

# 2021 Water Quality Report

## North Sewickley Township Water Authority

PWSID NO: 5040012

*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 2021. This report is designed to inform you about the quality water and services we deliver to you every day. The analysis covers January 1, 2021 through December 31, 2021. 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 2021, NSTWA distributed 111,791,000 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](http://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, 2021. 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><b>Turbidity Data</b></i>						
<i><b>Contaminant (Units)</b></i>	<i><b>Sample Date</b></i>	<i><b>Violation (Y/N)</b></i>	<i><b>Level Detected</b></i>	<i><b>MCLG</b></i>	<i><b>MCL</b></i>	<i><b>Likely Source of Contamination</b></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	0.099 (11/2/21)	N/A	TT = 1 NTU for a single measurement	

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

<b><i>Inorganic, Synthetic, and Volatile Organic Contaminants</i></b>							
<b><i>Contaminant (Units)</i></b>	<b><i>Sample Date</i></b>	<b><i>Violation (Y/N)</i></b>	<b><i>Level Detected</i></b>	<b><i>Range</i></b>	<b><i>MCLG</i></b>	<b><i>MCL</i></b>	<b><i>Likely Source of Contamination</i></b>
Copper (ppm)	August 2019	N	0.296 (b)	0.0174 – 0.938	1.3	AL = 1.3	Corrosion of household plumbing, erosion of natural deposits
Lead (ppb)	August 2019	N	0.0031 (b)	0.00-0.0054	0.0	AL = 15.0	Corrosion of household plumbing, erosion of natural deposits
Nitrate (ppm)	Aug 2021	N	0.70	0.70	10.0	10.0	Runoff from fertilizer use, Leaching from septic tanks and sewage, erosion of natural deposits
Barium (ppm)	Aug 2021	N	.0196	.0196	2.0	2.0	Discharge of drilling wastes; metal refineries; erosion of natural deposits

<b><i>Distribution Disinfectant &amp; Disinfection By-Products</i></b>							
<b><i>Contaminant (Units)</i></b>	<b><i>Sample Date</i></b>	<b><i>Violation (Y/N)</i></b>	<b><i>Level Detected</i></b>	<b><i>Range</i></b>	<b><i>MCLG</i></b>	<b><i>MCL</i></b>	<b><i>Likely Source of Contamination</i></b>
Chlorine (ppm)	Sampled Monthly	N	3.97 (c)	0.34-3.97	4.0 = MRDLG	4.0 = MRDL	Water additive to control microbes
Chloramines (ppm)	Sampled Monthly	N	2.56 (c)	0.16- 2.56	4.0 = MRDLG	4.0 = MRDL	Water additive to control microbes
Haloacetic Acids (ppb)	Sampled Quarterly	N	32.0 (d)	13.5 -43.1	N/A	60	By-product of disinfection
Total Trihalomethanes (ppb)	Sampled Quarterly	N	59.0 (d)	13.7-93.4	N/A	80	By-product of disinfection

(b) These are 90<sup>th</sup> 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.

<b><i>Entry Point Disinfection Residual</i></b>						
<b><i>Contaminant (Units)</i></b>	<b><i>Sample Date</i></b>	<b><i>Violation (Y/N)</i></b>	<b><i>Lowest Level Detected</i></b>	<b><i>Range of Detections</i></b>	<b><i>MinRDL</i></b>	<b><i>Likely Source of Contamination</i></b>
Chlorine (ppm)	Continuous Monitoring	N	1.13 (on 7/21/21)	1.13-2.97	0.2	Water additive to control microbes

<b><i>Total Organic Carbon</i></b>						
<b><i>Contaminant</i></b>	<b><i>Sample Date</i></b>	<b><i>Violation (Y/N)</i></b>	<b><i>Range of % Removal Required</i></b>	<b><i>Range of % Removal Achieved</i></b>	<b><i>No. of Quarters out of Compliance</i></b>	<b><i>Likely Source of Contamination</i></b>
Total Organic Carbon	Sampled Monthly	N	25-45	36.9—52.0	0	Naturally decaying organic matter

## UNREGULATED CONTAMINANT MONITORING (BFMA Test Data)

**Availability of Monitoring Data for Unregulated Contaminants for the Beaver Falls Municipal Authority.** BFMA has sampled for 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 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 (ug/L)	Range Detected (ug/L)	Health Advisory Level (ug/L)	Likely Source of Contamination
Germanium	0.300	<0.300	N/A	
Alpha – hexachlorocyclohexane	0.010	<0.010	N/A	Pesticide
Chlorpyrifos	0.029	<0.029	N/A	Organophosphate insecticide
Dimethipin	0.192	<0.192	7.3	Runoff from herbicide use
Ethoprop	0.029	<0.029	N/A	Pesticide
Oxyfluorfen	0.048	<0.048	N/A	Runoff from herbicide use
Profenofos	0.288	<0.288	N/A	Pesticide for cotton crops
Tebuconazole	0.192	<0.192	N/A	Agricultural Fungicide
Permethrin	0.038	<0.038	N/A	Residential/Industrial pesticide
Tribufos	0.067	<0.067	N/A	Pesticide for cotton crops
1-Butanol	2.00	<2.00	N/A	Solvent, fuel additive, plasticizer
2 - Methoxyethanol	0.400	<0.400	N/A	Jet fuel anti-icing additive; solvent for resins, coatings, dyes
2-Propen-1-ol	0.500	<0.500	N/A	Herbicide
BHA	0.0297	<0.0297	N/A	Antioxidant and preservative in food, animal feed, cosmetics, rubber, petroleum products; also used in medicines
o-Toluidine	0.00693	<0.00693	N/A	Manufacture of dyes
Quinoline	0.0198	<0.0198	N/A	Discharges from petroleum, coal

<i>Finished water (sampled in February 2021)</i>				
<i>Contaminant</i>	<i>Reporting Limit (ng/L)</i>	<i>Range Detected (ng/L)</i>	<i>Health Advisory Level (ng/L)</i>	<i>Likely Source of Contamination</i>
PFBS (perfluorobutane sulfonic acid)	3.7	19	N/A	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.
PFHxA (perfluorohexanoic acid)	3.7	2.8	N/A	
PFOS (perfluorooctane sulfonic acid)	3.7	2.1	HA is for combined PFOS & PFOA	
PFOA (perfluorooctanoic acid)	2.0	2.2	HA is for combined PFOA & PFOS	
Total Combined PFOA & PFOS	N/A	2.1-2.2	70	
<i>Untreated water (sampled in March, June, September, December 2018)</i>				
<i>Contaminant</i>	<i>Reporting Limit</i>	<i>Range Detected (ug/L)</i>	<i>Health Advisory Level</i>	<i>Likely Source of Contamination</i>
Bromide	20.0 (ug/L)	<20.0 - 265	N/A	Naturally occurring
Total Organic Carbon	0.500 (mg/L)	4.12 – 6.38	N/A	Naturally decaying organic matter
<i>Untreated water (sampled bi-weekly, June thru Sept)</i>				
<i>Contaminant</i>	<i>Reporting Limit (ug/L)</i>	<i>Range Detected (ug/L)</i>	<i>Health Advisory Level (10-day)(ug/L)</i>	<i>Likely Source of Contamination</i>
Total Microcystin	0.300	<0.300	0.3 children, 1.6 adults	Produced by certain species cyanobacteria
Anatoxin-a	0.0300	<0.0300	N/A	Produced by certain species cyanobacteria
Cylindrosperopsin	0.0900	<0.0900	0.7 children, 3 adults	Produced by certain species cyanobacteria
<i>Distribution System (sampled in March, June, September, December 2018)</i>				
<i>Contaminant</i>	<i>Reporting Limit (ug/L)</i>	<i>Range Detected (ug/L)</i>	<i>MCL (ug/L)</i>	<i>Likely Source of Contamination</i>
Bromochloroacetic Acid	0.300	1.94 – 4.95	N/A	By-product of disinfection
Bromodichloroacetic Acid	0.500	2.53 – 7.41	N/A	By-product of disinfection
Chlorodibromoacetic Acid	0.300	<0.300 – 2.35	N/A	By-product of disinfection
Tribromoacetic Acid	2.00	<2.00	N/A	By-product of disinfection

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>90<sup>th</sup> % 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	*0.002	ppg	0	N	Corrosion of household plumbing
Copper	1.3	N	*0.447	ppm	0	N	Corrosion of household plumbing

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

<i>Distribution Disinfectant &amp; 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)	Quarterly	**	**	**	N/A	80	By-product of disinfection
Haloacetic Acids HAA5 (ppb)	Quarterly	**	**	**	N/A	60	By-product of disinfection
Total Chlorine (ppm)	Monthly	**	25.88	1.13-3.54	4.0 = MCLG	4.0 = MCL	By-product of disinfection
Free Chlorine (ppm)	Monthly	**	0.28	0.07–0.61	4.0 = MCLG	4.0 = MCL	By-product of disinfection

\*\*Please review the attached public notification for list of violations for the North Sewickley Township Water Authority.

**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 Municipal Authority had one reporting violation due to a data entry error, which did not require public notification. Their contracted lab incorrectly entered a monitoring sampling date in Sept 2021, this date was corrected in Nov 2021. The North Sewickley Township Water Authority has a list of violations attached with this report as well. These violations occurred in prior years and are being reported as of a current date to remove them from all the error records. Please review the attached public notification for list of violations for the North Sewickley Township Water Authority.

## **EDUCATIONAL INFORMATION:**

The sources of drinking water (both tap water and bottled water) include rivers, lakes, stream, 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 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 drinking, 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).

## **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](http://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](http://www.northsewickleytownship.com).

**PUBLIC NOTICE**

**IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER  
 FAILURE TO MONITOR**

**ESTE INFORME CONTIENE INFORMACIÓN IMPORTANTE ACERCA DE SU AGUA POTABLE. HAGA QUE  
 ALGUIEN LO TRADUZCA PARA USTED, O HABLE CON ALGUIEN QUE LO ENTIENDA.**

**Monitoring Requirements Not Met By North Sewickley Township Water Authority for Weekly Distribution  
 Disinfectant Residual (R3), Annual Disinfectant Byproduct (3A) Haloacetic Acids and Trihalomethanes**

Our water system violated several drinking water standards. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During multiple months in 2020 and 2021 we failed to monitor for the following contaminants and therefore cannot be sure of the quality of our drinking water during that time.*

**What should I do?** There is nothing you need to do at this time.

The table below lists the contaminant(s) we did not properly test for, the required sampling frequency, year missed or incomplete monitoring occurred, month(s) missed or incomplete monitoring occurred, and the date on which corrective action samples were (or will be) taken.

Contaminant	Required sampling frequency	Missed Monitoring Year	Missed Monitoring Month(s)	When samples were or will be taken
Distribution Disinfectant Chlorine Residual	Weekly	2020	12/9/20 – 1/4/20	1/6/20
Distribution Disinfectant Chlorine Residual	Weekly	2020	6/21/20 – 6/27/20	6/29/20
Trihalomethanes & Haloacetic Acids	Annual	2020 – 2021	March	N/A
Distribution Disinfectant Chlorine Residual	Weekly	2021	11/14/21 – 11/20/21	N/A
Bacteria Sample	Monthly	2022	1/23/22 – 1/29/22	N/A
Distribution Disinfectant Chlorine Residual	Weekly	2022	1/2/22 – 1/8/22	N/A
Distribution Disinfectant Chlorine Residual	Weekly	2022	1/23/22 – 1/29/22	N/A

**What happened? What was done? When will it be resolved?**

Missed Monthly Reads, Missed Annual TTHM's. Discussion schedules with operators on procedure to ensure no future violations.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.





COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF SAFE DRINKING WATER

For more information regarding this notice, please contact Lisa A. Crespo at 724-650-6245.

Certified by:

Signature:

Date: 06/30/2022

Print Name and Title: Lisa A. Crespo

As a representative of the Public Water system indicated above, I certify that public notification addressing the above violation was distributed to all customers in accordance with the delivery requirements outlined in Chapter 25 PA Code 109 Subchapter D of the Department of Environmental Protection (DEP's) regulations. The following methods of distribution were used: 2021 CCR Report - Direct Mail, Website

PWS ID#: 5040010

Date distributed: June 2022