



## DRINKING WATER SYSTEM REPORT

**TO:** CAO, Council & Public Works Manager  
**FROM:** Claus Trost, Quality Management System Representative  
**DATE:** February, 2018  
**SUBJECT:** 2017 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 2017 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. These quarterly reports are also available on the internet at [www.lvtownship.ca](http://www.lvtownship.ca) Information on the City Water Works can be accessed at [www.pembroke.ca](http://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, 2017 - December 31, 2017

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 - 10 CFU/ml	
Residual Chlorine	.05 mg/ml	459	0	0.05 - 1.17 mg/l	
Trihalomethanes	0.10 mg/liter	1	1	.083175 mg/liter	
Haloacetic Acid	0.08	1	0	.03370 mg/l	
alkalinity - distribution		4	0	26 - 41 mg/l	
Lead - distribution	.01 mg/l	4	0	0.0006 – 0.00023	
pH – distribution & residential		16	0	6.63 - 7.24	
Lead - residential	.01 mg/l	10	0	<.00005 mg/l - 0.00066 mg/l	
Lead - commercial	.01 mg/l	4	0	0.00010 mg/l - 0.00201 mg/l	

In 2017, the municipality paid Caduceon \$5,060.66 for laboratory services.

## Complaints

There were no customer service calls received in 2017.

## **Staffing & Training**

Laurentian Valley Waterworks has 1 Water Quality Analyst and 5 operators certified for Water Distribution 1. In 2017, two operators graduated from Operators-in-Training to Level One, congratulations to Cole Hawkins and Shane Hebert.

Two operators attended a Water Main Repair Logistics course in Peterborough in early March. Also, the QMS rep met with the operators and reviewed the water sampling procedures, bottle labeling and manifest completion procedures. In October, the Operations Foreman and three operators attended the Eastern Ontario Water Works Conference in Belleville.

## **Construction**

There were no major construction projects on the water works in 2017. During the Third Quarter, H&H Construction installed the Robinson Lane water main extension, the pressure test was conducted on July 11<sup>th</sup> and the Microbiology samples were taken on July 13<sup>th</sup> and 14<sup>th</sup>, both sets came back clean, this section of pipe is still not operational, and we have not taken ownership of it.

## **Maintenance**

There were no water main breaks in 2017.

There were 350 locate requests completed in 2017, of which 146 identified water lines to be marked.

The City of Pembroke conducted a major water main repair on Boundary Road, which necessitated a bypass of the water through our system for the Elgin Street area, for a week in early February.

There was one service connection break, at 1345 Pembroke Street West, on April 17<sup>th</sup>, the service saddle was replaced.

The hydrants were flushed and the valves were exercised in the second and fourth quarters.

The chlorine meters and the ph meter were verified/calibrated in June.

In December, one building with water service was demolished, the service was shut off prior to demolition.

We have been monitoring the loss of water on the Pembroke Street West watermain, the problem/leak seems to have disappeared, in 2017 the total-calculated difference was 154,894 gallons.

## **Ministry of the Environment**

The MOE conducted their annual inspection of the water works on November 8th, they found two issues of non-compliance with regulatory requirements; we did not start sampling for haloacetic acid as required earlier this year, and there was an Operator who took chlorine samples when his Operator License was expired. In April and November we filed the

Community Lead Testing Reports, in November we updated the Drinking Water System Profile Information with the MOE.

### **Drinking Water Quality Management System**

NSF-ISR, our accreditation agency, conducted their off-site audit of our system on January 17; a copy of the Report was received on February 27, 2017, previously submitted. There was only one “Opportunity for Improvement” noted, which the Management had already identified in the 2016 Management Review.

The Management Review was completed on December 5, 2017 and the Report was previously circulated. The next External Audit is scheduled as an on-site audit, for March 12, 2018.

### **Asset Management and Financial Plan**

In 2017 no assets were replaced. The current Financial Plan is valid until 2020.

### **Accreditation & Licensing**

The Water Works continues to be accredited with NSF.

On March 30, 2016 the License & Permit were renewed, for another 5 year term.

### **Summary**

In 2017, the water works purchased 46,767,050 gallons of water from the City of Pembroke and distributed it to 647 homes and businesses. This was a 12% drop in volume from the last 10 year average. There were no water main breaks and no incidents of adverse water quality in 2017.

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
2001	10,535,760	11,324,510	16,272,410	10,524,230	48,656,910	-7.912
2002	9,671,790	10,794,534	18,639,816	16,868,052	55,974,192	6.195
2003	16,029,978	11,442,884	12,584,000	10,390,540	50,447,402	-4.082
2004	10,825,780	13,887,440	15,103,060	12,084,070	51,900,350	-1.168
2005	12,193,850	13,770,494	16,571,806	11,808,070	54,344,220	3.381
2006	10,725,906	12,470,040	14,573,900	11,572,310	49,342,156	-6.413
2007	12,102,020	14,869,070	17,366,521	13,244,381	57,581,992	8.814
2008	11,422,781	12,488,412	15,781,786	13,085,730	52,778,709	0.516
2009	11,400,822	13,200,202	14,142,370	12,821,490	51,564,884	-1.826
2010	11,422,415	15,108,830	15,838,621	12,040,820	54,410,686	3.500
2011	9,941,822	13,916,683	13,807,640	14,068,538	51,734,683	-1.492
2012	10,123,738	13,635,875	16,143,424	12,109,409	52,012,446	-0.950
2013	11,012,707	13,002,165	12,844,073	9,267,694	46,126,639	-13.831
2014	8,572,421	10,951,915	13,112,594	13,004,686	45,641,616	-15.041
2015	13,457,180	16,916,645	16,032,685	12,440,670	58,847,180	10.775
2016	11,976,910	14,558,170	15,791,380	12,040,490	54,366,950	3.422
2017	10,709,380	11,996,820	12,318,240	11,742,610	46,767,050	-12.273
10 yearAverage	11,143,282	13,864,797	15,086,109	12,412,391	52,506,579	

Gallons