Annual Drinking Water Quality Report for 2015
Town of Somerset
8500 Lower Lake Road, Barker, NY 14012
(Public Water Supply ID#NY3100583)

April 2016

INTRODUCTION

To comply with State regulations, Town of Somerset, 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 violate a maximum contaminant level or any other water quality standard. In 2015, we conducted tests for over 100 contaminants. Less than a quarter of the tested contaminants were detected. The NCWD is required to test for lead and copper every three (3) years. In 2014, 50 sites throughout the NCWD were tested for lead and copper. The analysis showed concentrations below action level for all 50 copper samples. The 90th percentile level of lead detected, 4.5 µg/L, was below the regulatory limit of 15.0µg/L; however, lead was found at a level higher than the action level (AL) recommended by the State at three (3) of 50 sites tested. 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 Melvin H. Denny, Superintendent of the Somerset Water Department, at (716)795-9919. 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 at the Somerset Town Hall, 8700 Haight Road, Barker, on the second Wednesday of each month at 6:30PM.

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 source is located in the west branch of the Niagara River. The water quality is considered excellent. During 2015, our system did not experience any restriction of our water source. The treatment plant uses pre-chlorination, coagulation, rapid mix, flocculation, sedimentation, and filtration processes to ensure the quality of the water. The NCWD also uses chlorination for disinfection. The water treatment plant has been approved as a direct filtration plant; however, water is treated using conventional filtration including all of the processes described above. In addition, fluoride and a corrosion inhibitor are added to the potable water prior to distribution.

The New York State Department of Health recently completed a draft Source Water Assessment of the **raw water source** under the State's Source Water Assessment Program (SWAP). The purpose of this program is to compile, organize, and evaluate information regarding possible and actual threats to the quality of public water supply (PWS) sources. It is important to note that source water assessment reports estimate the **potential** for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. The Great Lakes' watershed is exceptionally large and too big for a detailed evaluation in the SWAP. General drinking water concerns for public water supplies which use these sources include: storm generated turbidity, wastewater, toxic sediments, shipping related spills, and problems associated with exotic species (e.g. zebra mussels – intake clogging and taste and odor problems). The SWAP is based on the analysis of the contaminant inventory compiled for the drainage area deemed most likely to impact drinking water quality at this public water supply raw water intake. This assessment found an elevated susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for protozoa and pesticides contamination. There is also a high density of sanitary wastewater discharges, which results in elevated susceptibility for numerous contaminant categories. Non-sanitary wastewater could also impact source water quality. There is also noteworthy contamination susceptibility associated with other discrete contaminant sources, and these facility types include: Mines and Resources Conservation and Recovery Act (RCRA) facilities. If you have any questions about the States Source Water Assessment Program, please contact Ronald Gwozdek, Principal Public Health Engineer, Niagara County Department of Health at (716) 439-7452.

FACTS AND FIGURES

The **Town of Somerset** water system serves 2,129 people through 982 service connections. Our single highest day recorded in 2015 was an average of 587,451 gallons, during the month of July. The amount of water delivered to customers in 2015 was 156,078,570 gallons. The total water purchased in 2015 was 175,544,000 gallons. This leaves an unaccounted for total of 19,465,430 gallons (11.08% of the total amount produced for 2015). This water is used to flush mains, fight fires and leakage. In 2015, water customers were charged $1.46 per 1,000 gallons of water.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: microbiological contaminants, radioactive contaminants, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, synthetic organic compounds, trihalomethanes, haloacetic acids, and disinfection by-products. The table presented below depicts only those compounds which 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, is 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 Niagara County Health Department at (716) 439-7430.

Table 1: Table of Detected Contaminants							
Contaminant	**Violation Yes/No**	**Date of Sample**	**Level Detected (Avg. / Max.) (Range)**	**Unit of Measurement**	**MCLG**	**Regulatory Limit**	**Likely Source of Contamination**
Inorganic Contaminants							
Arsenic	No	3/15	0.53	ug/L	N/A	MCL=10	Erosion of natural deposits, waste runoff from glass and electronics production or runoff from orchards
Barium	No	3/15	0.0199	mg/L	2.00	MCL=2.00	Discharge of drilling wastes and from metal refineries; Erosion of natural deposits.
Copper[1] (in distribution system)	No	6/14-9/14	0.201 (0.01-0.33)	mg/L	1.3	AL=1.3	Corrosion of galvanized pipes; Erosion of natural deposits.
Fluoride	No	1/15-12/15	0.85 (0.70-1.10)	mg/L	N/A	MCL=2.2	Erosion of natural deposits; Water additive that promotes strong teeth
Lead[1] (in distribution system)	No	6/14 - 9/14	4.5 (0.50 – 299)	ug/L	0	AL=15	Corrosion of household plumbing systems; Erosion of natural deposits.
Nickel	No	3/15	0.0008	mg/L	N/A	N/A	Erosion of natural deposits; Atmospheric deposition.
Nitrate	No	11/15	0.200	mg/L	10.0	MCL=10.0	Erosion of natural deposits. Atmospheric deposition
Sodium	No	9/13	10.5	mg/L	N/A	AL=20	Erosion of natural deposits. Use of road salt, discharges from water softeners.
Entry Point Chlorine Residual	No	1/15 - 12/15	1.15 (1.0 – 1.5)	mg/L	MRDL 4.0	MRDLG 4.0	Added for disinfection.
Entry Point[2] Turbidity	No	1/15 - 12/15	0.03 (0.02 – 0.05)	NTU	N/A	0.3 NTU	Soil runoff
Entry Point[2] Turbidity	No	1/15 - 12/15	100% of samples less than 0.3 NTU	NTU	N/A	TT=95% of samples < 0.3 NTU	Soil runoff
Radioactive Contaminants							
Gross Alpha Particles	No	3/14	0.00	pCi/L	N/A	MCL=15	Erosion of natural deposits of certain radioactive minerals
Radium 226 and 228 combined	No	3/14	0.428	pCi/L	N/A	MCL=5	Decay of natural and man-made deposits of certain radioactive minerals.
Uranium	No	3/14	0.036	µg/L	N/A	MCL=30	Erosion of natural deposits

[1]During 2014 the Niagara County Water District collected and analyzed 50 samples for lead and copper. The level presented represents the 90th percentile of the 50 sites tested. The 90th percentile is equal to or greater than 90% of the lead or copper values detected at your water system. The analysis showed concentrations below action levels for all 50 copper samples. Three (3) of the 50 lead samples exceeded the action level of 15 µg/L. The range of lead levels detected is presented below the 90th percentile value.

2Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. NCWD's highest single turbidity measurement for the year was 0.05 NTU. State regulations require that turbidity must always be below 1 NTU leaving the Water Plant and 5 NTU in the distribution system. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. All samples collected in 2015 were below the treatment technique level.

TOWN OF SOMERSET

Town of Somerset has not exceeded the MCL for total coliform during the 2015 reporting period.

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg.) (Range)	Unit of Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Microbiological Contaminants[1]							
Turbidity	No	1/15 - 12/15	0.09 (0.02 – 0.38)	NTU	N/A	TT= <5NTU	Soil Runoff
Total Coliform	No	1/15 - 12/15	0 positive samples	N/A	0	MCL= 2 or more positive samples	Naturally present in the environment
Chlorine Residual	No	1/15 - 12/15	0.66 (0.21 – 1.06)	mg/l	MRDL 4.0	MRDLG 4.0	Added for disinfection.
Disinfection Byproducts[2]							
Total Trihalomethanes	No	1/15 – 12/15	51 (33 – 61)	µg/l	N/A	MCL=80	By-product of drinking water chlorination
Total Haloacetic Acids	No	1/15 – 12/15	29 (21 – 37)	µg/l	N/A	MCL=60	By-product of drinking water chlorination

[1]Turbidity is a measure of the cloudiness of the water. We test is because it is a good indicator of the effectiveness of our filtration system. State regulations require that average monthly turbidity must always be below 1 NTU leaving the Water Plant and 5 NTU in the distribution system.

[2]Results for Total Trihalomethanes (TTHMs) and Total Haloacetic Acids (HAA5s) are reported as the highest locational running annual average. The range of detection is shown below the average

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.

NE: Not Established

NR: Not Regulated

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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).

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 no violations. We are proud that your drinking water meets or exceeds all federal or state requirements. We have learned through our testing that some contaminants have been detected; however, most of these contaminants were detected below the level allowed by New York State. It should be noted that the action level for lead was exceeded in three (3) of the 50 samples collected in 2014. Therefore, 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 Niagara County Water District (NCWD) 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 2015, 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 NCWD 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 a properly controlled level. To ensure that the fluoride supplement in your water provides optimal dental protection, NCWD monitors fluoride levels on a daily basis to make sure fluoride is maintained at a target level of 0.7 mg/l. During 2015 monitoring showed that fluoride levels in your water were within 0.2 mg/l of the target level for 83.8% 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 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.
- 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 moved, you have a leak.

SYSTEM IMPROVEMENTS

In 2015, the NCWD completed roofing improvements at the Water Treatment Plant, waterline upgrades in the transmission system, and cleaning of the existing sludge lagoon. Construction has started on upgrades to the coagulation basins and the filtration system at the Water Treatment Plant. Additionally, the NCWD is currently developing plans for the extension of the transmission main through the Towns of Pendleton, Lockport, and Royalton to provide redundancy and increased capacity to the eastern section of the NCWD system. These improvements facilitate continuing efforts to maintain a safe and dependable water supply.

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 call our office if you have questions (716)795-9919.