

2024 Water Quality Report

North Sewickley Township Water Authority

PWSID NO: 5040010

Este informe contiene informacion importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o 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.)

The North Sewickley Township Water Authority (NSTWA) is pleased to present to you the WATER QUALITY REPORT for 2024. This report is designed to inform you about the quality water and services we deliver to you every day. The analysis covers January 1, 2024, through December 31, 2024. NSTWA strives to meet the strict regulations of both the State of Pennsylvania and the U.S. Environmental Protection Agency (EPA), which requires all water suppliers to prepare annual reports.

In 2024, NSTWA distributed 101,610,497 gallons of water to our customers.

Our water source is purchased, pretreated water from the Beaver Falls Municipal Authority (BFMA). Beaver Falls relies on surface water from the Beaver River which is formed by the confluence of the Mahoning and Shenango Rivers near New Castle, PA. There are also several smaller tributaries, including the Connoquenessing Creek, Pymatuning Creek, and Brush Creek, that feed into the watershed that is used by BFMA.

A Source Water Assessment of our source water was completed in May of 2002. The assessment has found that the Beaver River is potentially susceptible to accidental spills along roads and railways that border the river for almost its entire length. Overall, our source water has a high risk of significant contamination. A summary report of the Assessment is available on the Source Water Assessment Summary Reports eLibrary webpage: www.elibrary.dep.state.pa.us/dsweb/View/Collection-10045. Complete reports were distributed to municipalities, water supplier, local planning agencies and PADEP Regional Office, Records Management Unit at 412-442-4000.

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).

In order to ensure that tap water is drinkable, the EPA has set limits through regulations for certain contaminants in drinking water provided by public water systems. These MCL's (maximum contaminant levels) are set at very low levels because of potential adverse health effects to the general public. The BFMA routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables show the results the BFMA monitoring for the period of January 1 to December 31, 2024. The State also allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data is from prior years in accordance with the Safe Drinking Water Act. The date has been noted on the sampling results table. In the following tables, you will find many terms and abbreviations you may not be familiar with. To help you better understand these terms, we have provided the following definitions:

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years, or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter (µg/l) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) or Nanograms per liter (ng/l) – one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Running Annual Average (RAA) - mathematical average of analytical data in which four quarterly or twelve-monthly results are continuously averaged.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

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 that is 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 treatment plant entry point and in the distribution system.

Disinfectant - the chemical additive or process that is used to kill or inactivate pathogens that may be present in the water.

We are pleased to report, as you will see on the following tables, the contaminants that require testing in accordance with standards established by State and Federal laws, were within the allowable limits.

TABLES

BEAVER FALLS MUNICIPAL AUTHORITY

(BFMA Test Data)

<i>Turbidity Data</i>						
<i>Contaminant (Units)</i>	<i>Sample Date</i>	<i>Violation (Y/N)</i>	<i>Level Detected</i>	<i>MCLG</i>	<i>MCL</i>	<i>Likely Source of Contamination</i>
Turbidity (NTU)	Continuous Monitoring	N	100% (a)	0	TT = At least 95% of samples below 0.3	Soil Runoff
		Highest single measurement and date	0.366 (1/19/24)	N/A	TT = 1 NTU for a single measurement	

(a) The lowest monthly percentage of samples meeting the turbidity limits specified by DEP regulations

<i>Inorganic, Synthetic, and Volatile Organic Contaminants</i>							
<i>Contaminant (Units)</i>	<i>Sample Date</i>	<i>Violation (Y/N)</i>	<i>Level Detected</i>	<i>Range</i>	<i>MCLG</i>	<i>MCL</i>	<i>Likely Source of Contamination</i>
Copper (ppm)	June 2022	N	0.297 (b)	0.0105 – 1.3	1.3	AL = 1.3	Corrosion of household plumbing, erosion of natural deposits
Lead (ppb)	June 2022	N	2.36 (b)	0.00-9.8	0.0	AL = 15.0	Corrosion of household plumbing, erosion of natural deposits
Nickel (ppm)	July 2024	N	0.0114	0.0114	0.1	0.1	Leaching from metals in contact with drinking water pipe such as pipes and fittings, erosion of natural deposits
Fluoride (ppm)	July 2024	N	0.51	0.51	2.0	2.0	Erosion of natural deposits; water additive, discharge from fertilizer/aluminum factories
Nitrate (ppm)	Nov 2024	N	1.71	1.71	10.0	10.0	Runoff from fertilizer use, Leaching from septic tanks and sewage, erosion of natural deposits
Chromium (ppm)	July 2024	N	0.00264	0.00264	0.1	0.1	Discharge from steel and pulp mills; erosion of natural deposits
Barium (ppm)	July 2024	N	.0308	.0308	2.0	2.0	Discharge of drilling wastes; metal refineries; erosion of natural deposits
<i>Distribution Disinfectant & Disinfection By-Products</i>							
<i>Contaminant (Units)</i>	<i>Sample Date</i>	<i>Violation (Y/N)</i>	<i>Level Detected</i>	<i>Range</i>	<i>MCLG</i>	<i>MCL</i>	<i>Likely Source of Contamination</i>
Chlorine (ppm)	Sampled Monthly	N	3.99 (c)	0.20-3.99	4.0 = MRDLG	4.0 = MRDL	Water additive to control microbes
Chloramines (ppm)	Sampled Monthly	N	3.41 (c)	0.59-3.41	4.0 = MRDLG	4.0 = MRDL	Water additive to control microbes
Haloacetic Acids (ppb)	Sampled Quarterly	N	43.6 (d)	27.7-52.8	N/A	60	By-product of disinfection
Total Trihalomethanes (ppb)	Sampled Quarterly	N	66.28 (d)	25.4-92.2	N/A	80	By-product of disinfection

(b) These are 90th percentile results. None of the thirty-four samples for lead or copper exceeded the action level

(c) As of April 29, 2019 DEP regulations require a minimum disinfectant level of 0.2 mg/L be maintained in the distribution system at all times.

(d) Highest calculated locational RAA.

<i>Entry Point Disinfection Residual</i>						
<i>Contaminant (Units)</i>	<i>Sample Date</i>	<i>Violation (Y/N)</i>	<i>Lowest Level Detected</i>	<i>Range of Detections</i>	<i>Min RDL</i>	<i>Likely Source of Contamination</i>
Chlorine (ppm)	Continuous Monitoring	N	2.38 (on 1/6/24)	2.38-3.70	0.2	Water additive to control microbes

Total Organic Carbon						
Contaminant	Sample Date	Violation (Y/N)	Range of % Removal Required	Range of % Removal Achieved	No. of Quarters out of Compliance	Likely Source of Contamination
Total Organic Carbon	Sampled Monthly	N	35	28.3 – 55.0	0	Naturally decaying organic matter

****** The TOC removal performance ratio for any conventional treatment plant is based on the Running Annual Average of performance ratios, computer quarterly

Finished water (sampled quarterly in 2024)				
Contaminant	Reporting Limit (ppt)	Range Detected (ppt)	MCL (ppt)	Likely Source of Contamination
PFOS (perfluorooctane sulfonic acid)	1.65	2.16 – 2.92	18	Leachate from landfills, waste streams from a number of industrial processes, runoff from areas using certain firefighting foams. They have been used to make cookware, carpets, clothing, fabrics for furniture, paper packaging for food, and other materials that are resistant to water, grease, or stains. They are also used in firefighting foams and in a number of industrial processes.
PFOA (perfluorooctanoic acid)	1.78	2.82 – 5.48	14	
PFHxS (Perfluorohexanesulfonic acid)	N/A	1.38 – 1.9	N/A	
PFBS (Perfluorobutanesulfonic acid)	N/A	5.6 – 29.8	N/A	
PFNA (Perfluorononanoic acid)	N/A	0.675	N/A	

UNREGULATED CONTAMINANT MONITORING (BFMA Test Data)

Availability of Monitoring Data for Unregulated Contaminants for the Beaver Falls Municipal Authority. BFMA has sampled a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that this data is available. If you have any further questions, please contact us at the phone number listed at the bottom of the last page.

UNREGULATED CONTAMINANT MONITORING				
Finished water (sampled in March, June, September, December 2018)				
Contaminant	Reporting Limit (ppt)	Range Detected (ppt)	MCL (ppt)	Likely Source of Contamination
PFBA (Perfluorobutanoic acid)	5.0	8.3	N/A	Leachate from landfills, waste streams from a number of industrial processes, runoff from areas using certain firefighting foams.
PFHxA (Perfluorohexanoic acid)	3.0	3.2 – 7.7	N/A	
PFHxS (Perfluorohexanesulfonic acid)	1.72	1.38 – 1.9	N/A	

PFOS (Perfluorooctanoic acid)	4.0	4.0	18	They have been used to make cookware, carpets, clothing, fabrics for furniture, paper packaging for food, and other materials that are resistant to water, grease, or stains. They are also used in firefighting foams and in a number of industrial processes.
PFOA (Perfluorooctanoic acid)	4.0	5.4	14	
PFBS (Perfluorobutanesulfonic acid)	3.0	6.0 – 36.9	N/A	
PFPeA (Perfluoropentanoic acid)	3.0	4.2 – 7.8	N/A	

TABLES
NORTH SEWICKLEY TOWNSHIP WATER AUTHORITY
(NSTWA Test Data)

<i>Inorganic, Synthetic, and Volatile Organic Contaminants</i>							
<i>Contaminant</i>	<i>Action Level (AL)</i>	<i>MCLG</i>	<i>90th % Value</i>	<i>Units</i>	<i># Of Sites Above AL of Total Sites</i>	<i>Violation</i>	<i>Likely Source of Contamination</i>
Lead	15	N	*N/A	ppg	0	N	Corrosion of household plumbing
Copper	1.3	N	*N/A	ppm	0	N	Corrosion of household plumbing

*These are 90th percentile results. None of the twenty samples for lead or copper exceeded the minimum action level

**Lead and Copper sampling is performed every 3 years, sampling not required in 2024, next sampling is 2025

<i>Distribution Disinfectant & Disinfection By-Products</i>							
<i>Contaminant (Units)</i>	<i>Sample Date</i>	<i>Violation (Y/N)</i>	<i>Running Annual Average</i>	<i>Range</i>	<i>MCLG</i>	<i>MCL</i>	<i>Likely Source of Contamination</i>
Trihalomethanes TTHM (ppb)	Annual	N	0.03	0.0316-0.0336	N/A	0.08	By-product of disinfection
Haloacetic Acids HAA5 (ppb)	Annual	N	0.02	0.0202-0.0271	N/A	0.06	By-product of disinfection
Total Chlorine (ppm)	Monthly	N	2.27	1.36 – 2.90	4.0 = MCLG	4.0 = MCL	By-product of disinfection
Free Chlorine (ppm)	Monthly	N	0.31	0.10 – 1.28	4.0 = MCLG	4.0 = MCL	By-product of disinfection

**If there were any violations, they are attached with this report.

LT2 – LONG TERM ENHANCED SURFACE WATER TREATMENT RULE

In 2019, the Beaver Falls Municipal Authority completed the raw water monthly monitoring of our source water (Beaver River) for Cryptosporidium. Twenty-four (24) monthly samples were taken and there were six detections with a 12-arithmetic mean of 0.074 Oocysts per liter which complies with a Bin 1 Classification.

Cryptosporidium is a microbial pathogen found in surface waters throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. This monitoring will indicate the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of the infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immune-compromised people are at a greater risk of developing life-threatening illness. We encourage 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.

EXPLANATION OF VIOLATIONS:

Beaver Falls - First Quarter 2022, the Beaver Falls Municipal Authority experienced a source water contamination event. Orsanco (Ohio River Valley Water Sanitation Commission) reported detections of Benzene and Toluene on the Ohio River. At that same time, CWM lab contacted BFMA to report a detection on a set of in-house samples. The appropriate authorities were immediately notified of the detections. Orsanco graciously started sampling upstream of our intake eventually pinpointing the origin of the contamination to be on the Mahoning River across the state line in Ohio. During that event and continuing through the weekly monitoring, the BFMA treatment proves has been able to remove these contaminants to a level below the regulated MCL. **Update: Monitoring has continued throughout 2024 since levels well below the MCL are still detected during high river events.**

Beaver Falls Municipal Authority had a couple reporting violations due to data entry errors, which did not require public notification. The regulated testing was completed on schedule, unfortunately it was entered into the states reporting system late.

The North Sewickley Township Water Authority - had a couple reporting violations. In 2022, the asbestos testing was missed. This testing is not on the monitoring schedule and the testing was completed in January of 2025. There were a couple violations with the 1013/Free Chlorine Residual. These samples were all collected and analyzed by the lab, they were just taken on days that did not count toward the correct reporting week.

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 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, 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 users.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA and DEP prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. FDA and DEP regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonable 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).

HEALTH INFORMATION:

All drinking water, including bottled water, may be reasonably expected to contain at least small amounts of contaminants. The presence of these contaminants does not necessarily indicate that the 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). These contaminants can be microbes, organic or inorganic chemicals, or radioactive materials. Examples of these contaminants are viruses and bacteria from sewage or septic systems and salts and metals from industrial or domestic wastewater discharges. Pesticides and herbicides from agricultural and urban runoff can also be detected periodically in trace amounts. In addition to these, organic chemical contaminants that can come from gas station run-off or from industrial processes such as petroleum production may also be found at times, in trace amounts.

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. The BFMA 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

If you would like further information about the testing or sampling of our tap water, please contact our Authority Manager, Lisa A. Crespo, at 724-846-7480 during regular business hours: Monday through Friday, 7:00 A.M. to 3:00 P.M. If you want to learn more about the Authority, please attend any of our regularly scheduled meetings. They are held on the third Thursday of each month at 6:00 P.M. unless otherwise advertised in the Ellwood City Ledger. You can also visit our website at www.northsewickleytownship.com.