

**Laurentian Valley Township
Laurentian Valley Water Works
2010 Annual Report**

Description

Laurentian Valley Waterworks is a distribution system that purchases treated water from the City of Pembroke and distributes it to 625 homes and businesses through out 14 kilometers of distribution piping. There are no storage tanks, chlorine or pressure booster stations. Laurentian Valley Water Works received it's **Certificate** as a Water Distribution Plant, Level 1 (WD1) in November of 2000, # **2893**. On July 15, 2005 the system was reclassified as Water Distribution Subsystem Class 1 by the Ministry of Environment. The Drinking Water System Information number for Laurentian Valley Water Works is W260007465. This is the 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 and annual reports are also available on the internet at www.laurentianvalleytwsp.on.ca Information on the City Water Works can be accessed at www.pembrokeontario.com

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 & Testing

Water sampling was conducted by Claus Trost, Water Quality Analyst, Certificate number 12228 and Mark Zadow, Operator, Certificate number 13145. The water samples were sent to Caduceon Laboratories Inc. in Ottawa for analysis. Caduceon is an ODWS Accredited laboratory. The results of the analysis are faxed or emailed back to the Municipality. The following chart is a summary of those test results.

In 2010 the Municipality paid Caduceon Laboratories \$2,802.00 for water analysis services.

Analysis

For the period of January 1, 2010 - December 31, 2010

| Parameter Tested | MAC, IMAC or Standard | # of Samples | # of Adverse Results | Normal Range | Note # |
|---------------------------|-----------------------|--------------|----------------------|---------------------|---------|
| E, Coli | Nil | 121 | 0 | Absent | |
| Heterotrophic Plate Count | 500 CFU/ ml | 46 | 1 | <2/ml - 8 CFU/ ml | |
| Total Coliforms | Nil | 121 | 1 | < 1/100ml - 1/100ml | #1 |
| Residual Chlorine | .05 mg/ml | 527 | 0 | 0.02 - 1.24 mg/l | #2 |
| Trihalomethanes | .10 mg/liter | 4 | 0 | .069975 mg/liter | 4/4 ave |
| Alkalinity - distribution | | 6 | 0 | 31 -40 | |
| Field pH - distribution | | 6 | 0 | 7.10 - 7.67 | |
| Nitrite | 1.0 mg/l | 1 | 0 | <0.1 mg/l | |
| Nitrate | 10 mg/l | 1 | 0 | 0.3 mg/l | |
| Sodium | 200 mg/l | 1 | 0 | 19.4 mg/l | |

Notes

#1 One sample taken at Brum's dairy on May 25, 2010 was adverse with 1 Total Coliform, three resamples were taken up & downstream on May 27, 2010, all analyzed clean. The incident was attributed to a dirty tap at the sampling location. A Notice of Issue Resolution was faxed to the MOE & RCDHU on May 31, 2010

#2 One sample taken at Home Depot July 20, 2010 was adverse with a chlorine residual of less than 0.05 mg/l. The water main was flushed and the residual restored. A microbiological sample taken at the time was analyzed with no Total Coliforms detected. A Notice of Issue Resolution was faxed to the MOE & RCDHU on July 22, 2010

Complaints

On April 7th a complaint was received with regards to the colour of the water, this incident was related to the switching of the water flow when the water to the Bruham Main was turned off for the reconstruction project. After running the taps for 15 minutes the water colour returned to normal.

On August 24th, during the MOE audit, Barry Brum mentioned to Claus and the auditor that the dairy was having a problem with their water filters becoming plugged. This problem started after the Bruham Avenue watermain rehabilitation was completed, so it is not related to the reconstruction project. A call to the Brent at the City revealed that because of the low water level, they have had less turbidity to deal with because there was less flow in the river with which to disturb the fine particles, so the problem does not originate at the plant. In a discussion with Barry Brum in October, this problem has cleared up. It is not known what caused the issue.

Staffing & Training

Laurentian Valley Waterworks has 1 Water Quality Analyst, 4 operators certified Water Distribution - Class 1.

On March 10 the Works Department staff received the Accessibility Training, Health & Safety Training , updated H&S Policy Manual, reviewed the Drinking Water Quality Management System and the Water Quality Polices and Procedures Manual.

On April 14, 2010 the water works staff attended a course in Pembroke on Cross Connection & Backflow Prevention and on April 15th they completed the Disinfection of Watermains course.

The waterworks staff attended the Eastern Ontario Water Workers Conference in Napanee in October and the Water Quality Analyst attended the Water Forum, hosted by the MOE and Eastern Ontario Health Units in Kemptville.

Construction

The Bruham Avenue Water Main Rehabilitation Project was completed by RGT Clouthier Construction in the second quarter of 2010. The final cost was \$ 289,702.06 , of which the Provincial and Federal government covered \$193,134.70 under the Infrastructure Renewal Programs.

Maintenance

On January 19, 2010 the water service to 10 Matthews Avenue was repaired. The service line was damaged by the contractor boring the underground high-speed communication service lines.

On January 29, 2010 the water service to 637 Glen Street was repaired, the service saddle was replaced.

On February 26, 2010 the water service to the St John Lutheran Cemetery was turned off, they forgot to turn off their underground valve and froze their pipes, which let go when it turned warm that day.

On March 5, 2010 the water service was turned off and on to allow a contractor to repair the service line to 649 Stafford Street.

The water main valves and fire hydrants were inspected and exercised in April.

Flow Metrix verified the HACH Kit calibration on June 1, both kits are fine.

On June 8, 2010 fire hydrant #39 was repaired.

In September and October, the water main valves were exercised, water mains flushed and fire hydrants inspected and exercised

On December 10, 2010 the water main feed from the City at the Karen Street connection was closed. There is a leak in the main from the City to the meter which can't be repaired until next summer. There is no service disruption from this closure as the water is being fed from the Bruham Avenue main.

Three new residential services were turned on in 2010 and two residential services were disconnected.

Ministry of the Environment

Laurentian Valley Water Works was audited by the MOE on November 16, 2009, the results of that Audit were received on March 6, 2010. The water works exchanged correspondence with the MOE in regards to the 2009 Audit Inspection in April and May. An Application for Request for Regulatory Relief From Lead Sampling Requirements in Schedule 15.1 of Regulation 170/03, was also submitted to the MOE in March 2010. Seven months later, In early November, the MOE issued an Amended Certificate of Approval with regards to lead sampling. After some emails, this C of A was amended yet again on November 22.

The MOE delivered the 2010-2011 Inspection Report on November 18, 2010 from the audit which was conducted on August 24, 2010. The Ministry is still of the opinion that Laurentian Valley Water Works is not in compliance with Schedule 15.1 of O.Reg. 170/03 (lead sampling). *(The water works has agreed not to appeal the Amended C of A and take the specified samples for the next two years, because it would be less costly than an appeal.)*

Accreditation & Licensing

The Municipality has completed the Drinking Water Quality Management System, which was endorsed by Council on April 7, 2009. The DWQMS Application was submitted to the CGSB on October 30, 2009 and the Drinking Water License Application was submitted to the MOE on December 15th, 2009.

In the first quarter of 2010 the Municipality received correspondence from The Ministry of Environments Agent for the auditing of our Drinking Water Quality Management System explaining how they are behind in their work and the steps they are taking to resolve the backlog. On June 10, 2010 the Municipality received correspondence from the CGSB with regards to our application to the Accreditation for Operating Authorities program. They had some questions with regards to our Quality Management Program, a response to these questions was sent on July 19, 2010.

In the third quarter of 2010, the Municipality received more correspondence from The Ministry of Environments Agent for the auditing of our Drinking Water Quality Management System explaining how they are behind in their work and the steps they are taking to resolve the backlog. The Municipality has not had any correspondence with the CGSB since August, 2010

Summary

In 2010, the water works purchased 54,410,686 gallons of water from the City of Pembroke and distributed it to 625 homes and businesses. This was a five percent increase in water usage over the previous year. Out of 667 water samples taken, there were two reportable incidents of adverse water quality. There was a planned infrastructure renewal; \$ 289,702.06 to rehabilitate the Bruham Avenue water main. There were no unplanned, major expenditures and no water main breaks in 2010.

Claus Trost WQA

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 | -8.310 |
| 2002 | 9,671,790 | 10,794,534 | 18,639,816 | 16,868,052 | 55,974,192 | 5.849 |
| 2003 | 16,029,978 | 11,442,884 | 12,584,000 | 10,390,540 | 50,447,402 | -4.466 |
| 2004 | 10,825,780 | 13,887,440 | 15,103,060 | 12,084,070 | 51,900,350 | -1.541 |
| 2005 | 12,193,850 | 13,770,494 | 16,571,806 | 11,808,070 | 54,344,220 | 3.025 |
| 2006 | 10,725,906 | 12,470,040 | 14,573,900 | 11,572,310 | 49,342,156 | -6.806 |
| 2007 | 12,102,020 | 14,869,070 | 17,366,521 | 13,244,381 | 57,581,992 | 8.478 |
| 2008 | 11,422,781 | 12,488,412 | 15,781,786 | 13,085,730 | 52,778,709 | 0.149 |
| 2009 | 11,400,822 | 13,200,202 | 14,142,370 | 12,821,490 | 51,564,884 | -2.202 |
| 2010 | 11,422,415 | 15,108,830 | 15,838,621 | 12,040,820 | 54,410,686 | 3.144 |
| Average | 11,633,110 | 12,935,642 | 15,687,429 | 12,443,969 | 52,700,150 | |

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final: January 19, 2011

approved by Council: February ??, 2011

amended: