Annual Drinking Water Quality Report for 2020
Town of Bethlehem Water District No.1
445 Delaware Avenue, Delmar, NY 12054
(Public Water Supply Identification Number NY0100191)

INTRODUCTION

To comply with State regulations, the Town of Bethlehem Department of Public Works issues an annual report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, we conducted tests for over 80 contaminants and we are pleased to report that the water system did not have any contaminants higher than the limits set by New York State.

This report is an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to New York State standards. Our constant goal is to provide to you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. If you have any questions concerning this report or concerning your drinking water please contact: Mr. George S. Kansas P.E. Commissioner of Public Works, 445 Delaware Ave, Delmar NY 12054, Telephone (518) 439-4955 or e-mail GKansas@townofbethlehem.org.

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap 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 activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Departments and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The Bethlehem Water District No. 1 draws its water from both "surface water" and "ground water" sources. During 2020, our system did not experience any restriction of our water sources. These sources are:

- Surface water drawn from the Vly Creek Reservoir located in the Town of New Scotland
- Groundwater from two (2) wells located in the Town of New Scotland
- Groundwater from eleven (11) wells located along the Hudson River
- Surface water drawn from the Alcove Reservoir located in the Town of Coeymans (City of Albany water purchased by the Town of Bethlehem)

The New Salem Water Treatment Plant (WTP) draws its water from the Vly Creek Reservoir, which has a storage capacity of 1.25 billion gallons. The New Salem WTP has a peak capacity for purifying 6 million gallons of water per day. The treatment process consists of chlorination for disinfection; coagulation with aluminum sulfate; filtration with rapid sand filters, and corrosion control. The facility has equipment in place for the use of activated carbon for taste and odor control, but did not need to operate this system in 2020. There is no fluoride added to the Bethlehem Water Supply. Algae growth in the Reservoir is controlled by treatment with copper sulfate in the summer months, as well as three solar-powered mechanical mixers that are utilized during the summer months in the reservoir. Water is pumped from the purification plant to a 5,750,000-gallon steel water storage tank. From that point, water is delivered by gravity through a network of water mains, which reach all the way from North Bethlehem to Selkirk.

There are also two deep wells to supplement the capacity of the New Salem WTP. Each well has a capacity of 374 gallons per minute. We are permitted by the NYS Department of Environmental Conservation to withdraw 550,000 gallons per day, or 0.550 million gallons per day (MGD). Groundwater or well water is stored below the surface of the earth in deep, porous rocks or porous deposits of sand or gravel called "aquifers." Groundwater is purified naturally as it filters through layers of soil, clay, rock and sand. This process, known as "percolation", takes years to complete. As a result, groundwater requires less treatment than surface water.

The Clapper Road WTP is supplied by facilities including a groundwater infiltration system and a well field that consist of 11 drilled wells that are adjacent to the Hudson River in the hamlet of Selkirk. The treatment facility has the ability to treat 6 million gallon per day. The plant uses sodium permanganate and oxygen to oxidize iron and manganese found in the raw water, dissolved air flotation for the removal of organic materials, aluminum sulfate and a non-ionic polymer for coagulation, four (4) Trident filter units for water purification, sodium hydroxide and carbon dioxide for pH adjustment, corrosion control, and chlorine for disinfection.

To further strengthen the water distribution system and cooperate in a more regional approach to water supply, there are two interconnections with the City of Albany's water supply. One interconnection is located in a residential area on Kenwood Avenue and the other is in an industrial area on Creble Road. The Town currently purchases water from the City of Albany to supplement our capacity. We also have an emergency interconnect with the Town of Guilderland's water system in North Bethlehem. This interconnect can provide water from Bethlehem to Guilderland or vice versa depending upon which community needs supplemental water.

The City of Albany's water source is the Alcove Reservoir that is located on the Hannacroix Creek. Albany also has the Basic Creek Reservoir that serves as a secondary source. Treatment of Albany's water includes coagulation, sedimentation, pH adjustment, alkalinity adjustment, and filtration at the Albany Filtration Plant. Chlorine is added at the Albany plant as a residual disinfectant to maintain microbiological quality throughout the distribution system. Albany does not add fluoride to its water supply. To view the City of Albany Annual Water Quality Report go to the following link:
http://www.albanyny.org/Government/Departments/WaterAndWaterSupply/WaterQualityReport.aspx

FACTS AND FIGURES

The Bethlehem Water District serves approximately 36,000 people through 11,852 service connections. In 2020, the District provided 699,890,000 gallons of water from the New Salem WTP, 155,910,000 gallons from Well #1 and Well #2, and 247,650,000 gallons of water from the Clapper Road WTP. Supplemental water purchased from Albany was 456,690,000 gallons. The total volume of water produced from all sources in 2020 was 1,560,140,000 gallons. Approximately 1,444,701,666 gallons of water was billed to customers of Water District #1. The difference (7.4%) between the volume billed and the total volume produced is water used firefighting, flushing of the water distribution system, errors in water meters and water lost to leaks.

Our water system has over 230 miles of water mains and approximately 1,670 hydrants for fire protection. It also includes several covered water storage tanks with a combined capacity of over 13,000,000 gallons. Additionally, there are water storage tanks with 2,000,000 gallons and 70,000 gallons at the Clapper Road WTP and New Salem WTP, respectively, which hold finished water before being delivered to the town's pipe network. Average daily water production for the New Salem WTP; Clapper Road WTP; Well#1; Well#2 and Albany was 4,274,356 gallons per day, or 4.274 MGD.

The charge for water in 2020 was as follows:

Water Usage Tiers	Price per CCF[1]	Equivalent Price per 1,000 Gallons
Up to 500 CF[2]	$2.25	$3.01
501 CF to 5,000 CF	$4.67	$6.24
5,001 CF to 50,000 CF	$4.93	$6.59
50,001 CF to 500,000 CF	$3.39	$4.53
500,001 CF and over	$2.93	$3.92

1: CCF = hundred cubic feet
2: CF = cubic feet (1 cubic foot = 7.48 gallons of water)

Water customers located outside of the Water District were billed twice the In-District rates listed above. A 10% late fee was assessed on any bill not paid by the due date.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In accordance with State regulations, we routinely test your drinking water for numerous contaminants. Plant operators perform daily laboratory tests. Chlorine levels are constantly monitored. Drinking water is also tested by independent laboratories for such things as inorganic contaminants, radiological contaminants, lead and copper, nitrate, volatile organic contaminants, disinfection byproducts and synthetic organic contaminants. In addition, we test fifty-two (52) samples each month from the New Salem WTP and distribution system and eight (8) from the Clapper Road WTP and distribution system for coliform bacteria. All samples were found to be safe. The tables presented below depict which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these compounds do not change frequently. Some of our data, though representative, are more than one year old. Complete records are on file in the Water District Office. For a listing of all the parameters that we must analyze and the frequency of testing for compliance, please see the NYS Sanitary Code.

It should be noted that all drinking water, including bottled drinking water, might be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791), the EPA website at www.epa.gov or the Albany County Health Department at (518) 447-4620.

INFORMATION ON UNREGULATED CONTAMINANTS

Unregulated Contaminant Monitoring 4 was conducted during 2018. This is a requirement of the 1996 Safe Drinking Water Act amendments. This monitoring provides a basis for future regulatory action to protect the public health. The number in parentheses

refers to the number measured for a total of 32 analytes. The breakdown of analytes is as follows: semi volatile organic chemicals (3), pesticides and pesticide manufacturing byproduct (9), metals (2), alcohols (3), cyanotoxin chemical contaminants (10), brominated haloacetic acid groups (3) and indicator compounds (2). We have listed those compounds that were detected in the table of Detected Contaminants for the Town of Bethlehem. There are no associated MCL's for these compounds at this time with the exception of Manganese. If you have any questions about the Unregulated Contaminant Monitoring Regulation or the results provided in the tables below, please contact the Albany County Department of Health at (518) 447-4620.

WHAT DOES THIS INFORMATION MEAN?

As you can see by the tables below, our system had no violations. We have learned through our monitoring and testing that some contaminants have been detected; however, these compounds were detected below New York State requirements. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 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.

New York State has adopted the first in the nation drinking water standard for 1,4-Dioxane along with one of the lowest maximum contaminant levels for PFOA and PFOS. Public Water Supplies in NYS are required to test for PFOA, PFOS and 1,4-Dioxane. PFOA and PFOS have Maximum Contaminant Levels (MCL) of 10 parts per trillion each while 1,4-Dioxane has an MCL of 1.0 parts per billion. The Town of Bethlehem has completed its 1st and 2nd quarter monitoring for PFOA, PFOS &1,4-Dioxane.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Some people may be more vulnerable to disease causing microorganisms or pathogens 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 from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbiological pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

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

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2020, our system was in compliance with applicable New York State drinking water operating, monitoring and reporting requirements.

WHAT IS THE SOURCE WATER ASSESSMENT PROGRAM (SWAP)?

To emphasize the protection of surface and ground water sources used for public drinking water, Congress amended the Safe Drinking Water Act (SDWA) in 1996. The amendments require that New York State Department of Health's Bureau of Public Water Supply Protection is responsible for ensuring that source water assessments are completed for all of New York's public water systems.

A source water assessment provides information on the potential contaminant threats to public drinking water sources:

- Each source water assessment will: determine where water used for public drinking water comes from (delineate the source areas)
- Inventory potential sources of contamination that may impact public drinking water sources
- Assess the likelihood of a source water area becoming potential contaminated

SWAP summaries for each of our water sources are attached to this report.

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life;
- Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water storage facilities; and
- Saving water lessens the strain on the water system during dry spells or droughts, helping to avoid severe water use restrictions so that essential firefighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Only run the dishwasher and clothes washer when there is a full load.
- Turn off the tap when brushing your teeth and washing dishes.
- Use water saving showerheads.
- Install faucet aerators in the kitchen and the bathroom to reduce the flow from 4 to 2.5 gallons per minute.
- Water gardens and lawns for only a couple of hours after sunset or in the early morning to avoid excessive evaporation.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.
- Keep showers to 5 minutes or less in length.
- When washing your family vehicle, use a bucket of water and rinse it quickly with the hose.

2020 CAPITAL IMPROVEMENTS

We completed work at the Clapper Road WTP by installing a Dissolved Air Flotation (DAF) system to reduce TTHM formation and ensure the system's long-term compliance with the current disinfection byproducts rule. Sodium permanganate and oxygen are used on the pre-treatment side reducing the amount of chlorine used and thus reducing the disinfection byproducts (Trihalomethanes and Haloacetic Acids). We also use carbon dioxide and sodium hydroxide for pH adjustment on the post-treatment side.

CLOSING

Thank you for allowing us to continue providing you and your family with clean, quality drinking water this year. We ask that all of our customers help us protect our water system and resources. Please call the Department of Public Works at (518) 439-4955 if you have any questions or concerns.

Town of Bethlehem
NY0100191
Source Water Assessment Summary

The NYS DOH has completed Source Water Assessments for Bethlehem's Vly Creek Reservoir, New Salem wells and the Infiltration Gallery & new well field. The assessments are summarized below. The assessments include susceptibility ratings based on the risk posed by each potential source of contamination and how likely contaminants could enter the wells, the reservoir or Hudson River. The susceptibility rating is an estimate of the potential for contamination. It does not mean that the water delivered to your home is or will become unsafe to drink. See section "Are there contaminants in our drinking water?" of this report, for information concerning low levels of contaminants in your water.

New Salem Wells: The wells draw water from a high yield aquifer. Contaminants, if present, can move relatively quickly in high yield aquifers. The assessment has determined that the wells are susceptible to the microbes; bacteria, viruses and protozoa. Microbes can originate from improperly maintained or failing septic systems. Disinfection of the well water insures that any microbes that might reach the wells will be eliminated. The assessment has also determined that the wells are susceptible to various chemical types, such as nitrates, pesticides and petroleum products. Nitrates and pesticides can come from agricultural practices. Petroleum products can originate from leaking storage tanks. Fortunately, stored fuels are some distance from the wells.

Vly Creek Reservoir: This assessment found the amount of agricultural lands in the Vly Creek Reservoir's assessment area results in a potential for protozoa and pesticide contamination. However, there are presently no notable contamination threats.

The Hudson River and Dinmore Road well field (Clapper Road WTP raw water source): The assessment found the amount of pasture in the assessment area results in a potential for protozoa contamination. There is also a high density of sanitary wastewater discharges upstream, which result in susceptibility to other contaminant categories. Non-sanitary wastewater discharges may also contribute to contamination.

Both of the Bethlehem water treatment plants perform multi level treatment to insure you receive safe drinking water. Additionally, as this annual report shows your water is routinely monitored for a great number of potential contaminants.

A copy of the full Source Water Assessment, including a map of the assessment area, is available for review by contacting us at the number provided in this report.

City of Albany
NY0100189
Alcove and Basic Creek Reservoirs
Source Water Assessment Summary

The NYS DOH has completed a Source Water Assessment for the City of Albany's Alcove and Basic Creek Reservoirs. The assessments are summarized below. The assessments include susceptibility ratings based on the risk posed by each potential source of contamination and how likely contaminants could enter the reservoirs. The susceptibility rating is an estimate of the potential for contamination. It does not mean that the water delivered to your home is or will become unsafe to drink. See section "Are there contaminants in our drinking water?" of this report, for information concerning low levels of contaminants in your water.

This assessment found the amount of pasture in the Alcove Reservoir assessment area results in a potential for protozoa contamination. It should be noted that the Albany Department of Water routinely tests for disease causing protozoa. In the last several years none have been detected in the reservoir. There are no other notable contamination threats to the reservoir. It should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination.

This assessment found the amount of pasture in the Basic Creek Reservoir assessment area results in a potential for protozoa contamination. While there are some facilities present that are permitted to discharge, they do not represent an important threat to source water quality based on the type of discharge. There is also notable contamination susceptibility associated with landfills north of the reservoir. It should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination. Albany's water treatment plant performs multi level treatment to insure you receive safe drinking water. Additionally, as this annual report shows your water is routinely monitored for a great number of potential contaminants.

TOWN OF BETHLEHEM WATER DISTRIC No.1 NEW SALEM PURIFICATION PLANT & WELLS TABLE OF DETECTED CONTAMINANTS * Public Water Supply Identification Number NY010019						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity [1] (Highest turbidity sample from 6/25/20)	N	0.43	NTU	N/A	TT=5 NTU	Soil runoff
New Salem WTP		100%			TT= % samples <0.3	
Inorganic Contaminants (Sample data from 9/16/20 for **WTP in boldface;** sample data from Well #1 &, Well #2 from 9/16/20 unless otherwise noted)						
Barium	N	**28.5** 31.3-35.3	ppb	2000	2000	Natural sources
Chloride WTP Range for wells	N	**42.2** 45.9-136	ppm	N/A	250	Geology; Naturally occurring
Copper (sample data 7/2/20-7/14/20) Range of copper concentration	N	0.334[2] 0.0339-0.776	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits;
Lead (sample data 6/7/17-6/12/17) Range of lead concentration	N	1.27[3] ND-3.72	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Nickel Range for wells	N	**0.8** 1-1.4	ppb	N/A	100	Geology; Naturally occurring
Nitrate (as Nitrogen) WTP Range for wells	N	1.57-2.36	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Odor	N	**3** 1-1	units	N/A	3	Natural sources
pH (WTP) range for wells	N	**6.54** 7.02-7.33	units		6.5-8.5	
Sodium[4] (WTP) Range for wells	N	**22.1** 31.3-67.7	ppm	N/A	N/A	Geology; Road Salt
Sulfate	N	**53.2** 31.7-43.2	ppm	N/A	250	Naturally occurring
Zinc WTP	N	**305** 5.1-ND	ppb	N/A	5000	Galvanized pipe; **corrosion inhibitor**
Synthetic Organic Chemicals sample from 10/6/20						
2,4-D	N	**2.55**	ppb	N/A	50	Release to the environment by its application as a pesticide used to control broad leaf needs in agriculture and for control of woody plants along roadsides, railways, and utility rights-of-way
Disinfection Byproducts Stage 1						
Chlorine	N	1.96 1.19-3.45	ppm	MRDLG N/A	MRDL 4	Used in the treatment and disinfection of drinking water
Disinfection Byproducts Stage 2 (4 samples collected quarterly 2/4/20, 5/12/20, 8/6/20 & 11/7/20)						
Haloacetic Acids (HAA5) [5] Range of HAA5s all sites	N	LRAA1 **53.0** 26.7-78.5 LRAA2 46 25.6—55.3 LRAA3 48.5 23-72.1 LRAA4 39.6 32.4-57.1	ppb	N/A	60	By-product of drinking water chlorination
Total Trihalomethanes (TTHMM)[6] Wemple Rd Range of TTHMs all sites	N	LRAA1 69.7 45.6-90.6 LRAA2 36.9 21.5-59.8 LRAA3 60.4 35.5-83.1 LRAA4 62.1 39.5-96.8	ppb	0	80	By-product of drinking water chlorination
Total Organic Carbon[7] (monthly samples from 2020)						
Total Organic Carbon Monthly Compliance Ratio	N	**1.04-1.37**	N/A	Compliance ratio >=1	TT	Organic material both natural and man made; Organic pollutants, decaying vegetation,
Unregulated Contaminant Monitoring 4 (Quarterly samples collected **(** Quarterly samples collected 1/9/18, 4/25/18, 7/23/18 &10/24/18 and Well samples collected 1/9/18 & 7/23/18)						
Manganese	N	2.8-18.7	ppb	N/A	300	Naturally occurring
HAA6	N/A	1.35-19.5	ppb			
HAA9	N/A	12.0-92.5	ppb			
TOC	N/A	3.24-4.57				

FOOTNOTES-

1. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Level detected represents the highest level detected**.** State regulations require that entry point turbidity must always be below 1.0 NTU**.** The regulations also require that 95% of the turbidity samples collected have measurements below 0.3 NTU. We also monitor the distribution system 5 times a week with 0.17 NTU being the average turbidity.
2. The level presented represents the 90th percentile of 30 test sites. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, 30 samples were collected at your water system and the 90th percentile value was the 27th sample with the fourth highest value (level detected 0.334 mg/l. The action level for copper was not exceeded at any of the sites tested.
3. The level presented represents the 90th percentile of 30 test sites. The action level for lead was not exceeded at any of the 30 sites tested.
4. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.
5. The average shown represents the highest LRAA at each site. The highest LRAA for the HAA5s was in the 2nd quarter at LRAA1, the 1st quarter for LRAA2, and the 4th quarter for LRAA3 and LRAA4 The LRAA was not exceeded at any of the four sites during any of the 4 quarters in 2020 during any of the 4 quarters.
6. The average shown represents the highest LRAA at each site. The highest LRAA for the THMs was in the 4th quarter at each site. The LRAA was not exceeded at any of the four sites during any of the 4 quarters in 2020.
7. The Interim Enhanced Surface Water Treatment Rule (IESWTR) requires monitoring of raw and finished water Total Organic Carbon (TOC). Depending on the raw water alkalinity value, proper water treatment should remove between 15% to 35% of the raw water TOC thus reducing the amount of disinfection byproducts produced**.** The removal or compliance ratio should be 1 or greater.

TOWN OF BETHLEHEM WATER DISTRIC No.1 CLAPPER ROAD WTP TABLE OF DETECTED CONTAMINANTS*
Public Water Supply Identification Number NY0130034

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity [1] (Highest turbidity sample from 7/14/20)	N	0.36	NTU	N/A	TT=5 NTU	Soil runoff
		100%			TT= % samples < 0.3	
Inorganic Contaminants (Sample data from 9/16/20) unless otherwise noted)						
Barium	N	28.3	ppb	2000	2000	Geology; Naturally occurring
Chloride	N	42.2	ppm	N/A	250	Geology; Naturally occurring
Manganese	N	3.2	ppb	N/A	3.2	Geology; Naturally occurring
Nickel	N	0.8	ppb	N/A	100	Geology; Naturally occurring
Odor	N	3	units	N/A	3	Natural sources
pH	N	6.73	units		6.5-8.5	
Sodium[2]	N	21..9	ppm	N/A	N/A	Geology; Road Salt
Sulfate	N	54.2	ppm	N/A	250	Naturally occurring
Zinc	N	0.331	ppb	N/A	5000	Galvanized pipe; **corrosion inhibitor**
Synthetic Organic Compounds (sample from 4/2/19)						
2,4-D	N	0.500	ppb	N/A	50	Release to the environment by its application as a pesticide used to control broad leaf needs in agriculture and for control of woody plants along roadsides, railways, and utility rights-of-way.
Dalapon	N	3.65	ppb	N/A	50	Runoff from herbicide used on rights of way
PFOA (from 9/21/20 & 12/14/20)	N	1.99-2.03	ppt	N/A	10	Released into the environment from widespread use in commercial and industrial applications.
PFOS (from 9/21/20 & 12/14/20)	N	2.25-2.41				
Disinfection Byproducts						
Chlorine (average) based on daily testing	N	1.25	ppm	MRDLG	MRDL	Used in the treatment and disinfection of drinking water
Range of chlorine residual		0.65-2.00		N/A	4	
Total Organic Carbon[3] (monthly samples from July-December 2020)						
Total Organic Carbon Monthly Compliance Ratio	N	1.0	N/A	Compliance ratio >=1	TT	Organic material both natural and man made; Organic pollutants, decaying vegetation,
Unregulated Contaminant Monitoring Regulation 4 (Quarterly samples collected 1/9/18, 4/25/18, 7/23/18 &10/24/18)						
Manganese	N	ND-.939	ppb	N/A	300	Erosion of natural deposits
TOC	N/A	1.6-2.27	ppm	N/A	N/A	
Bromide	N/A	58.1-74.8	ppb	N/A	N/A	

FOOTNOTES-

1. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Level detected represents the highest level detected**.** State regulations require that entry point turbidity must always be below 1.0 NTU**.** The regulations also require that 95% of the turbidity samples collected have measurements below 0.3 NTU. We also monitor the distribution system 5 times a week with 0.17 NTU being the average turbidity.
2. Water containing more than 20 mg/l should not be consumed by persons on severely restricted sodium diets. . Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.
3. The Interim Enhanced Surface Water Treatment Rule (IESWTR) requires monitoring of raw and finished water Total Organic Carbon (TOC). Depending on the raw water alkalinity value, proper water treatment should remove between 15% to 35% of the raw water TOC thus reducing the amount of disinfection byproducts produced**.** The removal or compliance ratio should be 1 or greater.

* The tables presented for Bethlehem WD#1 depict only those analytes that were detected. Many of the test results were **NOT DETECTABLE.** The type/group (number of contaminants in each group) tested for were as follows: volatile organic compounds (53) +MTBE, synthetic organic compounds (31), asbestos, color; radiological chemicals (3). The inorganic contaminants tested for and not detected were: arsenic, cadmium, chromium, mercury nitrate, silver, selenium, antimony, beryllium, thallium, iron, and cyanide; microbiological contaminants -E. coli.

Glossary of Terms Used in Data Tables

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

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 - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) (ng/l) corresponds to one part of liquid to one trillion parts of liquid

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

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.

90th Percentile Value- The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system

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

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

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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 - The "Goal" (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Locational Running Annual Average (LRAA) - The LRAA is calculated by taking the average of the four most recent samples collected at each individual site.

N/A-not applicable