

OUR WATERS RUN DEEP

CHARLOTTETOWN WATER & SEWER UTILITY

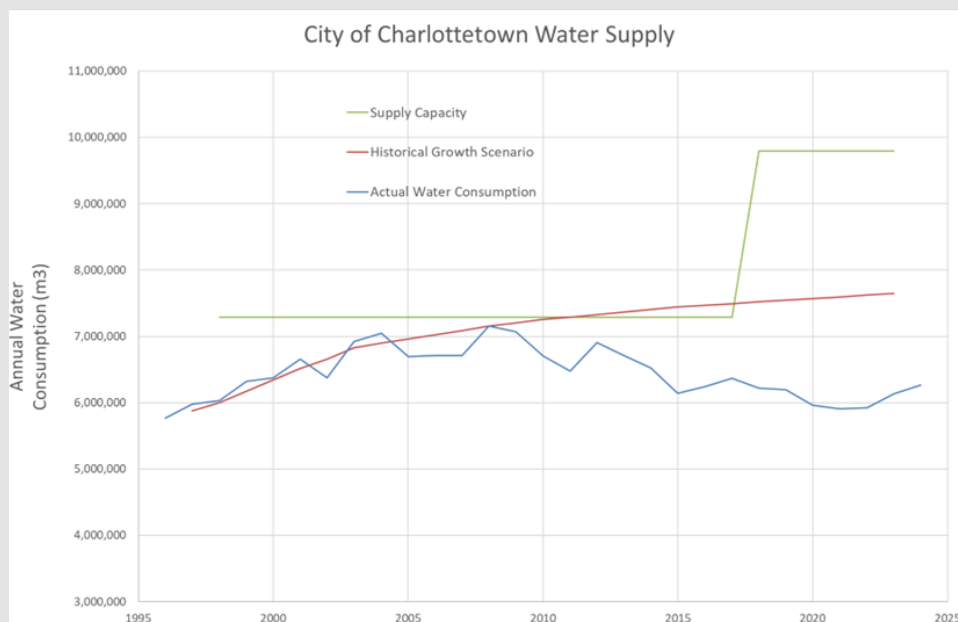


Message from the City of Charlottetown Water and Sewer Utility

The Charlottetown Water and Sewer Corporation has a long history (established 1887) of providing great service to the residents of Charlottetown. The Miltonvale Wellfield, coupled with the Brackley Wellfield, Union Wellfield and Suffolk Wellfield are exceeding the water demand within the City. Having a diverse water supply and water conscious residents, means the City of Charlottetown's capacity significantly surpasses the current water demands.

The City of Charlottetown won the "Best of the Best" Water Taste Test at the 2024 American Water Works Association Annual Conference and Exposition in Anaheim, California. Charlottetown won the right to compete at the international competition after winning the Atlantic Canada 'Best of the Best' Water Taste Test contest in October 2023. The winners were determined by a panel of judges that included trained water flavor profilers. The water was judged on features such as appearance, mouth feel and overall taste.

Residents of Charlottetown continue to embrace water conservation. The City's annual water consumption level had a rising trend from the time of amalgamation up to the year 2008 peak of 7.2 million cubic meters. Despite Charlottetown's growing population, residents have reduced water consumption since that 2008 peak. Consumption rates have dropped more than 1 million cubic meters. This puts today's consumption levels comparable to those seen at the beginning of the century at 6.1 million cubic meters. The residents of Charlottetown should be proud of their efforts in the area of water conservation. The graphic below provides a representation of water supply capacity, water demand and a representation of where demand could have gone in the absence of increase water conservation.



2024 WATER & SEWER REPORT

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UTILITY GENERAL INFORMATION

Treatment

The treatment plant is responsible for the operation, maintenance and repairs of the City's sewage treatment facilities including the Riverside Drive Treatment Plant, and sewer pumping stations at Navy Quay, Dorchester Street, and West Royalty.

Works

Works is responsible for the maintenance and repair of the City's water and sewer systems including water pumping stations at Brackley, Union, Suffolk, Malpeque Road, Miltonvale Wellfield and Mt Edward Road Booster Station, water and sewer mains, services, water meters, fire hydrants and 35 sewer pumping stations located throughout the city.

Engineering

Engineering provides support for short and long range planning, engineering, and design and upgrade of new and existing existing water and sewer facilities, mapping and records maintenance, layout and inspection of utility and contractor installations, monitoring of water quality and response to customer, developer and contractor inquiries and complaints.

Accounts

Accounts is responsible for the financial and billing needs of the City's Water and Sewer Utility.

For your convenience, the following payment methods are available:

- In person by cash, cheques or post-dated cheques, Debit card, Visa, or MasterCard at 199 Queen Street.
- By mailing cheques to PO Box 98, Charlottetown PE C1A 7K2.
- Payment through your online banking bill payments or in person at your bank
- Online payments with credit card or credit backed debit card (VISA debit) by visiting our website. www.charlottetown.ca
- A 24 hour payment drop box located to the right of the front door at City Hall (199 Queen street)



Photo credit
Odyssey Virtual

WATER DISTRIBUTION REPORT

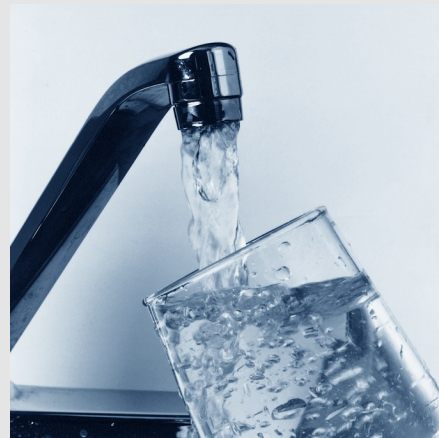
Total Coliform Bacteria and E.coli (Distribution System)

	# of Samples	Positive TC Tests (TC≤10)	# of Non-Compliant Samples (TC>10)	E.coli
January	49	3	2	-
February	41	-	-	-
March	39	-	-	-
April	38	-	-	-
May	35	-	-	-
June	43	1	-	-
July	41	-	-	-
August	33	-	-	-
September	37	-	-	-
October	47	2	1*	-
November	39	-	-	-
December	38	-	-	-
Total	480	6	3	0
Detection %	-	1.25	0.63	-

* Follow up sampling completed, results negative for bacteria

Total Background Growth (Distribution System)

	# of Samples	Positive BG Tests (BG≤200)	# of Non-Compliant Samples (BG>200)
January	49	1	-
February	41	-	-
March	39	-	-
April	38	-	-
May	35	-	-
June	43	-	-
July	41	-	-
August	33	1	-
September	37	-	-
October	47	-	1*
November	39	-	-
December	38	-	-
Total	480	2	1
Detection %	-	0.42	0.21



WATER SOURCE REPORT

UNTREATED WATER (SAMPLES FROM WELLS)

	Milton # of Samples	Brackley # of Samples	Suffolk # of Samples	Union # of Samples	Total	TC ≤10	TC>10	E.coli	BG≤200	BG>200
January	1	4	4	6	15	4	1	-	-	-
February	1	4	4	5	14	3	-	-	-	-
March	6	3	4	7	20	6	8	-	-	-
April	5	4	4	5	18	7	-	-	-	-
May	5	4	4	5	18	2	-	-	-	-
June	5	4	5	5	19	2	-	-	-	-
July	5	4	6	5	20	4	1	-	-	-
August	5	4	4	5	18	3	1		-	-
September	8	4	4	4	20	6	3	-	-	-
October	6	3	5	4	18	6	2	-	-	-
November	5	3	4	4	16	5	-	-	-	-
December	5	5	4	4	18	10	3	-	-	-
TOTAL	57	46	52	59	214	58	19	0	0	0

WATER PUMPING & BOOSTER STATIONS

The Utility has four (4) water pumping stations systems that consist of 18 submersible pumps ranging from 10 hp (10 l/s) to 100hp (50-53 l/s). In addition, there are two water booster stations that consists of seven (7) 60 hp centrifugal booster pumps located at Sherwood Pump house and Miltonvale Booster Station.

Preventive maintenance checks were carried out throughout the year. All pumps, motors, and controls are operational with normal maintenance required.

In accordance with the *Drinking Water and Wastewater Facility Operating Regulations*, a water sample is collected from each source of supply on a monthly basis and analyzed for the presence of coliform bacteria and E.coli. On occasion a low count of E.coli has been reported. However, there were no detections of E.coli in the treated water system.

As directed by the PEI Department of Communities, Land and Environment the utility maintains a free chlorine residual of 0.4 mg/l or greater at the first water service connection located within the city to the municipal water system which is on MacRae Drive. Any connection made before this location (outside the city) is provided additional disinfection protection with the use of ultraviolet light equipment installed in the customers home.

CHEMICAL ANALYSES REPORT (WELLS & DISTRIBUTION)

Parameter	Brackley (avg) Concentration, (mg/l)	Suffolk (avg) Concentration, (mg/l)	Union (avg) Concentration, (mg/l)	Milton Concentration, (mg/l)	Distribution System Typical (mg/l)	MAC* (mg/L)	AO* (mg/L)
Alkalinity Total	135.71	116.50	145.11	126.20	136.00	--	--
Barium	0.39	0.51	0.54	0.48	0.50	1.0	--
Calcium	33.48	27.72	36.54	23.69	32.72	--	--
Chloride	11.94	10.59	20.79	10.20	15.48	--	≤250
Chromium	--	--	--	--	--	0.05	--
Copper	0.005	0.006	0.014	0.003	0.12	--	≤1.0
Iron	0.005	<0.002	<0.002	<0.002	<0.002	--	≤0.3
Lead	0.0004	0.0011	0.0004	<0.0001	0.0004	0.01	--
Magnesium	18.27	15.16	20.47	13.70	17.75	--	--
Manganese	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--	≤0.05
Nickel	--	--	--	--	--	--	--
Nitrate-N	4.33	1.98	3.59	2.50	3.24	10.0	--
pH	8.11	8.15	8.09	8.36	7.97	--	6.5 to 8.5
Phosphorus	0.040	0.041	0.043	0.029	0.036	--	--
Potassium	1.36	1.30	1.62	1.46	1.57	--	--
Sodium	6.09	6.30	10.06	15.02	11.54	--	≤200
Sulfate	7.11	4.61	8.98	7.07	7.11	--	≤500
Zinc	0.004	0.003	0.003	0.004	0.003	--	≤5
Total Hardness	158.82	131.63	173.75	115.54	154.77	--	≤200

*MAC - Maximum Acceptable Concentration AO - Aesthetic Objective - as per *Guidelines for Canadian Drinking Water Quality*, Health Canada

WASTEWATER TREATMENT REPORTS

Treatment Plant Effluent						
Month	Average CBOD (mg/L)	Average Suspended Solids (mg/L)	Maximum Total Ammonia (mg/L)	Total Nitrogen (mg/L)	Total Phosphorus (µg/L)	Geometric Mean Fecal Coliform (MPN/100ml)
January	<10	9.2	-	-	-	120.33
February	<10	7.5	-	-	-	31.68
March	<10	6.7	-	-	-	32.57
April	<10	4.3	-	-	-	38.97
May	<10	7.2	0.181	38.4	5060	9.28
June	<10	21.0	-	-	-	39.64
July	<10	2.3	-	-	-	23.14
August	<10	6.8	2.08	32.0	4130	123.19
September	10.25	13.8	-	-	-	255.10
October	<10	9.0	-	-	-	128.57
November	<10	9.3	3.565	24.8	2890	47.11
December	<10	6.5	-	-	-	25.24

Upgrades at the pollution control plant allow for the treatment of wastewater from both East Royalty and the Town of Stratford. In 2024 the plant treated 7.78 million cubic meters of wastewater.



SEASONAL WATER USE RESTRICTIONS



With the summer months fast approaching, residents are reminded that Seasonal Water Use Restrictions come into effect on June 1st. As per the Utility's Rules and Regulations, "no resident shall permit the use of water that conflicts with the "Water Shortage Restrictions".

	Seasonal Water Use Restrictions (Effective June 1 – September 30)	Water Shortage Restrictions (Implemented at the discretion of the Charlottetown Water & Sewer Utility Corporation)
Lawn watering (hose or sprinkler) New sod is exempt from restrictions for first 30 days after it is laid	5am – 10am OR 7pm – 1am (max 2 hours per day)	Prohibited
Spot watering for gardens/ hanging baskets	Anytime	Anytime
Filling or topping up swimming pools or hot tubs	Anytime	Prohibited
Hosing hard surfaces (sidewalks, driveways)	Prohibited at all times	Prohibited at all times
Car washing	Anytime	Once per week
Kiddie pools/water toys	Anytime	Anytime

HOW TO READ YOUR WATER METER

Your new water meter accurately measures the water you use in litres and cubic metres (m³).

Your water bill is calculated based on the number of cubic metres used in a billing cycle. There are 1,000 litres in a cubic metre.

As water passes through the meter the "sweep hand" moves around the dial.

Each complete revolution of the dial equals 100 litres of water or 0.1 cubic metres.

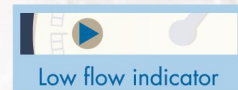


CHARLOTTETOWN WATER & SEWER UTILITY
www.charlottetown.ca
199 Queen Street, Charlottetown • 902-629-4014



HOW TO CHECK FOR LEAKS

The triangular shaped "low flow indicator" will move when even the smallest amount of water is passing through the meter. You should use the low flow indicator periodically to check for leaks within your property.



How to check for leaks within your property using your water meter's low flow indicator.

- 1) Check to ensure that all faucets, and any appliances that use water, are turned off and make sure that toilets are not flushed during the test.
- 2) Look at your meter and make sure that the low flow indicator is NOT moving.
 - If it is NOT moving, you do not have any leaks.
 - If you can see it moving then there is likely a leak within your property.

Check your toilets first. Incorrectly seated or worn out toilet flappers are the No.1 cause of leaks in the home.



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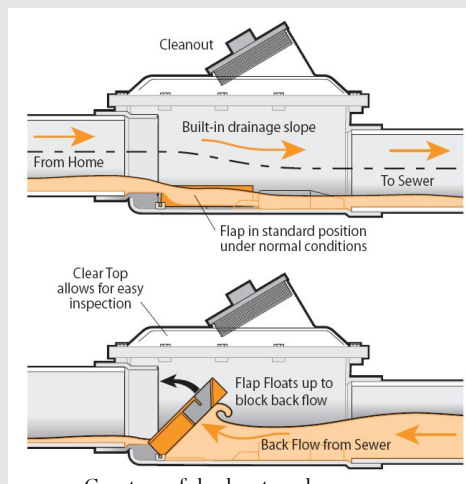


EDUCATION AND AWARENESS

Backwater valves permit the flow of wastewater away from a home to the municipal sanitary sewer system. During times of large amounts of water, the valve will close automatically if sewage or water approaches the home through the sanitary or storm lateral.

A backwater valve is one of the most effective tools available to reduce the risk of damage to homes from storm water and sanitary waste. Most homes in Canada, however, do not have a backwater valve. For those homes that do have a backwater valve if it is not properly maintained, water and sanitary waste can back up into a home during an extreme water event.

People need to be educated and perform proper maintenance if the valves are to be effective. It's determined that the main mode of failure of the backwater valves is the valve cover is not screwed down tightly, resulting in failure of the valve. Typically people are not aware of the appropriate maintenance and care required to secure the greatest protection from backwater valves. To learn about proper maintenance please visit: <http://www.basementfloodreduction.com/option15.html> for more information and educational videos.



Courtesy of: backwatervalve.com

Be Water Friendly — The Be Water Friendly brand and accompanying micro-site was created in 2011 to create a common identifier for water conservation programs and initiatives and provide a designated online resource for water conservation information. The logo and word mark are displayed on all program brochures and are also displayed on the Utility fleet as a continuous reminder of this important discussion in the Charlottetown community. The micro-site contains all the pertinent information on water supply concerns and is an important source of information on water conservation tips and for displaying new programs and initiatives.



Fix-a-Leak Week — The Utility promoted US EPA Fix-a-Leak Week to encourage the identification and repair of leaks by Utility customers. This was also promoted through the annual bill for flat-rate customers that included an information card and leak strips that can be used to identify toilet leaks in the home and information on how to repair the most common types of toilet leak. For more information on proper maintenance and educational videos, visit: <http://www.bewaterfriendly.com/>

Water School — Since 2011, the Town of Stratford has provided water conservation education to Grade 5 students in Stratford and the surrounding area through a program known as “Water School” (Water’s Cool!). In 2019, the program was expanded to include Grade 5 students in Charlottetown.



Water School is a day-long field trip that introduces grade 5 students to water conservation and various aspects of watersheds, including the water cycle, groundwater, wetlands, forestry and buffer zones, in an interactive and activity-based setting. Students partake in hands-on experiments, use of dioramas, quizzes, an art contest, and instruction from professionals in the field of water conservation. Students leave the day excited about their local environment, and ready to share and put their new knowledge to work.

MAINTAINING SEWAGE SERENITY

The proper maintenance and operation of our sewer system begins with our customers. In order to provide an effective sewage collection and treatment system it is important that care is taken by all. The following information is provided to assist all of us in contributing to effective management of our wastewater.

When you use your toilet, shower, washing machine or dishwasher, wastewater leaves your home through pipes that connect to the city sewer system.

Materials that may be flushed or poured down the drain could harm Utility staff and the pipes that connect to city sewers as well as the city sewer system. Every property owner connected to the city sewer treatment system can be a potential contributor to sewer problems, and a potential victim of those problems.

Putting the wrong things down the drain could damage the sewer system, cause sewer backups in your home, and sewer releases to the environment. Anyone who uses the city sewer system should be responsible for what they flush or pour down drains.

The only thing that should be flushed down a toilet is human waste (urine and feces) and toilet paper.



Please avoid flushing these common household items

- disposable diapers
- tampons
- cotton balls and swabs
- mini or maxi pads
- unused medications (return to a pharmacy)
- condoms
- cleaning wipes of any kind
- facial tissue
- bandages and bandage wrappings
- fats, oils and grease

By working together we can all ensure effective management of our wastewater. Thank you for your assistance