



DRINKING WATER SYSTEM REPORT

TO: CAO, Council & Public Works Manager
FROM: Claus Trost, Quality Management System Representative
DATE: January, 2021
SUBJECT: 2020 Annual Report

Background

Laurentian Valley Water Works manages just over 14 kilometres of water main and branch lines in the Township. Laurentian Valley Water Works received its Certificate #2893 as a Water Distribution System Class 1 in November of 2000. On May 31, 2011 Drinking Water Works Permit 192-201 and License Number 192-201 was issued by the Ministry of Environment for the Laurentian Valley Distribution System. On March 30, 2016 the License & Permit were renewed. The Drinking Water System Information number for Laurentian Valley Water Works is W260007465. This is the 2020 Annual and Summary Report as required by O.Reg 170/03 as amended.

Laurentian Valley Township has a water servicing agreement with the City of Pembroke. The water is purchased from the City and distributed in the Stafford Village area, part of Pembroke Street East and part of Pembroke Street West. The City treats and tests the water at the Pembroke Filtration Plant on Riverside Drive and tests the water in their distribution system. The Municipality tests the water in its distribution system. The City provides an Annual & Summary Report to the Municipality as required by O.Reg 170/03.

This report and the Certificates of Analysis are available to the general public at the front counter of the Municipal Office at 460 Witt Road during office hours. The quarterly reports are also available on the internet at www.lvtownship.ca Information on the City Water Works can be accessed at www.pembroke.ca.

Ownership

Laurentian Valley Water Works is owned by the Corporation of the Township of Laurentian Valley.

Operating Authority

Laurentian Valley Water Works is operated by the Corporation of the Township of Laurentian Valley.

Sampling and Testing

The weekly water samples were sent to Caduceon Laboratories Inc. in Ottawa for analysis. Caduceon is an ODWS Accredited laboratory. The results of the analysis are emailed to the Municipality. The following chart is a summary of those test results.

Analysis for the period of January 1, 2020 - December 31, 2020

Parameter Tested	MAC, IMAC or Standard	# of Samples	# of Adverse Results	Normal Range	Note #
E, Coli	Nil	112	0	Absent	
Total Coliforms	Nil	112	0	< 1/100ml	
Heterotrophic Plate Count	500 CFU/ ml	42	0	<2 CFU/ml - 48 CFU/ml	
Residual Chlorine	.05 mg/ml	487	0	0.05 - 1.21 mg/l	
Trihalomethanes	0.10 mg/liter	4	0	.08075 mg/liter	
Haloacetic Acid	0.08	4	0	.049 mg/l	
alkalinity - distribution		4	0	28 - 36 mg/l	
Lead - distribution	.01 mg/l	2	0	<0.0011 – 0.00049	
pH – distribution		4	0	7.42 - 8.23	

In 2020, the municipality paid Caduceon \$4,109.30 for laboratory services.

Complaints

There were no complaints received in 2020.

Staffing & Training

Laurentian Valley Waterworks has 1 Water Quality Analyst and 5 operators certified for Water Distribution 1. In late 2020, two operators renewed their Licenses.

Construction

There was no construction undertaken in 2020.

Maintenance

There was one water main break in the first quarter of 2020; on January 17 there was a main break on Roy Street, the water pressure was throttled back from 9:00 AM to 12:30 P.M., while a 6 inch pipe clamp was replaced, the existing pipe repair clamp corroded and failed.

One service connection was repaired on March 12, 2020, at 504 Roy Street and another on October 6 at 614 Willow Drive.

The low flow water meter at the west end of Pembroke was repaired at the end of January, it had stopped recording the flow in late 2019 and was identified at the reading in early January.

The water meters were inspected and calibrated by Flow Metrix in May; there was a problem testing two of the meters, the downstream valve on the Elgin Street is leaking and the downstream valve on the Bruham Avenue meter also leaks, these leaks skew the results under full flow.

The hydrants and valves were exercised in the second and fourth quarters, as per the operational plan.

In June, Hydrant valve #47 was replaced.

In 2020 the works department conducted 5 customer service calls, to turn the water off and back on, while the customer's plumber conducted maintenance on their plumbing system.

One new, commercial service was connected in the fourth quarter.

In 2020 the Works department completed 215 locate requests, of which 78 identified water lines to be marked.

Covid-19 Pandemic

The emergency commenced at the end of the first quarter when the Emergency Management and Civil Protection Act was enacted. As per the Operations Plan, the Operators were separated into two groups, to reduce the likelihood of losing all of our operators at the same time. By May the operators and office staff were all back full time. At the start of the second quarter, Caduceon Laboratories enacted a change in sample submission procedure, our manifests are now emailed, separate from the samples. During the second quarter our sampling point at Bingo Country was lost while the building was closed, the sampling location was moved to Smitty's Home Hardware. In the third quarter, the hall reopened and we resumed sampling at the hall. Late in the year we encountered problems with our courier, they were unable to guarantee next day delivery due to increased shipping volumes, we have started shipping with a local shipper.

We continue to monitor the advice from the Health Unit and the Ontario Municipal Water Association, with regard to the continued supply of safe water to our clients.

Ministry of the Environment

The License Renewal documents were submitted to the MOECP, on September 23, 2020
The Ministry conducted the annual inspection on October 21, 2020; the final report has not been received yet.

There was one incidence of Regulatory Non-compliance, the samples taken in the first week of December arrived late at the Laboratory twice and subsequently could not be analyzed. This occurred because Purolator was overrun with deliveries and could not meet their overnight guarantees. We have changed to a local delivery company to make the deliveries.

Drinking Water Quality Management System

The External Audit was conducted on March 16, 2020. There were no Corrective Actions found, four Opportunities for Improvement were identified. The Audit Report was circulated.

The Internal Audit was completed in the fourth quarter Angie Wren, there were no corrective action requests, just some administrative errors/typos to correct.

The management review was completed on December 9, 2020, report previously submitted.

Asset Management and Financial Plan

A new Financial Plan was submitted to the Ministry with the License renewal application.

Accreditation & Licensing

The Water Works continues to be accredited with NSF, renewal to occur after the external audit is completed in March.

The License Renewal documents were submitted to the MOECP, on September 23, 2020

Summary

In 2020, the water works purchased 45,331,088 gallons of water from the City of Pembroke and distributed it to 647 homes and businesses. This was a 13% decrease in volume from the last 10 year average. There was one water main break and no incidents of adverse water quality in 2020.

Respectfully Submitted
Township of Laurentian Valley

“Original Signed”

Claus Trost
Quality Management System Representative

Total and Average Water Use Statistics

	1st quarter	2nd quarter	3rd quarter	4th quarter	Total	% Deviation from Average
2010	11,422,415	15,108,830	15,838,621	12,040,820	54,410,686	5.784
2011	9,941,822	13,916,683	13,807,640	14,068,538	51,734,683	0.911
2012	10,123,738	13,635,875	16,143,424	12,109,409	52,012,446	1.440
2013	11,012,707	13,002,165	12,844,073	9,267,694	46,126,639	-11.137
2014	8,572,421	10,951,915	13,112,594	13,004,686	45,641,616	-12.318
2015	13,457,180	16,916,645	16,032,685	12,440,670	58,847,180	12.887
2016	11,976,910	14,558,170	15,791,380	12,040,490	54,366,950	5.708
2017	10,709,380	11,996,820	12,318,240	11,742,610	46,767,050	-9.615
2018	12,022,340	13,355,100	14,025,550	12,062,490	51,465,480	0.392
2019	11,904,640	12,334,476	12,725,130	10,507,288	47,471,534	-7.988
2020	10,806,026	9,673,730	13,064,392	11,786,940	45,331,088	-13.087
10 year average	10,929,599	14,012,898	14,795,774	12,138,901	51,263,637	