

ANNUAL DRINKING WATER QUALITY REPORT FOR 2011 BRISTOL-CANANDAIGUA-FARMINGTON WATER DISTRICTS AND MANCHESTER VILLAGE AND TOWN WATER DISTRICTS

Introduction

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. The purpose of this report is to provide information about the quality of water that we provide to you. Our constant goal is to provide 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 protect our water resources. Last year, in the Towns of Bristol, Canandaigua, Farmington, Manchester and the Village of Manchester your tap water met all State drinking water health standards. We are committed to ensuring the quality of your water. If you have any questions about this report or concerning your water utility, please contact either:

Canandaigua-Farmington:	Jim Crane, Water Superintendent	(585) 924-3158
Town of Bristol:	Jim Fletcher, Water Superintendent	(585) 394-3300
Town of Canandaigua:	Jim Fletcher, Water Superintendent	(585) 394-3300
Town of Manchester:	Wayne Holtz, Water Superintendent	(585) 289-3010
Village of Manchester:	Jeff Liberati, Water Superintendent	(585) 289-4340
New York State Department of Health	Hyland Hartsough	(315) 789-3030

We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Town Board Meetings. The meetings are held:

Town of Farmington:	The second and fourth Tuesdays of each month at 7:00 p.m. at the Farmington Town Hall located at 1000 County Road 8, Farmington, New York.
Town of Bristol:	The second Monday of each month at 7:30 p.m. at the Bristol Town Hall located at 6740 County Road 32, Canandaigua, New York.
Town of Canandaigua:	Every three weeks on Monday at 7:00 p.m. at the Canandaigua Town Hall located at 5440 Route 5 & 20 West, Canandaigua, New York.
Town of Manchester:	The second Tuesday of each month at 7:00 p.m. at the Manchester Town Hall located at 1272 County Road 7, Clifton Springs, New York.
Village of Manchester:	The first Monday of each month at 6:00 p.m. at the Manchester Village Hall located at 8 Clifton Street, Manchester, New York.

Where Does Our Water Come From?

Our water source is surface water source, Canandaigua Lake. The Canandaigua-Farmington Consolidated Water District and the Canandaigua Town Consolidated Water Districts as well as the West Lake Road Water Benefit District are supplied from City of Canandaigua. The City of Canandaigua operates a Water Filtration Plant located on West Lake Road in the Town of Canandaigua. After filtration, carbon can also be added for taste and odor control. The water is disinfected by injection of gaseous chlorine, sodium hydroxide is added for pH control to reduce corrosion in the distribution system and then fluoride is added before being pumped to the distribution system. The treated water enters the Canandaigua-Farmington Consolidated Water District and the Town of Canandaigua Water Districts (listed above) through meter pits located at the City of Canandaigua line or at the connection point with the City of Canandaigua's transmission main. The Canandaigua-Farmington Consolidated Water District supplies treated water from the City of Canandaigua to the Village of Manchester and the Town of Manchester Water Districts 3, 4 and Central. The Town of Canandaigua Consolidated Water District supplies treated water from the City of Canandaigua to the Town of East Bloomfield through a meter pit located at the Canandaigua-East Bloomfield town line. Also, the Town of Canandaigua Consolidated Water District supplies treated water from the City of Canandaigua to the Canandaigua-Bristol Water District and the Bristol Water District Extension #1 through a pump station located on Goodale Road in the Hamlet of Cheshire.

New York State Department of Health has completed a source water assessment for Canandaigua Lake with the following results:

This assessment found a moderate susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for protozoa, phosphorus, DBP precursors, and pesticides contamination. 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. However, it appears that the total amount of wastewater discharged to surface water in this assessment area is 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: IHWS, CBS, landfills, mines, RCRA, and TRI.

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 human activity.

Contaminants that may be present in source water include:

- > **Microbial contaminants**
- > **Inorganic contaminants**
- > **Pesticides and herbicides**
- > **Organic chemical contaminants**
- > **Radioactive contaminants**

Facts and Figures

The **Canandaigua-Farmington water system** serves approximately 12,000 people through 4,009 service connections. The total water purchased in 2011 was 624.953 million gallons. The daily average of water treated and pumped into the distribution system was 1.712 million gallons per day. Our highest single day was 2,980,000 gallons. The amount of water delivered to customers was 499.263 million gallons. This leaves an unaccounted for total of 125.690 million gallons. Approximately 7% of our purchased water was used to flush watermains and fight fires. Approximately 13% of our total purchased water was lost this year due to watermain breakage. In 2011, water customers were charged \$3.50 per 1,000 gallons for 0 to 6,000 gallons of water used and additional usage over 6,000 gallons is \$4.05 per 1,000 gallons or a minimum quarterly bill of \$21.00.

The **Canandaigua-Farmington Consolidated Water District** sells water to the Town and Village of Manchester. Their System facts and figures are as follows:

- The **Village of Manchester** services a population of 1,709 through 492 service connections. The total water purchased in 2011 was 45.327 million gallons. The daily average to the Distribution System was 124,184 gallons per day. The single highest day was 551,000 gallons. The amount of water sold to customers was 41.705 million gallons. Approximately 250,000 gallons of water was used to flush watermains, fire hydrants, fight fires, etc. This leaves an unaccounted total of 3.372 million gallons and leakage which is 7.44% of the total purchased. In 2011, water customers were charged \$24.00 for 0 to 6,000 gallons of water used as the minimum quarterly bill. Any additional usage over 6,000 gallons is \$4.50 per thousand.
- The **Town of Manchester Water Districts** services a population of 1,370 through 496 service connections. The total water purchased in 2011 was 47.460 million gallons. The daily average to the Distribution System was 130,027 gallons per day. The single highest day was 360,000 gallons. The amount of water sold to customers was 37.899 million gallons. Approximately 367,000 gallons of water was used due to watermain breaks and approximately 478,000 gallons of water was used to flush watermains, install new watermains, install fire hydrants and fight fires. This leaves an unaccounted total of 8.716 million gallons and leakage which is 18.36% of the total purchased. In 2011 water customers were charged \$26.00 0 to 8,000 gallons of water used as the minimum quarterly bill. Any additional usage over 8,000 gallons is \$3.15 per 1,000 thousand.

- The **Town of Canandaigua Water Districts** purchases its water separately from the City of Canandaigua and serves approximately 10,045 people through 2,145 service connections. The total water purchased in 2011 was 212.737 million gallons. The daily average to the Distribution System was 582,840 gallons per day. The single highest day was 2,739,700 gallons. The amount of water sold to customers was 191.700 million gallons. Approximately 500,000 gallons of water was lost during watermain breaks, 80,000 gallons of water was used for new watermain installation and 850,000 gallons of water was used to flush watermains, fire hydrants, fight fires, etc. This leaves an unaccounted total of 19.607 million gallons and leakage which is 9.22% of the total purchased. In 2011, water customers were charged \$3.50 per 1,000 gallons for 0 to 6,000 gallons of water used and additional usage over 6,000 gallons is \$4.05 per 1,000 gallons or a minimum quarterly bill of \$21.00.
- The **Town of Bristol Water District** purchases its water from the Town of Canandaigua and serves approximately 186 people through 53 service connections.

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 drinking water by the City of Canandaigua before it is delivered to the Canandaigua-Farmington water system. 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 Canandaigua monitor fluoride levels on a daily basis. During 2011 monitoring showed fluoride levels in your water were in the optimal range 80% of the time. None of the monitoring results showed fluoride at levels greater than the 2.2 mg/l MCL for fluoride.

Are There Contaminants In Our Drinking Water?

In order to ensure that tap water is safe to drink, we routinely test your drinking water. The New York State Department of Health and the Environmental Protection Agency prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. 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.

In accordance with State regulations, the **City of Canandaigua** routinely monitors your drinking water for numerous contaminants. They test your drinking water for coliform bacteria, turbidity, inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, total trihalomethanes, and synthetic organic contaminants. The table presented below depicts which contaminants were detected in your drinking water. The State allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Therefore, some of the data, though representative of the water quality, is more than one year old. Test results were all negative except for those indicated on the following table. The **Canandaigua-Farmington Consolidated Water District** tested the water for coliform bacteria at least thirteen (13) times a month. The **Village of Manchester** tested the water for coliform bacteria two times per month. The **Manchester Water Districts #3, #4 and Central** tested the water for coliform bacteria once per month.

The **Canandaigua Consolidated Water District** tested the water for coliform bacteria seven times per month, and the **West Lake Road Water District, the Canandaigua-Bristol Water District and the Bristol Water District Extension Number 1** tested the water for coliform bacteria once per month

The table presented below depicts which compounds were detected in your 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)**.

TEST RESULTS

Substance (Units)	Violation Y/N	Date of Sample	Level Detected	Range Low - High	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria (ppm) Canandaigua Consolidated Canandaigua-Bristol WD Town of Bristol Town of Manchester	No	Each Month	LT 1	N/A	0		Naturally present in the environment
Total Coliform Bacteria (ppm) CFWD	Yes 10/25/2011 08/23/2011 08/16/2011 06/07/2011 All re-checked samples returned negative after each resampling of each violation	Each Month	Present	N/A	0	Presence of Coliform Bacteria in 4 samples	Naturally present in the environment
Total Coliform Bacteria (ppm) Town of Canandaigua – West Lake Road Water District	Yes 10/26/2011 All re-checked samples returned negative after 10/27/2011	Each Month	Present	N/A	0	Presence of Coliform Bacteria in 1 sample	Naturally present in the environment
Total Coliform Bacteria (ppm) Village of Manchester	Yes 07/27/2011 All re-checked samples returned negative after 07/29/2011	Each Month	Present	N/A	0	Presence of Coliform Bacteria in 1 sample	Naturally present in the environment
Turbidity** (NTU)	No	2011	0.28	0.02 - 0.28	N/A	TT=0.3	Soil runoff
Turbidity** (NTU)	No	2011	0.92	0.01 - 0.92	N/A	TT=<1	Soil runoff
Radiological Gross Alpha (pCi/l)	No	07/2004	1.0	N/A	0	15	Erosion of natural deposits
Radium 226 (pCi/L)	No	03/2009	0.083	ND-.08	0	5	Erosion of natural deposits
Radium 228 (pCi/L)	No	03/2009	0.18	N/A	0	5	Erosion of natural deposits
Inorganic Contaminants							
Lead (ppb)	No	08/2011	0.0	< 1 – 2.8	N/A	AL=15	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm) Canandaigua-Bristol	No No	08/2011 07/2009	0.029 0.45	0.00 to 0.03 0.014 to 0.49	N/A N/A	AL=1.3 AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Fluoride (ppm)	No	08/2011	1.17	0.55 – 1.17	N/A	2.2	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Barium (ppm)	No	08/2011	0.02	N/A	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from Crop land
Nickel (ppb)	No	08/2011	1.4	N/A	100	100	Erosion of natural deposits; discharge from steel factories
Nitrate (ppm)	No	05/2011	0.26	N/A	10	10	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks
Chromium (ppb)	No	08/2011	2.0	ND-2.0	100	100	Erosion of natural deposits; discharge from steel factories
Alkalinity (ppm)	No	2011	120	114-120	N/A	N/A	Naturally present in the environment
Total Organic Carbon (ppm)	No	2011	2.8	2.0-2.8	N/A	N/A	Naturally present in the environment
Dissolved Organic Carbon (ppm)	No	2011	2.6	1.9-2.6	N/A	N/A	Naturally present in the environment
UV254 (cm⁻¹)	No	2011	0.0363	0.0179-.0363	N/A	N/A	
Specific Ultraviolet Absorbance (L/mg-m)	No	2011	1.73	0.78-1.73	2	N/A	
Total Haloacetic Acids (ppb)							By-product of drinking water chlorination
Stage 1”							
City of Canandaigua	No	2011	32	14-50	N/A	60	
Stage 2:							
City of Canandaigua	No	2009	30	19 - 46	N/A	60	
CFWD	No	2009	32	15 - 38	N/A	60	
Canandaigua Consolidated	No	2009	39	26 - 57	N/A	60	
Canandaigua-Bristol WD	No	2008	15	N/A	N/A	60	
Town of Bristol	No	2008	2	N/A	N/A	60	
Town of Manchester	No	2009	43	21 - 64	N/A	60	
Village of Manchester	No	2009	44	35 – 52	N/A	60	
Volatile Organic Contaminants							
TTHM (ppb) [Total trihalomethanes]							By-product of drinking water chlorination
Stage 1:							
City of Canandaigua	No	2011	71	45 – 103	N/A	80	
Stage 2:							
City of Canandaigua	No	2009	51	23 - 83	N/A	80	
CFWD	No	2009	66	33 – 124	N/A	80	
Canandaigua Consolidated	No	2009	53	29 – 76	N/A	80	
Canandaigua-Bristol WD	No	2008	74	N/A	N/A	80	
Town of Bristol	No	2008	98	N/A	N/A	80	
Town of Manchester	No	2009	70	27 - 109	N/A	80	
Village of Manchester	No	2009	58	28 – 85	N/A	80	

Notes:

** 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.

> 0 site(s) out of 30 above the Action Level for Copper.

> 0 site(s) out of 30 above the Action Level for Lead.

Definitions:

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

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. MCL's are set as close to the MCLG's 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. MCLG's 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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

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.

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.

Picocuries per liter (pCi/l) - A measure of radioactivity in water.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, 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.

What Does This Information Mean?

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

Microbiological Contaminants:

- (1) **Total Coliform** - Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
- (3) **Turbidity** - 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.

Inorganic Contaminants:

(17) **Lead** - As you can see by the table, our system had no violations.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. 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. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

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 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, and then check the meter after 15 minutes. If it moved, you have a leak.

System Improvements

In 2011 the Canandaigua-Farmington Water District saw continued growth in the Auburn Meadows and the Estates of Beaver Creek subdivisions. Approximately 2,700 feet of watermain was replaced on Purdy Road.

In 2011 the Canandaigua Consolidated Water District installed approximately 10,080 feet of watermain.

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.

- Canandaigua-Farmington (585) 924-3158
- Town of Canandaigua (585) 394-3300
- Town of Manchester (585) 289-3010
- Village of Manchester (585) 289-4340
- Town of Bristol, (585) 394-3300
- Hyland Hartsough, New York State Department of Health (315) 789-3030

This Report Covers Public Water Supply ID Numbers:

Village of Manchester: 3401160

Canandaigua-Farmington Consolidated Water District: 3401151

Town of Bristol: Bristol Water District Extension Number 1: 3430041

Town of Canandaigua: Canandaigua Consolidated Water District: 3430008
West Lake Road Water Benefit District: 3430009
Canandaigua-Bristol Water District: 3430040

Town of Manchester: Manchester Water District Number 3: 3430014
Manchester Central Water District: 3430021
Manchester Water District Number 4: 3430020