



WARRINGTON TOWNSHIP SERVICE AREA – PWSID # 1090070

2023 ANNUAL DRINKING WATER QUALITY REPORT – CONSUMER CONFIDENCE REPORT

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien. (This report contains important information about your drinking water. Translate it or speak with someone who understands it.)

This report includes information about where your Water comes from, what it contains and how it compares with the standards set by the Pennsylvania Department of Environmental Protection (PADEP) and the Environmental Protection Agency (EPA) Safe Drinking Water Act (SDWA). You are being provided a copy of this report in compliance with the Safe Drinking Water Act. Landlords, businesses, other property owners are strongly encouraged to share this water quality report with their tenants and employees.

OUR COMMITMENT TO QUALITY

The North Wales Water Authority takes great pride in delivering water of the highest quality to our customers. We are committed to providing drinking water which meets all state and federal Safe Drinking Water Act Requirements.

We are also available to talk to your group. You may request a visit by calling our office at 267-482-6940 or filling out a form on our website.

If you'd like to learn more about NWWA, please attend any of our regularly scheduled Board of Directors meetings. The Board meets on the 3rd Wednesday of each month at 5:00 p.m. at the Authority Office at 200 W. Walnut Street in North Wales.

SOURCES OF WATER:

During 2023, nearly all water supplied through the Warrington Township service area public water system was provided by the North Wales Water Authority and the Forest Park Water Treatment Plant. In November 2020, we received an operational permit for Costner wellfield, then in September 2023 operational permits were obtained for wells 3, 5, 8, 9, and 11. This was after treatment systems for the wells had been constructed, removing PFOA and PFOS to non-detectable levels. All sample results labeled 'Warrington Well' in the following data tables have been sampled post-treatment from the Finished Water. However, Costner and well 9 did not contribute any water to the distribution system during 2023. Water sample collection and monitoring still occurred at these wells for 2023. The remaining wells were responsible for less than 1% of the water within Warrington's distribution system. They are available to be used as a supplemental source of supply during times of drought or other emergencies. Please call our office at 267-482-6940 if you would like to discuss sample results from Costner wellfield and Well #9 - we are not required to post the results in this annual Water Quality Report. To explore the PFAS data collected from the Warrington wells please visit bit.ly/Warrington_Wells_Update.

Source Water Assessments of the NWWA Forest Park Water Treatment Plant and the Warrington Township service area were completed by the PA Department of Environmental Protection in February 2003 and June 2005, respectively. The systems were found to be potentially susceptible to contamination in transportation corridors; from auto repair shops; and from storm water runoff from agricultural fields, lawn care, golf courses, and parking lots. A summary report of the Assessments is available on the Source Water Assessment Summary Reports eLibrary Web Page, www.depgreenport.state.pa.us/elibrary/GetFolder?FolderID=4499. 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 PADEP Southcentral Regional Office, Records Management Unit at (484)250-5910.

MONITORING YOUR WATER:

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of 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 before it is treated 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 agricultural, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA and PADEP prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. We treat and monitor our water according to their regulations. FDA and PADEP regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

OUR 2023 WATER MONITORING RESULTS:

During 2023, North Wales Water Authority conducted hundreds of tests for possible drinking water contaminants. We detected no contaminant levels higher than the State and Federal Drinking Water standards allow. Similar testing was also completed by the Forest Park Treatment Plant. This arrangement results in some duplication of testing, but also provides more quality control.

The attached tables summarize the results of monitoring for the year 2023. Dozens of other contaminants that were tested for, but not detected, are not listed. Unless otherwise noted, the data presented in the tables is from testing done from January 1, 2023, to December 31, 2023. The PADEP requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of our data, though representative, is more than 1 year old.

DEFINITIONS AND ABBREVIATIONS:

These are the definitions of the terms and abbreviations used in Tables 1 and 2 on the inside of this folder:

- **MCL (Maximum Contaminant Level):** The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
- **MCLG (Maximum Contaminant Level Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
- **MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **MRDLG (Maximum Residual Disinfectant Level Goal):** 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.
- **ppm (parts per million):** one part per million corresponds to one minute in two years, a single penny in \$10,000, one ounce to 31 tons, or 1 inch in 16 miles.
- **ppb (parts per billion):** one part per billion corresponds to one second in 32 years, a single penny in \$10 million, a pinch of salt to 10 tons of potato chips, or 1 inch in 16,000 miles.
- **ppt (parts per trillion):** one part per trillion corresponds to one second in 32,000 years, a single penny in \$10 billion, a pinch of salt to 10,000 tons of potato chips, or 1 inch in 16,000,000 miles.
- **pCi/l (picocuries per liter):** picocuries per liter is a measure of the radioactivity of water.
- **NTU (Nephelometric Turbidity Unit):** nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **AL (Action Level):** the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
- **TT (Treatment Technique):** a treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **MinRDL (Minimum Residual Disinfectant Level):** The minimum level of residual disinfectant required at the entry point to the distribution system
- **ND (Non-detect):** An ND result indicates that the contaminant concentration in a sample is below the threshold at which instrumentation can reliably detect it.
- **PFOS:** Perflourooctanesulfonic Acid.
- **PFOA:** Perflourooctanoic Acid

DETECTED SAMPLE RESULTS
Warrington Township – PWSID 1090070

Chemical Contaminants								
Contaminant	MCL in CCR Units	MCLG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Barium	2	2	0.015	N/A	ppm	2023	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Bromate	10	0	2.30	1.50 – 4.00	ppb	2023	N	By-product of drinking water chlorination
Nitrate - FPTP	10	10	0.533	0.34 – 0.781	ppm	2023	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrate – Warrington Wells	10	10	2.36	0 – 2.36	ppm	12/2023	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Gross Alpha Particle Activity	15	0	0.22	0 – 0.22	pCi/l	2023	N	Erosion of natural deposits
Combined Uranium	30	0	12.92	0 – 12.92	ppb	2023	N	Erosion of natural deposits
Arsenic	10	0	5	N/A	ppb	2021	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Fluoride	2*	2	0.104	N/A	ppm	2021	N	Erosion of natural deposits; Discharge from fertilizer and aluminum factories

*EPA's MCL for fluoride is 4 ppm. However, Pennsylvania has set a lower MCL to better protect human health. NWWA does not add fluoride to the water during treatment.

Distribution Disinfectant Residual								
Contaminant	MRDL	MRDLG	Highest Monthly Average	Range of Monthly Average Results	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine (in distribution system)	4.0	4.0	1.12	0.70 – 1.12	ppm	2023	N	Water additive used to control microbes

Entry Point Disinfectant Residual							
Contaminant	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine – Warrington Wells	0.40	0.57	0.57 – 0.80	ppm	12/2023	N	Water additive used to control microbes.
Chlorine - FPWTP	0.20	1.27	1.27 – 1.88	ppm	2023	N	Water additive used to control microbes.

Haloacetic Acids (HAA5)—2023							
Contaminant	MCL in CCR Units	MCLG	Range of Detections	Amount Detected	Units	Violation Y/N	Sources of Contamination
Haloacetic Acids (HAA5)	60.0	N/A	6.40 – 31.60	17.56	ppb	N	By-products of drinking water disinfection.

Constituents of Disinfection Byproducts: Haloacetic Acids (HAAs)							
Contaminant	MCLG	Range of Detections	Amount Detected	Units	Violation Y/N	Sources of Contamination	
Dibromoacetic acid	N/A	N/A	0.07	ppb	N	By-products of drinking water disinfection.	
Dichloroacetic acid	0	3.09 – 21.00	10.91				
Trichloroacetic acid	20.0	1.96 – 12.30	6.66				

We had no detection of Monobromoacetic Acid or Monochloroacetic Acid during the 2023 sample year.

Total Trihalomethanes (TTHMs)—2023							
Contaminant	MCL in CCR Units	MCLG	Range of Detections	Amount Detected	Units	Violation Y/N	Sources of Contamination
Total Trihalomethanes (TTHM)	80.0	N/A	8.06 – 67.50	35.04	ppb	N	By-products of drinking water disinfection.

Constituents of Disinfection Byproducts: Total Trihalomethanes (TTHMs)							
Contaminant	MCLG	Range of Detections	Amount Detected	Units	Violation Y/N	Sources of Contamination	
Bromodichloromethane	0	1.79 – 13.10	6.60	ppb	N	By-products of drinking water disinfection.	
Bromoform	0	N/A	0.04				
Chlorodibromomethane	60.0	0.65 – 4.04	2.38				
Chloroform	70.0	5.62 – 54.00	26.73				

Perfluorinated Compounds							
Contaminant	Highest Level Detected	Range of Detections	Sample Date	MCL	MCLG	Units	Sources Of Contamination
PFOS FPWTP	1.1*	ND-2.8	2023	18	14	ppt	Human-made chemicals used to make items that are resistant to water, grease, or stains, such as cookware, carpets, and packaging. Also used in industrial processes and in firefighting foams.
PFOS Warrington Wells	ND	N/A	12/2023				
PFOA FPWTP	2.2*	ND-4.1	2023	14	8		
PFOA Warrington Wells	ND	N/A	12/2023				

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

Lead and Copper							
Contaminant	Action Level (AL)	MCLG	90 th Percentile Value	Units	# of Sites Above AL of Total Sites	Violation Y/N	Sources of Contamination
Lead 6/2022	15	0	0.143	ppb	0 out of 30	N	Corrosion of household plumbing.
Copper 6/2022	1.3	1.3	0.001	ppm	0 out of 30	N	Corrosion of household plumbing.

Turbidity							
Contaminant	MCL	MCLG	Level Detected	Range of Detections	Sample Date	Violation Y/N	Sources of Contamination
Turbidity	TT=1 NTU for a single measurement	N/A	0.04	0.03-0.07	2023	No	Soil runoff.

100% of Turbidity samples were below 0.1 NTU. As a member of the Partnership for Safe Drinking Water, our goal is to maintain turbidity levels below 0.1 NTU. This was achieved throughout 2023.

Microbial – Coliform Bacteria, Cryptosporidium and Giardia							
Contaminant	MCL	MCLG	Highest Level Detected	Range of Detections	Sample Date	Violation Y/N	Sources of Contamination

Coliform bacteria including Total Coliform and E. Coli were monitored on a continuous basis in 2023. Neither parameter was detected in accordance with the regulations of the PA Department of Environmental Protection.

Raw water monitoring for Giardia and Cryptosporidium was performed in March, June, and October of 2023. Giardia was detected in 0 out of 3 samples. Cryptosporidium was detected in 0 out of 3 samples. Cryptosporidium and Giardia are both naturally present in the environment.

Below is a list of parameters which Forest Park Water Treatment Plant monitored for but did not detect during the 2023 sample year:

Synthetic Organic Contaminants		
1,2-Dibromo-3-chloropropane	Benzo[a]pyrene	Di-2(ethylhexyl) phthalate
Endrin	Hexachlorobenzene	Pentachlorophenol
2,4-D	Carbofuran	Dinoseb
Ethylene dibromide	Hexachlorocyclopentadiene	Picloram
2,4,5-TP [Silvex]	Chlordane	Dioxin [2,3,7,8-TCDD]
Glyphosphate	Lindane	PCBs [Polychlorinated biphenyls]
Alachlor	Dalapon	Diquat
Heptachlor	Methoxychlor	Simazine
Atrazine	Di-2(ethylhexyl) adipate	Endothall
Heptachlor epoxide	Oxamyl [Vydate]	Toxaphene

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

Regulated Inorganic Contaminants		
Antimony	Chromium	Nickel
Arsenic	Cyanide	Nitrite
Beryllium	Fluoride	Selenium
Cadmium	Mercury	Thallium

Regulated Radiological Contaminants
Gross Alpha
Radium 226
Radium 228
Uranium

Polyfluoroalkyl Substances (PFAS)
perfluorobutanesulfonic acid (PFBS)
perfluoroheptanoic acid (PFHpA)
perfluorohexanesulfonic acid (PFHxS)
perfluorononanoic acid (PFNA)

LATE REPORTING VIOLATION:

In December 2023, NWWA did not report the entry point residuals for EPs 102, 104, 105, or 107 within the required reporting window. The entry point residuals collected during the two days each well was operational were not submitted with the original report. We rectified this oversight in February 2024 when the mistake was brought to our attention.

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 Wales Water Authority is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

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 and the Center 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 or visit the EPA website at www.epa.gov/safewater/dwhealth.