Annual Drinking Water Quality Report for 2013
Town of Brunswick
336 Town Office Road Troy, New York 12180
Public Water Supply ID# NY4110144 and NY 4130300

INTRODUCTION

To comply with State regulations, The Town of Brunswick 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, we conducted tests for 13 contaminants. We had two violations of the Disinfection By Product Rule for the September 2013 and December 2013 four quarter running average maximum contaminate level for Trihalomethanes (THMs). The Maximum Contaminate Level (MCL) allowed for THMs in your drinking water is 0.080 parts per million. The four quarter running average test result for September and December were 0.0927 and 0.0967 parts per million respectively in the Town of Brunswick Consolidated Water District. Our water supplier the City of Troy is taking steps to reduce organic precursors in the water that combine with chlorine during disinfection to form Disinfection By Products. The Town will monitor the City of Troy progress and make operational changes to reduce disinfection by products in your water supply. Additional testing for Disinfection By Products were at or below the maximum contaminant limit for 2013. Town of Brunswick had 1 positive E.Coli sample taken in the Distribution System and a Boil Water Advisory was issued. Upon resampling all tests for E. Coli were negative. Most probable cause was a sampling error at the sink where the sample was drawn from. All other required water quality tests performed by the Town Water Department met all state drinking water health standards in both the Brunswick Consolidated Water District and Brunswick Water District #11. 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 William Bradley, Superintendent of Water at (518) 279-3461 Ext. 112. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled town board meetings. The meetings are held on the second Thursday of each month at 7:00 PM in the Town Offices located at 336 Town Office Road (518) 279-3461.

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 Town of Brunswick purchases its water from the City of Troy. Troy's water source is the Tomhannock Reservoir northeast of the Town of Brunswick.

Water flows from the reservoir by gravity where potassium permanganate is added at the intake seasonally to reduce organic compounds which could potentially become Disinfection By Products later in the treatment process. At the Melrose Chlorination Station the water is pre-disinfected with chlorine dioxide all year long. The water then flows in 7 miles of pipe line to the John P. Buckley Water Treatment Plant. The water treatment plant is a conventional treatment plant utilizing coagulation, flocculation, sedimentation, filtration, chlorination and fluoridation processes to treat the water for potable use.

The New York State Health Department completed a Source Water Assessment for the Tomhannock Reservoir. It includes a susceptibility rating based on the risk posed by each potential source of contamination and how likely contaminants could enter the reservoir and is only 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. The assessment found an elevated susceptibility to contamination for this source of drinking water. The amount of agricultural land in the assessment area results in an elevated potential for protozoa and pesticides contamination, however, there is reason to believe that the land cover data may over estimate the percentage of row crops in the assessment area. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality, based on their density in the assessment area. In addition, it appears that the total amount of wastewater discharged to surface water in this assessment area is not high enough to further raise the potential for contamination (particularly for protozoa). There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include mines and closed landfills. Finally, 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.

Water entering the Town of Brunswick Water system is re-chlorinate as needed to maintain the proper chlorine residual in the system. During 2012, our system did not experience any restriction of our water source.

FACTS AND FIGURES

The Town of Brunswick water system serves water to approximately 6612 residents, living in approximately 3300 dwelling units as well as the commercial customers within the Town. The Town receives water from the City of Troy through metered connections at North Lake Ave, Sycaway Ave, South Lake, Brunswick Road and Leversee Road. Water not provide directly from Troy water mains under gravity is pumped and re-chlorinated at a booster pump station located at the Vanderhayden Reservoir to a 2,000,000 gallon steel storage reservoir which feeds the remaining distribution system including Rt. 142, Rt. 7, Rt. 278 and Rt. 2. The Town also has a water booster pump station in Cropseyville where the water is again re-chlorinated. The total water purchased from the City of Troy from December 31, 2012 through December 30, 2013 was 220,359,051 gallons. A total of 188,445,600 gallons was billed to customers. All services are metered As a result a total of 32,913,451 gallons of water can be attributed to water usage for fire protection, flushing, new construction of mains, water main breaks and leaks. Our average daily demand is 608,129 gallons. Our single highest day was 0.795 million gallons. The Town of Brunswick charges $4.73 per 1000 gallons. The average amount charged per household is $264.00 annually for water, the Town bill twice per year. The average household is consuming approximately 49,000 gallons per year.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

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 Rensselaer County Health Department at (518) 270-2674.

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. None of the compounds we analyzed for except total Trihalomethanes as noted before were detected in your drinking water above acceptable regulated values. The Town of Brunswick tests for the compounds listed in the table below, The City of Troy from whom we purchase our water test for additional compounds. The City of Troy test results are available in the City of Troy annual water quality reports and on their web site at
http://www.troydpu.org/Libraries/Public_Utilities/AWQR2013.sflb.ashx

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.
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.
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).

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table our system had a violation for Total Trihalomethanes. The Town of Brunswick Consolidated Water District Public Water Supply ID# 4110144 had two consecutive four quarter running averages September and December which exceeded the maximum contaminate limits for Trihalomethanes (THMs). The Maximum Contaminate Level (MCL) allowed for THMs in your drinking water is 0.080 parts per million (ppm). The four quarter running average test results for September was .0927 ppm and for December was .0967 ppm in the Town of Brunswick Consolidated Water District. A part per million is one part of something in one million parts of something else - like a grain of salt in a million grains of sugar or 1 penny in 10 thousand dollars. The Town is required to notify and provide our customers with the following information per Federal and State regulations of this Tier II violation.

Trihalomethanes are a group of chemicals that includes chloroform, bromoform, bromodichloromethane, and chlorodibromomethane. Trihalomethanes are formed in drinking water during treatment by chlorine, which reacts with certain acids that are in naturally-occurring organic material (e.g., decomposing vegetation such as tree leaves, algae or other aquatic plants) in surface water sources such as rivers and lakes. The amount of trihalomethanes in drinking water can change from day to day, depending on the temperature, the amount of organic material in the water, the amount of chlorine added, and a variety of other factors. Drinking water is disinfected by public water suppliers to kill bacteria and viruses that could cause serious illnesses. Chlorine is the most commonly used disinfectant in New York State. For this reason, disinfection of drinking water by chlorination is beneficial to public health.

Some studies suggest that people who drink chlorinated water (which contains trihalomethanes) or water containing elevated levels of trihalomethanes for long periods of time may have an increased risk for certain health effects. For example, some studies of people who drank chlorinated drinking water for 20 to 30 years show that long term exposure to disinfection by-products (including trihalomethanes) is associated with an increased risk for certain types of cancer. A few studies of women who drank water containing trihalomethanes during pregnancy show an association between exposure to elevated levels of trihalomethanes and small increased risks for low birth weights, miscarriages and birth defects. However, in each of the studies, how long and how frequently people actually drank the water, as well as how much trihalomethanes the water contained is not known for certain. Therefore, we do not know for sure if the observed increases in risk for cancer and other health effects are due to trihalomethanes or some other factor. The individual trihalomethanes chloroform, bromodichloromethane and dibromochloromethane cause cancer in laboratory animals exposed to high levels over their lifetimes. Chloroform, bromodichloromethane and dibromochloromethane are also known to cause effects in laboratory animals after high levels of exposure, primarily on the liver, kidney, nervous system and on their ability to bear healthy offspring. Chemicals that cause adverse health effects in laboratory animals after high levels of exposure may pose a risk for adverse health effects in humans exposed to lower levels over long periods of time.

Our supplier of water the City of Troy is working to reduce the organic precursors and the trihalomethanes (THMs) in the water supplied to the Town of Brunswick. This will help to reduce the formation of disinfection byproducts in our system. The Town of Brunswick is studying ways of reducing or removing trihalomethanes in our distribution system should the City of Troy not be able to reduce the disinfection byproducts or precursors in the water supplied to the Town. These include additional flushing of water mains, possible aeration of the two million gallon storage and alternate disinfection agents.

We also detected some additional contaminates through our testing; however, these contaminants were detected below levels allowed by New York State. We are required to present the following information on lead in drinking water:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. The Town of Brunswick 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 (1-800-426-4791) or at http://www.epa.gov/safewater/lead

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2013, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, 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).

INFORMATION ON FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. Fluoride is added to your water by the City of Troy before it is delivered to us. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.8 to 1.2 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that the City of Troy our supplier of water to monitor fluoride levels on a daily basis. During 2013 monitoring showed fluoride levels in your water were in the optimal range 100 % of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

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 spend additional capital to increase pump and storage capacity.
- 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 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, and then check the meter after 15 minutes. If it has moved, you have a leak.

SYSTEM IMPROVEMENTS

In 2013, The Town of Brunswick will continue the leak detection program started in 2012. The leak detection program has been successful at finding subsurface leaks in the water system. We cut our loss from approximately 67 million gallons to 33 million gallons last year. The Water Department has also been replacing old worn out hydrants in various locations in the Town. We will continue in 2014 to improve fire protection by replacing additional hydrants and making improvements at our pump station to improve energy efficiency. There will continue to be an emphases to correct the disinfection by products produced in the distribution system by the chlorination of the water. The City of Troy is studying ways to reduce the occurrence of disinfection by products at the treatment plant by changing the treatment process to reduce the amount of precursors in the water before chlorine is added. The Town of Brunswick will wait until the City of Troy has completed its testing before the Town invests in capital equipment to treat the water that we purchase from the City.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community. Please notify us when you see any unusual leaking water on the streets so we can investigate. Also please check your plumbing for leaking faucets, running toilets or other wasted water in your home or business. Even a small leak over a six month billing period can mean a substantial increase in your water bill. Please contact us with any question you may have at (518) 279-3461 ext 112.

MS4 (Municipal Separate Storm Sewer Systems) ANNUAL REPORT

The Town of Brunswick is a MS4 regulated community as such we are required to implement and practice the six minimum control measures; Public Education and Outreach, Public Involvement and Participation, Illicit Discharge and Detection Elimination, Construction Site Stormwater Runoff, Post Construction Stormwater Management and Stormwater Management for Municipal Operations. The Town of Brunswick has implemented and practices all six minimum control measures. Please review the 2014 MS4 Annual Report available on the town web site at http://www.townofbrunswick.org/building

Table of Detected Contaminants 2013 Annual Water Quality Report
Results Brunswick Consolidated Water District PWS ID NY 4110144

Contaminant	Violation YES/NO	Date of Sample	Value or Average	Low	High	Unit measure ment	MCLG	Regulatory Limit (MCL TT or AL)	Likely source of contamination
Chloroform	No	Quarterly	75.2	32.8	130.0	Ug/l	70		1
Bromodichloromethane	No	Quarterly	9.0	7.0	11.3	Ug/l	0		1
Dibromochloromethane	No	Quarterly	1.2	< 1	1.5	Ug/l	0		1
Bromoform	No	Quarterly	1.0	< 1.0	< 1.0	Ug/l	60		1
Total Trihalomethane	No	Quarterly	85.2	41.13	143.0	Ug/l	na	80	1,2
Running 4 Qrt Ave	Yes	Sept 2013	92.7	60.0	92.7	Ug/l	na	80	1,2
Running 4 Qrt Ave	Yes	Dec 2013	96.7	60.0	96.7	Ug/l	na	80	1,2
Dibromoacetic Acid	No	Quarterly	0.9	0.5	1.0	Ug/l	na		1
Dichloroacetic Acid	No	Quarterly	9.3	2.0	19.9	Ug/l	na		1
Monobromoacetic Acid	No	Quarterly	0.9	< 0.5	1.0	Ug/l	na		1
Monochloroacetic Acid	No	Quarterly	1.6	1.5	2.0	Ug/l	70		1
Trichloroacetic Acid	No	Quarterly	8.7	1.0	26.0	Ug/l	20		1
Total haloacetic Acid	No	Quarterly	18.36	2.0	39.0*	Ug/l	na	60	1,2 *
Copper	No	Annually	.06	0.020	0.17	Ug/l	1.3	<0.02 -1.3	3
Lead	No	Annually	.002	< 0.001	< 0.008	Ug/l	0	<0.001–0.015	3
Nitrate	No	Annually	0.16	0.16	0.16	Mg/l	10	<0.2-10.0	4
Coliform	No	8 per Mo	Negative					5%ofSamples	5
E. Coli	Yes	8 per Mo	Positive					No positive	5

Results Brunswick Water District #11 PWS ID NY 4130300

Contaminant	Violation YES/NO	Date of Sample	Value or Average	Low	High	Unit measure ment	MCLG	Regulatory Limit (MCL TT or AL)	Likely source of contamination
Chloroform	No	Quarterly	56.3	20.90	104.0	Ug/l	70		1
Bromodichloromethane	No	Quarterly	7.72	6.24	9.60	Ug/l	0		1
Dibromochloromethane	No	Quarterly	1.06	< 1.0	1.20	Ug/l	0		1
Bromoform	No	Quarterly	1.0	< 1.0	< 1.0	Ug/l	60		1
Total Trihalomethane	No	Quarterly	64.56	28.40	114.0	Ug/l	na	80	1,2
Dibromoacetic Acid	No	Quarterly	0.90	0.50	1.0	Ug/l	0		1
Dichloroacetic Acid	No	Quarterly	10.92	5.40	17.0	Ug/l	na		1
Monobromoacetic Acid	No	Quarterly	2.50	< 0.5	1.0	Ug/l	na		1
Monochloroacetic Acid	No	Quarterly	1.80	< 1.0	2.0	Ug/l	70		1
Trichloroacetic Acid	No	Quarterly	16.98	6.70	31.00	Ug/l	20		1
Total haloacetic Acid	No	Quarterly	29.90	43.0	18.80	Ug/l	na	60	1,2
Copper	No	Annually	0.06	0.02	0.13	Ug/l	1.3	<0.02 -1.3	3
Lead	No	Annually	0.001	< 0.001	< 0.001	Ug/l	0	<0.001–0.015	3
Nitrate	No	Annually	0.21	0.21	0.21	Mg/l	10	<0.2-10.0	4
Coliform	No	1 per Month	Negative					5%ofSamples	5
E. Coli	No	1 per Month	Negative					No Positives	6

1 Likely source of contamination is the result of treatment of organic compounds with chlorine. Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the contaminants. * 3rd quarter results for Total Haloacetic Acids are estimated or have no result due to laboratory error.

2 Running 4 quarter average MCL for Total Trihalomethane is 80 Ug/l, for Total Haloacetic Acid is 60 Ug/l . If exceeded the water supplier must take action to reduce.

3 Likely source of Contamination is the result of corrosion of service lines and household plumbing and natural source erosion. Lead and copper are regulated by a Treatment Technique that requires systems to control the corrosiveness of their water. If more than 10% of tap water samples exceed the action level, water systems must take additional steps. For copper, the action level is 1.3 mg/L, and for lead is 0.015 mg/L.

4 Likely source of contamination is runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits.

5 A violation occurs when more than 5.0% of the total coliform samples are positive.

6 A violation occurs when a total coliform positive sample is positive for E Coli.

Additional Information on drinking water contaminantes can view at the EPA web site. http://water.epa.gov/drink/contaminants/index.cfm#List