



Annual

**Drinking Water Quality Report**

**2014**

**Brewster Heights Water**

**161 Putnam Avenue**

(Public Water Supply ID # 3905680)

**Town of Southeast, New York**

1360 Route 22

Brewster, NY 10509

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Town of Southeast, New York  
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**INTRODUCTION**

To comply with State and Federal regulations, Brewster Heights will be annually issuing a report describing the quality of your drinking water. The current report covers the period of 1/1/2014 through 12/31/2014. 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 standards. 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 279-8206.

**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 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 your tap water is safe to drink, the State and the Environmental Protection Agency (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 1239 people through 382 service connections, which includes multiple dwellings with one or more connections. The source of water is the Middlebranch Reservoir. The water is purchased from New York City DEP who owns the reservoir. Two pumps located at the reservoir pump up the water to the treatment facility. A chemical coagulant is added to the water before the filters. After the water is filtered, it is disinfected with chlorine then pumped into two storage tanks. The tanks have a combined storage capacity of 200,000-gallons. Booster pumps take water from the storage tanks and pump it to a hydro-pneumatic tank. The water is treated with a chemical for corrosion control before being sent to the distribution system.

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

As the State regulations require, the water system operators routinely test your drinking water for numerous contaminants. These contaminants include; total coliform, inorganic compounds, nitrates, nitrites, lead and copper, volatile organic compounds, total trihalomethanes, synthetic organic compounds, and radiological. The table presented below depicts which compounds were detected in your drinking water. The State allows the water system operators 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 (800-462-4791) or the Putnam County Health Department at 845-278-6130.

The test data presented in this report covers solely the Brewster Heights Water District distribution system. This report does not reflect data from the testing that the New York City DEP is required to do.

**Water Quality Data Table for Brewster Heights**

Contaminant	Violation Y/N	Date Of Sample	Level Detected	Unit Measurement	MCLG	MCL	Sources in Drinking Water
<b>Microbiological Contaminants</b>							
Turbidity <sup>1</sup>	No	6/9/14	1.6	NTU	NA	TT = >5 NTU	Soil Runoff
Turbidity <sup>1</sup>	No	NA	100%	NTU	NA	TT = 95% of Samples < 0.5 NTU	Soil Runoff

Contaminant	Violation Yes/No	Date Of Sample	Level Detected	Unit of Measurement	MCLG	MCL	Sources in Drinking Water
<b>Inorganic Contaminants</b>							
Copper	No	6/21/12	0.185 <sup>2</sup> Range .0056-0.210	mg/l	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	No	6/21/12	3.0 <sup>2</sup> Range >1-5	ug/l	15	15	Corrosion of household plumbing systems, erosion of natural deposits

Contaminant	Violation Yes/No	Date Of Sample	Level Detected	Unit of Measurement	MCLG	MCL	Sources in Drinking Water
<b>Disinfection Byproducts</b>							
Total Trihalomethanes (TTHMs - chloroform, bromodichloromethane, dibromochloromethane, bromoform)	No	2014 Sampled Quarterly	Range 42-56	ug/l	N/A	80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are found when source water contains large amounts of organic matter.
TTHM Rolling Annual Average	No	48 ug/l is the rolling annual average calculated from quarterly data results in 2014. 55.8 ug/l is the highest number for the annual average for 2014.					
Haloacetic Acids (mono-, di-, and trichloroacetic acid, mono- and dibromoacetic acid)	No	2014 Sampled Quarterly	Range 24-49	ug/l	N/A	60	By-product of drinking water chlorination needed to kill harmful organisms
HAA5 Rolling Annual Average	No	40.5 ug/l is the rolling annual average calculated from quarterly data results in 2014. 48.5 ug/l is the highest number for the annual average for 2014.					

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. Our highest single turbidity measurement for the year occurred on 6/9/14 (1.6 NTU). State regulations require that turbidity must always be less than or equal to 1.0 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU.

- Five lead and copper samples were taken in 2012. All samples were below the action limit.

- 2- 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..

### **Definitions:**

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

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

**Maximum Contaminant Level (MCL)** – The “Maximum Allowed” (MCL) is the highest level of a contaminant that is allowed in drinking water. MCL’s are set as close to the MCLG’s as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal (MCLG)** – 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.

**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 (ug/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 (nanograms/l)** – One part per trillion corresponds to one minute in 2,000,000 years or a single penny in \$10,000,000,000.

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

**Millirems per year (mrem/yr)** – measures of radiation absorbed by the body.

**Nephelometric Turbidity Units (NTU)** – is a unit of measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

### **Mathematical Conversions**

1 mg/l = 1 ppm

1 ug/l = 1 ppb

1 ppm x 1000 = 1ppb

1ppb / 1000 = 1 ppm

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

As you can see by the table, our system had One Treatment Technique Violations during 2011 requiring 95% of Turbidity Samples be below 0.3 NTU. The duration of the violation was from March 11 thru March 30, 2011. The potential adverse health effects are:

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

We informed residents and the Health Department and corrected this problem through operational and process control techniques as noted above. Turbidity returned to normal levels on March 31, 2011.

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

During 2014, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

## **DO I NEED TO TAKE SPECIAL PRECAUTIONS?**

Our drinking water meets and exceeded state and federal regulations. Some people (Immune-compromised persons such as those with cancer under-going chemotherapy, persons who have undergone organ transplants, and people with HIV/AIDS or other immune system disorders) may be more vulnerable to contaminants in drinking water than the general population. The elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care provider. Environmental Protection Agency and Center of Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbiological contaminants are available from the **Safe Drinking Water Hot Line (1-800-426-4791)**.

## **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 fire fighting 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 up 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.
- ◆ Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances, then check the meter after 15 minutes, if it moved, you have a leak.

## **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

## WATER HARDNESS

Your water has a hardness of 250 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 Fairfax Water is considered "moderately hard" to "hard." The table below is provided as a reference.

Water Hardness Scale		
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

We ask that all our customers help us protect our water sources. 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.





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