

***Annual Drinking Water Quality Report for 2022***  
***Birch Hill***  
***Town of Southeast, New York***  
***(Public Water Supply ID # 3905683)***

## **INTRODUCTION**

To comply with State regulations, Birch Hill, will be annually issuing a 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, your tap water met all State drinking water health standards. We are proud to report that our system did not receive a single violation from the Health Department. Our system had one contaminant, Perfluoro octane sulfonic acid (PFOS), that exceeded the maximum contaminant level set by the state. Please see the below table for details. This report provides 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 State standards. If you have any questions about this report or concerning your drinking water, please contact the Special Districts Administrator for the Town of Southeast at (845) 279-8206, or e-mail at [specialdistricts@southeast-ny.gov](mailto:specialdistricts@southeast-ny.gov). We want you to be informed about your drinking water.

## **WHERE DOES OUR WATER COME FROM?**

In general, 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 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 Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water system serves approximately 60 people through 24 service connections, which includes multiple dwellings with one or more connections. The water supply consists of two wells located off Highview Terrace. The water is pumped into the plant where it travels to fill one 5,000-gallon water storage tank. The water is then pumped from the storage tanks using a booster pump into a hydro-pneumatic tank. The water then discharges from the tank into the distribution system on demand.

## **ARE THERE CONTAMINANTS IN OUR DRINKING WATER?**

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, radiological and synthetic organic compounds. The table presented below depicts 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 contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably 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 (800-426-4791) or the Putnam County Health Department at (845) 808-1390

**Water Quality Data Table for Birch Hill**

<b>Contaminant</b>	<b>Violation Yes/No</b>	<b>Date Of Sample</b>	<b>Level Detected</b>	<b>Unit of Measurement</b>	<b>MCLG</b>	<b>MCL</b>	<b>Sources In Drinking Water</b>
<b>Synthetic Organic Contaminants including Pesticides and Herbicides</b>							
Perfluoro octanoic acid (PFOA)	No	Quarterly 2022	Average 8.66 Range 8.01-9.59	ng/l	N/A	10	Released into the environment from widespread use in commercial and industrial applications.
Perfluoro octane sulfonic acid (PFOS)	No	Quarterly 2022	Average 15.8 Range 7.03-21.2	ng/l	N/A	10	Released into the environment from widespread use in commercial and industrial applications.
<b>Radioactive Contaminants</b>							
Gross alpha activity (including radium -226 but excluding radon and uranium)	No	2/26/20	4.61	pCi/L	0	15	Erosion of natural deposits.
Combined Radium - 226 and 228	No	2/26/20	1.08	pCi/L	0	5	Erosion of natural deposits.
Uranium	No	2/26/20	5.7	ug/l	0	30	Erosion of natural deposits.
<b>Inorganic Contaminants</b>							
Nitrate	No	7/22/22	3.22	mg/l	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Copper <sup>1</sup>	No	8/20/20	Average 1.25 Range 0.306 – 2.67	mg/l	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead <sup>1</sup>	No	8/20/20	Average 1.6 Range 1.0 – 3.2	ug/l	0	15	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Contaminant	Violation Yes/No	Date Of Sample	Level Detected	Unit of Measurement	MCLG	MCL	Sources In Drinking Water
Barium	No	7/22/22	0.040	mg/l	2	2	Discharge from drilling wastes and metal refineries. Erosion of natural deposits
Chloride	No	7/22/22	81.9	mg/l	N/A	250	Naturally occurring or indicative of road salt contamination
Sodium	No	Quarterly 2022	Average 44.6 Range 29.7-59.2	mg/l	N/A	See Health Effects	Naturally occurring: Road salt: Water softeners: Animal waste

- Five Lead and Copper samples were taken on 8/19/20 and 8/20/20 and all five were below the action limit for lead. Three (3) samples tested above the action limit (AL) for copper. See Health Effects and “What Does This Mean” below. The level presented represents the 90<sup>th</sup> percentile of the total number of samples taken. 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 90<sup>th</sup> percentile is equal to or greater than 90% of the Lead/Copper values detected at your water system.

**Health Effects:**

**Barium** - Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

**Chloride** - Chloride is essential for maintaining good health. Research has not conclusively demonstrated that human exposure to chloride itself causes adverse health effects, although exposure to high levels of certain chloride salts has been associated with adverse health effects in humans. For example, high dietary intake of sodium chloride can be a contributing factor to high blood pressure, but this has been attributed mainly to the presence of sodium. The New York State standard for chloride is 250 milligrams per liter, and is based on chloride’s effects on the taste and odor of the water.

**Combined Radium 226 and 228** - Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

**Copper** - Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson’s Disease should consult their personal doctor.

**Gross alpha activity** - Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

**Haloacetic Acids** - Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

**Lead** - Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

**Nitrate** - Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

**Perfluorooctanoic acid (PFOA)** - PFOA caused a range of health effects when studied in animals at high exposure levels. The most consistent findings were effects on the liver and immune system and impaired fetal growth and development. Studies of high-level exposures to PFOA in people provide evidence that some of the health effects seen in animals may also occur in humans. The United States Environmental Protection Agency considers PFOA as having suggestive evidence for causing cancer based on studies of lifetime exposure to high levels of PFOA in animals.

**Perfluorooctane sulfonic acid (PFOS)** - PFOS caused a range of health effects when studied in animals at high exposure levels. The most consistent findings were effects on the liver and immune system and impaired fetal growth and development. Studies of high-level exposures to PFOS in people provide evidence that some of the health effects seen in animals may also occur in humans. The United States Environmental Protection Agency considers PFOS as having suggestive evidence for causing cancer based on studies of lifetime exposure to high levels of PFOS in animals.

**Sodium** - Water containing more than 20 mg/l of sodium should not be used for drinking by people 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.

**Uranium** - Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer.

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, nitrite, volatile organic compounds, herbicides, pesticides, and polychlorinated biphenyls (PCBs). None of the compounds we analyzed for were detected in your drinking water.

#### **Definitions:**

**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.

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

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

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

**Variance & Exemption (V&E)**: state or EPA permission not to meet an MCL or treatment technique under certain conditions.

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

**Non-Detects (ND)**: Laboratory analysis indicates that the constituent is not present.

**Milligrams per liter (mg/l)**: Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

**Micrograms per liter (ug/l)**: Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

**Nanograms per liter (ng/l)**: Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

**Picocuries per liter (pCi/L)**: A measure of the radioactivity in water.

## **WHAT DOES THIS INFORMATION MEAN?**

As you can see by the table, our system had one contaminant (PFOS) at a concentration level higher than that allowed by the state. We are currently working on a solution to remediate this contaminant in

consultation with the Department of Health. We have learned through our testing that other contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

## **IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

During 2022, our system was in compliance with all applicable State drinking water operating, monitoring and reporting requirements.

## **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 microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

## **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 towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, 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:

- ◆ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- ◆ Turn off the tap when brushing your teeth.
- ◆ 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.

## **BACKFLOW PREVENTION**

### **What is "Backflow"?**

Backflow occurs when water is pushed (called backpressure) or pulled (called back siphon). Backpressure is caused when the force of water at a property overcomes city water pressure. Generally backpressure is attributed to pumps, but can also be caused by tall buildings (due to the height and weight of the given column of water). Back siphon occurs when a "reverse siphon" is caused due to pressure loss or fluctuation. Generally water main breaks or large water uses like operating fire hydrants during a fire can cause back siphon to occur. The use of backflow prevention assemblies can help prevent backpressure and/or back siphon.

### **Backflow Prevention**

- Each water spigot (hose bib) should have a hose bib vacuum breaker installed.
- Never submerge the hose end in any liquid.
- If using a spray nozzle, Release the pressure in the hose AFTER the hose bib is shut, Sun or heat can cause the hose pressure to become greater than the drinking water system pressure.
- Disconnect hoses from faucets or bibs after use.
- Store the hose in a manner that would prevent the end from dropping into a liquid or on the ground.
- Never attach hoses or other devices to tub or sink faucets that could be submerged in a liquid.

Please contact your water supplier if you have any questions about backflow prevention

Reference: <http://www.epa.gov/safewater/crossconnection.html>  
<http://www.usc.edu/dept/fccchr/>  
<http://www.health.state.ny.us/environmental/water/drinking/cross/cross.htm>

### **Water hardness**

Your water has a hardness of 261 ppm.

The most common water problem is hardness, which is caused by calcium. No natural water supply is free of hardness. Many industrial and domestic water users are concerned about the hardness of their water. Hard water requires more soap and synthetic detergents for home laundry and washing, and contributes to scaling in boilers and industrial equipment. Hardness is caused by compounds of calcium and magnesium, and by a variety of other metals. Water is an excellent solvent and readily dissolves minerals it comes in contact with. As water moves through soil and rock, it dissolves very small amounts of minerals and holds them in solution. Calcium and magnesium dissolved in water are the two most common minerals that make water "hard."

The hardness of water is referred to by three types of measurements: grains per gallon, milligrams per liter (mg/L), or parts per million (ppm). Typically, the water produced by Birch Hill Water is considered "very hard." The table below is provided as a reference.

<b>Water Hardness Scale</b>		
Grains Per Gallon	Milligrams Per Liter (mg/L) or Parts Per Million (ppm)	Classification
less than 1.0	less than 17.1	Soft
1.0 - 3.5	17.1 - 60	Slightly Hard
3.5 - 7.0	60 - 120	Moderately Hard
7.0 - 10.5	120 - 180	Hard
over 10.5	over 180	Very Hard

You can test your water for hardness at your home or in your pool using a water hardness test kit available from most "do it yourself" home centers or pool supply stores.

### **SHUTTING YOUR WATER OFF IN AN EMERGENCY**

Your home should have a "master shutoff valve" inside and a curb valve outside. In case of emergency do you know where your valves are and how to shut your water off? You may contact the Town if you would like to schedule an appointment for assistance in locating your outside shutoff.

### **CLOSING**

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We ask that all our customers help us protect our water sources, which are the heart of our community. If you have any comments or questions regarding the information presented in this report, please do not hesitate to contact the Special District Office by either e-mailing [specialdistricts@southeast-ny.gov](mailto:specialdistricts@southeast-ny.gov) or calling 845-279-8206. We will do our best to provide you an answer or direct you to the operators of your water system who are here to answer any of your questions.