What Does it Mean?

As you can see by the table included in this report, our system had no violations of drinking water contaminant limits during 2022. We are proud that your drinking water meets or exceeds all Federal and State requirements.

## Definitions:

Throughout this report, you may find some terms and abbreviations you are not familiar with. To help you better understand these terms, we have provided the following definitions:

| <b><i>Important Drinking Water Definitions</i></b> |  |
|--|--|
| <b>Term</b>  | <b>Definition</b>  |
| 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. |
| Minimum Residual Disinfectant Level (MinRDL)       | The minimum level of residual disinfectant required at the entry point to the distribution system.   |

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|---|--|
| Treatment Technique (TT)                              | A required process intended to reduce the level of a contaminant in drinking water.                        |
| Undetected Contaminants or Non-Detect (ND)            | Laboratory analysis indicates that the contaminant is not present at a detectable level.                   |
| ppm: Parts per million or Milligrams per liter (mg/L) | One part per million corresponds to one minute in two years, or a single penny in \$10,000.                |
| ppb: Parts per billion or Micrograms per liter (ug/L) | One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.          |
| pCi/L: Picocuries per liter                           | Picocuries per liter is a measure of the radioactivity in water.   |
| NTU: Nephelometric Turbidity Unit                     | A measure of the clarity of water. Turbidity in excess of 5 NTUs is just noticeable to the average person. |

### Know the Health Effects:

Maximum Contaminant Levels (MCLs) are set at very stringent levels for health effects. To understand the possible health effects described for many regulated contaminants, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a **one-in-a-million chance** of having the described health effect. Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on ways to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline at 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 microbes, organic and inorganic chemicals, or radioactive materials.

All 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 the water poses a health risk. In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Nitrates in drinking water at levels above 10 ppm are health risks for infants of less than 6 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 for advice from your health care provider.

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

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. TBA 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 two 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](http://www.epa.gov/safewater/lead).

### **A Closer Look at Water Quality...and Your Water Supply:**

The Telford Borough Authority (TBA) provides water service to Telford Borough and portions of the townships of Franconia, Hilltown, and West Rockhill. The sources of water for this area include six active deep wells and water delivered through connections with the North Penn Water Authority (NPWA) system. The six groundwater wells all draw from the Brunswick Formation aquifer, which in turn is recharged by an average of two million gallons per day it receives in precipitation. These six wells have sufficient capacity to serve the needs of the TBA's service area.

Water is also received by TBA's distribution system from NPWA to supply other portions of NPWA's service territory, including the Sellersville Borough system. In 2022, approximately 95% of the water that NPWA delivered to its customers was treated surface water from the Forest Park Water (FPW) Treatment Plant located in Chalfont. The remaining 5% of water came from 6 groundwater supply wells that NPWA operates. These wells are located throughout their service territory in Bucks and Montgomery counties. The water from these wells is chlorinated before it is delivered to our customers' homes. The source of water that is treated at FPW, which is jointly owned by North Penn and North Wales Water Authorities, 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 FPW. Water released from Lake Galena flows down the North Branch Neshaminy Creek to where it is drawn into the FPW Treatment Plant in Chalfont, Pennsylvania. In the summer months and times of low flow, 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.

Two storage tanks totaling two million gallons of reserve capacity, with emergency connections to the Hilltown Township Water and Sewer Authority and the NPWA, comprise the remainder of your water supply system. The TBA and NPWA water sources are most susceptible to pollution from nearby transportation corridors, railroads, auto repair shops, and from residential and agricultural activity. Source water assessments have been completed by the PA DEP for water supply sources in both systems and are available online at the following link: [www.depgreenport.state.pa.us/elibrary/GetFolder?FolderID=4499](http://www.depgreenport.state.pa.us/elibrary/GetFolder?FolderID=4499).

In 2022, TBA distributed approximately 208 million gallons of water to its customers for an average daily consumption of 571,436 gpd. Your current water bill is calculated at the rate of \$5.10 per 1,000 gallons, plus a \$14.00 per month service charge (\$42.00 per quarter). These funds are used to maintain and replace the water system's equipment and over 44 miles of water mains.

### **Notes from North Penn Water Authority:**

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 timeframe, 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).

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 2 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, small children, and the elderly are at a greater risk of developing life-threatening illness. NPWA encourages immune-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.

### **Monitoring Your Drinking Water:**

The U.S. Safe Drinking Water Act requires that we routinely monitor for a variety of possible contaminants. The frequency of contaminant testing varies depending on the contaminant and specific conditions presented by the local area and industry. The results reported here are the most up-to-date information available. In addition, the TBA monitors numerous possible contaminants beyond what is required to help ensure the water you drink is as safe and pure as possible.

An independent, State-certified laboratory analyzed all samples. The testing results are reported to the Authority and to all required State regulatory agencies by the laboratory in compliance with State requirements. All water that reaches you has gone through a rigorous variety of treatment and contaminant removal processes, including air stripping, to reach the desired level of purity

and safety for your water.

| <b>Undetected Contaminants Tested for by the Telford Borough Authority and the North Penn Water Authority (NPWA)</b>   |  |
|--|--|
| <b>Microbiological Contaminants</b>  |  |
| Fecal Coliform E. Coli (2022) (NPWA 2022)  |  |
| <b>Inorganic Contaminants</b>  |  |
| Antimony (2021) (NPWA 2022)<br>Asbestos (2022) (NPWA 2021)<br>Beryllium (2021) (NPWA 2021)<br>Cadmium (2021) (NPWA 2022)<br>Chloride (2000)<br>Chromium (2021)<br>Cyanide (2012) (NPWA 2021)<br>Iron (2000)<br>Mercury (2021) (NPWA 2022)  | Nickel (2021)<br>Nitrite (2022) (NPWA 2022)<br>Perfluorobutanesulfonic Acid (PFBS) (NPWA 2022)<br>Perfluoroheptanoic Acid (PFHpA) (2021) (NPWA 2022)<br>Perfluorohexanesulfonic Acid (PFHxS) (NPWA 2022)<br>Perfluorononanoic Acid (PFNA) (NPWA 2022)<br>Selenium (2021) (NPWA 2022)<br>Thallium (2021) (NPWA 2022)  |
| <b>Organic Contaminants</b>  |  |
| 1,1,2-Trichloroethane (2022) (NPWA 2022)<br>1,1,1,2-Tetrachloroethane (1999)<br>1,1,1-Trichloroethane (2022) (NPWA 2022)<br>1,1,2,2-Tetrachloroethane (1999)<br>1,1-Dichloroethane (1999)<br>1,1-Dichloroethylene (2022) (NPWA 2022)<br>1,1-Dichloropropene (1999)<br>1,2,3-Trichloropropane (1999) (NPWA 2015)<br>1,2,4-Trichlorobenzene (2022) (NPWA 2022)<br>1,2-Dibromo-3-chloropropane (2021) (NPWA 2020)<br>1,2-Dibromoethane (EDB) (2007)<br>1,2-Dibromomethane (1998)<br>1,2-Dichloroethane (2022) (NPWA 2022)<br>1,2-Dichloropropane (2022) (NPWA 2022)<br>1,3-Dichlorobenzene (1998)<br>o-Dichlorobenzene (2022) (NPWA 2022)<br>p-Dichlorobenzene (2019) (NPWA 2022)<br>1,3-Dichloropropane (1999)<br>1,3-Dichloropropene (1998)<br>1,4-Dichlorobenzene (1999) (NPWA 2014)<br>2,2-Dichloropropene (1999)<br>2,4,5-TP (2021) (NPWA 2020)<br>2,4-D (2021) (NPWA 2020)<br>Alachlor (2021) (NPWA 2020)<br>Aldrin (1998)<br>Atrazine (2021) (NPWA 2022)<br>Benzene (2022) (NPWA 2022)<br>Benzo(A)pyrene (2021) (NPWA 2020)<br>Bromochloromethane (1999)<br>Bromomethane (1999) (NPWA 2015)<br>Carbofuran (2021) (NPWA 2020)<br>Carbon Tetrachloride (2022) (NPWA 2022)<br>Chlordane (2021) (NPWA 2020)<br>Chlorobenzene (2022) (NPWA 2022)<br>Chloroethane (1999)<br>Chloromethane (1999) (NPWA 2019)<br>cis-1,2-Dichloroethylene (2022) (NPWA 2022)<br>cis-1,3-Dichloropropene (1999)<br>Dalapon (2021) (NPWA 2020)<br>Di(2-ethylhexyl)adipate (2021) (NPWA 2022)<br>Di(2-ethylhexyl)phthalate (2021) (NPWA 2022)<br>Dibromochloromethane (1998) | Dibromomethane (2013) (NPWA 2020)<br>Dicamba (1998)<br>Dichlorodifluoromethane (1999)<br>Dichlorofluoromethane 1998)<br>Dichloromethane (2022) (NPWA 2022)<br>Dieldrin (1998)<br>Dinoseb (2021) (NPWA 2020)<br>Dioxin (2,3,7,8,TCDD) (2021) (NPWA 2020)<br>Diquat (2021) (NPWA 2020)<br>Endothall (2021) (NPWA 2020)<br>Endrin (2021) (NPWA 2020)<br>Ethylbenzene (2022) (NPWA 2022)<br>Ethylene dibromide (2021) (NPWA 2020)<br>Freon 22 (1998)<br>Glyphosate (2021) (NPWA 2020)<br>Heptachlor (2021) (NPWA 2020)<br>Heptachlor Epoxide (2021) (NPWA 2020)<br>Hexachlorobenzene (2021) (NPWA 2020)<br>Hexachlorocyclopentadiene (2021) (NPWA 2020)<br>Lindane (2021) (NPWA 2020)<br>Methoxychlor (2021) (NPWA 2020)<br>Methylene chloride (1998)<br>Methyl-Tert-Butyl-Ether (2011)<br>Naphthalene (2001)<br>o-Dichlorobenzene (2021) (NPWA 2016)<br>Oxymal (Vydate) (2021) (NPWA 2020)<br>para-Dichlorobenzene (2022) (NPWA 2017)<br>Pentachlorophenol (2020) (NPWA 2022)<br>Picloram (2021) (NPWA 2020)<br>Polychlorinated biphenols (PCBs) (2021) (NPWA 2020)<br>Simazine (2021) (NPWA 2022)<br>Styrene (2022) (NPWA 2022)<br>Surfactants (1998)<br>Tetrachloroethane (1998)<br>Tetrachloroethylene (2022) (NPWA 2017)<br>Toluene (2022) (NPWA 2022)<br>Toxaphene (2021) (NPWA 2020)<br>trans-1,2-Dichloroethylene (2022) (NPWA 2022)<br>trans-1,3-Dichloropropene (1999)<br>Trichloroethylene (2022) (NPWA 2021)<br>Trichlorofluoromethane (1999)<br>Vinyl chloride (2022) (NPWA 2022)<br>Xylenes (2022) (NPWA 2022) |

Note: 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 TBA and the 2022 sampling by the NPWA.

## Contaminants Detected by the Telford Borough Authority (TBA) in Our Drinking Water

| Substance   | Highest Level Allowed (MCL)                  |       | TBA Average Level Detected |                     | TBA Range of Detected Values       |                                      | EPA MCLG (EPA Goal)           |   | Likely source of substance   | Violation YES/NO |
|---|--|-------|----------------------------|---------------------|------------------------------------|--------------------------------------|-------------------------------|---|--|------------------|
| <b>Inorganic Contaminants (See Note 1)</b>                            |  |       |                            |                     |                                    |                                      |                               |   |  |                  |
| Arsenic   | 10   | ppb   | 6                          | ppb                 | 6                                  | ppb                                  | 0                             | ppb   | Erosion of natural deposits, industrial production waste                   | NO               |
| Barium (2021)   | 2  | ppm   | 0.215                      | ppm                 | 0.074 - 0.333                      | ppm                                  | 2                             | ppm   | Erosion of natural deposits, drilling wastes, metals refineries            | NO               |
| Fluoride (2021)   | 2  | ppm   | 0.035                      | ppm                 | 0 - 0.174                          | ppm                                  | 2                             | ppm   | Erosion of natural deposits, water additive, aluminum/fertilizer factories | NO               |
| Nitrate (as Nitrogen)   | 10   | ppm   | 2.24                       | ppm                 | 1.7 - 3.64                         | ppm                                  | 10                            | ppm   | Geology, farmland runoff, sewage   | NO               |
| <b>Volatile Organic Chemicals (None Detected in 2022)</b>             |  |       |                            |                     |                                    |                                      |                               |   |  |                  |
| <b>Synthetic Organic Contaminants (None Detected in 2022)</b>         |  |       |                            |                     |                                    |                                      |                               |   |  |                  |
| <b>Radioactive Contaminants (See Note 1)</b>                          |  |       |                            |                     |                                    |                                      |                               |   |  |                  |
| Gross Alpha (pCi/L) (2020)  | 15   | pCi/L | 7.82                       | pCi/L               | 6.15 - 9.66                        | pCi/L                                | 0                             | pCi/L   | Erosion of natural deposits  | NO               |
| Uranium (ppb) (2020)  | 30   | ppb   | 4.35                       | ppb                 | 3.58 - 5.64                        | ppb                                  | 0                             | ppb   | Erosion of natural deposits  | NO               |
| Radium-226 (2016)   | 5  | pCi/L | 0.361                      | pCi/L               | 0.361                              | pCi/L                                | 0                             | pCi/L   | Erosion of natural deposits  | NO               |
| Radium-228 (2016)   | 5  | pCi/L | 0.0388                     | pCi/L               | 0.0388                             | pCi/L                                | 0                             | pCi/L   | Erosion of natural deposits  | NO               |
| <b>Disinfectant Residual and Disinfection Byproducts (See Note 1)</b> |  |       |                            |                     |                                    |                                      |                               |   |  |                  |
| Haloacetic acids (HAA5)   | 60   | ppb   | 11.73                      | ppb                 | 0 - 26.4                           | ppb                                  | N/A                           |   | By-product of drinking water disinfection                                  | NO               |
| Total Trihalomethanes (TTHM)  | 80   | ppb   | 29.5                       | ppb                 | 10.6 - 59.2                        | ppb                                  | N/A                           |   | By-product of drinking water disinfection                                  | NO               |
| Chloroform (THM)  | The sum of these 4 THMs must be less than 80 | ppb   | 19.5                       | ppb                 | 4.82 - 47.5                        | ppb                                  | N/A                           |   | By-product of drinking water disinfection                                  | NO               |
| Bromoform (THM)   |  | ppb   | 1.4                        | ppb                 | 0 - 4.80                           | ppb                                  | N/A                           |   | By-product of drinking water disinfection                                  | NO               |
| Bromodichloromethane (THM)  |  | ppb   | 5.4                        | ppb                 | 3.60 - 9.16                        | ppb                                  | N/A                           |   | By-product of drinking water disinfection                                  | NO               |
| Chlorodibromomethane (THM)  |  | ppb   | 3.2                        | ppb                 | 1.60 - 6.15                        | ppb                                  | N/A                           |   | By-product of drinking water disinfection                                  | NO               |
| Chlorine Residual (Entry Points)                                      | MRDL = 4                                     | ppm   | 0.82                       | ppm                 | 0.50 - 1.86                        | ppm                                  | MRDLG = 4 ppm                 |   | Water additive used to control microbes                                    | NO               |
| Chlorine Residual (Distribution)                                      | MRDL = 4                                     | ppm   | 0.56                       | ppm                 | 0.50 - 0.63                        | ppm                                  | MRDLG = 4 ppm                 |   | Water additive used to control microbes                                    | NO               |
| <b>Lead and Copper Rule</b>   |  |       |                            |                     |                                    |                                      |                               |   |  |                  |
| Substance   | TBA Range of Detected Values                 |       | 90th Percentile Value      |                     | Action Level (AL)                  | EPA MCLG (EPA Goal)                  | # of Sites above Action Level | Source of Contaminant   | Violation YES/NO   |                  |
| Copper  | 0.011 - 0.381                                | ppm   | 0.193                      | ppm                 | 1.3                                | 1.3 ppm                              | 0 of 20                       | Corrosion of household plumbing systems, natural deposits   | NO   |                  |
| Lead  | 0 - 13                                       | ppb   | 8                          | ppb                 | 15                                 | 0 ppb                                | 0 of 20                       | Corrosion of household plumbing systems, natural deposits   | NO   |                  |
| <b>Microbiological Contaminants</b>                                   |  |       |                            |                     |                                    |                                      |                               |   |  |                  |
| Substance   | Maximum Contaminant Level (MCL)              |       |                            | EPA MCLG (EPA Goal) | Highest number of Positive Samples | Source of Contaminant                | Violation YES/NO              |   |  |                  |
| Total Coliforms   | 0  |       |                            | 0 (Absent)          | 0                                  | Naturally present in the environment | NO                            |   |  |                  |
| Fecal Coliform and E. Coli Bacteria                                   | 0  |       |                            | 0 (Absent)          | 0                                  | Human and animal fecal waste         | NO                            |   |  |                  |
| <b>Per- and Polyfluoroalkyl Substances (PFAS)</b>                     |  |       |                            |                     |                                    |                                      |                               |   |  |                  |
| Substance   | 2023 PADEP MCL                               |       | TBA Average Level Detected |                     | TBA Range of Detected Values       |                                      | EPA MCLG (EPA Goal)           | Source of Contaminant   | Violation YES/NO   |                  |
| Perfluorooctanoic acid (PFOA)   | 14   | ppt   | 7.82                       | ppt                 | 2.72 - 11.4                        | ppt                                  | N/A                           | PFOA and PFOS are fluorinated organic chemicals that are part of a larger group of chemicals referred to as perfluoroalkyl substances (PFASs). They have been used to make carpets, clothing, fabrics for furniture, paper packaging for food and other materials (e.g., cookware) that are resistant to water, grease or stains. They are also used for firefighting at airfields and in a number of industrial processes. | N/A  |                  |
| Perfluorooctanesulfonic acid (PFOS)                                   | 18   | ppt   | 8.03                       | ppt                 | 3.35 - 14.9                        | ppt                                  | N/A                           |   | N/A  |                  |

Notes:  
 1 - Items which were not sampled in 2022 are shown with the most recent year of sampling by the TBA. Not all contaminants are required to be sampled for each year, according to PA DEP Regulations.

## Contaminants Detected by the North Penn Water Authority (NPWA) in Our Drinking Water

| Substance   | Highest Level Allowed (MCL) |       | NPWA Highest Level Detected              |       | NPWA Range of Detected Values |       | EPA MCLG (EPA Goal)           |       | Likely source of substance   | Violation YES/NO |
|---|-----------------------------|-------|--|-------|-------------------------------|-------|-------------------------------|-------|--|------------------|
| <b>Inorganic Contaminants</b>   |                             |       |  |       |                               |       |                               |       |  |                  |
| Arsenic   | 10                          | ppb   | 6  | ppb   | 0 - 6                         | ppb   | 0                             | ppb   | Erosion of natural deposits, industrial production waste   | NO               |
| Barium  | 2                           | ppm   | 0.329                                    | ppm   | 0.018 - 0.329                 | ppm   | 2                             | ppm   | Erosion of natural deposits, drilling wastes, metals refineries  | NO               |
| Chromium  | 100                         | ppb   | 1  | ppb   | 0 - 1                         | ppb   | 100                           | ppb   | Discharge from steel and pulp mills; Erosion of natural deposits   | NO               |
| Cyanide   | 200                         | ppb   | 7  | ppb   | 0 - 7                         | ppb   | 200                           | ppb   | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits   | NO               |
| Fluoride  | 2                           | ppm   | 0.151                                    | ppm   | 0 - 0.151                     | ppm   | 2                             | ppm   | Erosion of natural deposits, water additive, aluminum/fertilizer factories   | NO               |
| Nickel  | N/A                         | ppb   | 1  | ppb   | 0 - 1                         | ppb   | N/A                           | ppb   | Erosion of natural deposits; Discharge from fertilizer and aluminum factories  | NO               |
| Nitrate (as Nitrogen)   | 10                          | ppm   | 4.98                                     | ppm   | 0.308 - 4.98                  | ppm   | 10                            | ppm   | Geology, farmland runoff, sewage   | NO               |
| <b>Volatile Organic Chemicals (VOCs)</b>  |                             |       |  |       |                               |       |                               |       |  |                  |
| Tetrachloroethylene   | 5                           | ppb   | 0.8                                      | ppb   | 0 - 0.800                     | ppb   | 0                             | ppb   | Discharge from factories and dry cleaners  | NO               |
| <b>Radionuclides (2020)</b>   |                             |       |  |       |                               |       |                               |       |  |                  |
| Alpha Emitters  | 15                          | pCi/L | 4.71                                     | pCi/L | 2.93 - 4.71                   | pCi/L | 0                             | pCi/L | Erosion of natural deposits  | NO               |
| Combined Radium (Radium 226 and 228)  | 5                           | pCi/L | 1.81                                     | pCi/L | 0.49 - 1.81                   | pCi/L | 0                             | pCi/L | Erosion of natural deposits  | NO               |
| Uranium   | 30                          | µg/L  | 3.99                                     | µg/L  | 1.28 - 3.99                   | µg/L  | 0                             | µg/L  | Erosion of natural deposits  | NO               |
| <b>Disinfectant Residual and Disinfection Byproducts (DBPs)</b>   |                             |       |  |       |                               |       |                               |       |  |                  |
| Bromate   | 10                          | ppb   | 2.8                                      | ppb   | 1.1 - 2.8                     | ppb   | 0                             | ppb   | By-product of drinking water disinfection  | NO               |
| Chlorine (Leaving Treatment Plant)  | MRDL = 4                    | ppm   | 1.67                                     | ppm   | 1.20 - 1.67                   | ppm   | MRDLG = 4                     | ppm   | Water additive used to control microbes  | NO               |
| Chlorine (Leaving the Wells)  | MRDL = 4                    | ppm   | 2  | ppm   | 0.42 - 2.00                   | ppm   | MRDLG = 4                     | ppm   | Water additive used to control microbes  | NO               |
| <b>Disinfectant Residual and Disinfection Byproducts (DBPs) (Tested Throughout the Distribution System)</b> |                             |       |  |       |                               |       |                               |       |  |                  |
| Chlorine  | MRDL = 4                    | ppm   | 1.23                                     | ppm   | 1.03 - 1.23                   | ppm   | MRDLG = 4                     | ppm   | Water additive used to control microbes  | NO               |
| Haloacetic Acids (HAAs) <sup>1</sup>  | 60                          | ppb   | 17.6*                                    | ppb   | 7.53 - 23.4                   | ppb   | N/A                           | ppb   | By-product of drinking water disinfection  | NO               |
| Total Trihalomethanes (TTHMs) <sup>2</sup>  | 80                          | ppb   | 35.7*                                    | ppb   | 9.38 - 63.6                   | ppb   | N/A                           | ppb   | By-product of drinking water disinfection  | NO               |
| <b>Performance Monitoring at the Treatment Plant</b>  |                             |       |  |       |                               |       |                               |       |  |                  |
| Turbidity <sup>3</sup>  | TT                          | NTU   | 0.05                                     | NTU   | 0.03 - 0.05                   | NTU   | N/A                           | NTU   | Soil Runoff  | NO               |
| <b>Perfluorinated Compounds (PFCs) Forest Park Water Treatment Plant:</b>                                   |                             |       |  |       |                               |       |                               |       |  |                  |
| Substance   | Highest Level Allowed (MCL) |       | NPWA Average Level Detected              |       | NPWA Range of Detected Values |       | EPA MCLG (EPA Goal)           |       | Likely source of substance   | Violation YES/NO |
| Perfluorooctanesulfonic acid (PFOS) (Leaving Treatment Plant) <sup>4</sup>                                  | N/A                         | ppt   | 0.5                                      | ppt   | 0 - 2.1                       | ppt   | N/A                           | ppt   | PFOA and PFOS are fluorinated organic chemicals that are part of a larger group of chemicals referred to as perfluoroalkyl substances (PFASs). They have been used to make carpets, clothing, fabrics for furniture, paper packaging for food and other materials (e.g., cookware) that are resistant to water, grease or stains. They are also used for firefighting at airfields and in a number of industrial processes | N/A              |
| Perfluorooctanoic acid (PFOA) (Leaving Treatment Plant) <sup>4</sup>  | N/A                         | ppt   | 2.5                                      | ppt   | 2.1 - 3.2                     | ppt   | N/A                           | ppt   |  | N/A              |
| <b>Lead and Copper Rule - Tested at Customers' Taps (2022)</b>  |                             |       |  |       |                               |       |                               |       |  |                  |
| Substance   | 90th Percentile Value       |       | Action Level (AL)                        |       | EPA MCLG (EPA Goal)           |       | # of Sites above Action Level |       | Source of Contaminant  | Violation YES/NO |
| Copper (6/1/2022 to 9/30/2022)  | 0.278                       | ppm   | 90% of homes must test less than 1.3 ppm |       | 1.3                           | ppm   | 0 out of 31                   |       | Corrosion of household plumbing systems, natural deposits  | NO               |
| Lead (6/1/2022 to 9/30/2022)  | 1                           | ppm   | 90% of homes must test less than 15 ppb  |       | 0                             | ppb   | 0 out of 31                   |       | Corrosion of household plumbing systems, natural deposits  | NO               |
| <b>Bacteria in Tap Water (Tested Throughout the Distribution System) (None Detected in 2022)</b>            |                             |       |  |       |                               |       |                               |       |  |                  |

Notes:  
 \* Compliance is based on a a running annual average of quarterly results. This value represents the highest running annual average result, not a single sample result.  
 1. HAAs = sum of - dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, and trichloroacetic acid.  
 2. TTHMs = sum of - bromoform, bromodichloromethane, chlorodibromomethane and chloroform.  
 3. Turbidity is a measure of the cloudiness of the water. NPWA monitors it because it is a good indicator of the effectiveness of their filtration system.  
 As a member of the Partnership for Safe Drinking water, their goal is to achieve <0.1 NTU. In 2022 this was accomplished, 100% of all samples were <0.1 NTU.  
 4. Unregulated contaminants are those for which EPA has not yet established drinking water standards. \*\* In 2022, PFOS + PFOA had a combined HAL (Health Advisory Level) of 70 ppt