

**Drinking water system Report**

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| **TO:** | CAO, Council & Public Works Manager |
| **FROM:** | Brad Faught, Quality Management System Representative |
| **DATE:** | February 14, 2024 |
| **SUBJECT:** | 2023 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 February 8, 2021 the License & Permit were renewed. The Drinking Water System Information number for Laurentian Valley Water Works is W260007465. This is the 2023 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 throughout certain parts of Laurentian Valley. The City of Pembroke treats and tests the water at the Water Purification Plant located on Riverside Drive and tests the water in their distribution system. Laurentian Valley 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 and on the Municipal website. Information on the City Water Works can be accessed at [www.pembroke.ca](http://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 and** **Testing**

The weekly water samples were sent to Caduceon Laboratories Incorporated 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, 2023 - December 31, 2023**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter Tested | MAC,  IMAC or  Standard | # of  Samples | # of Adverse  Results | Normal  Range | Note # |
| E, Coli | Nil | 114 | 0 | Absent |  |
| Total Coliforms | Nil | 114 | 1 | < 1/100ml | 1 |
| Heterotrophic Plate Count | 500 CFU/ ml | 24 | 0 | <2 CFU/ml - 34 CFU/ml |  |
| Residual Chlorine | .05 mg/ml | 461 | 0 | 0.05 - 1.32 mg/l |  |
| Trihalomethanes | 0.10 mg/liter | 4 | 0 | .09175 mg/liter |  |
| Haloacetic Acid | 0.08 | 4 | 0 | .04855 mg/l |  |
| alkalinity - distribution |  | 4 | 0 | 38 - 53 mg/l |  |
| Lead - distribution | .01 mg/l | 2 | 0 | 0.00011 |  |
| pH – distribution |  | 4 | 0 | 6.57 - 7.35 |  |

Note # 1 – On February 22, 2023 a sample taken at Home Depot tested positive for Total Coliforms (3TC). We believe due to the location of the sample taken is the reason for the positive sample. Area was resampled and test showed 0 TC’s.

In 2023, the municipality paid Caduceon $5366.22 for laboratory services.

**Complaints**

There were two water quality complaints in 2023. The first complaint was a strong chlorine smell in the water, first thing in the morning. This could have been due to numerous residences utilizing water at the same time which would pull new treated water into the piping causing more chlorine than usual. The second complaint was an odour in the water. Chlorine residuals conducted and it was determined that the hot water tank was causing the issue.

**Staffing & Training**

Laurentian Valley Waterworks has 3 operators certified for Water Distribution 1. There is also one Operator-In-Training.

**Construction**

There was no construction undertaken in 2023.

**Maintenance**

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

There was 11 customer service events in 2023.

April 28, 2023 repaired two water saddles on Hamilton Street.

September 14th, 2023 new service installation to 1036 Pembroke Street East.

On October 31, 2023 there was an emergency valve and hydrant replacement on Hamilton Street that was leaking.

On December 2, 2023 there was a water main break on Willow Drive that was repaired.

In 2023 the Works department completed 230 locate requests, of which 99 identified water lines to be marked.

**Ministry of the Environment**

MECP inspector conducted our annual inspection in January of 2024 and we are awaiting results from that inspection.

**Drinking Water Quality Management System**

The External Audit was conducted on March 30, 2023. There were no Corrective Actions found. The internal audit was completed by Kendryck in December of 2023 and items that were found in the audit were rectified.

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

The Financial Plan and Asset Management Plan were submitted to the Ministry with the License renewal application, they are both current, although they will require updating to reflect the new contract with the City.

**Accreditation** **& Licensing**

The Water Works continues to be accredited with NSF, the current accreditation expires in June of 2024.

**Summary**

In 2023, there was one adverse sample due to where the sample was taken but when resampled the test passed. The water works purchased 44,751,013 gallons of water from the City of Pembroke. This was a 10% decrease in volume from the last 10 year average.

Respectfully Submitted

Township of Laurentian Valley

***“Original Signed”***

Brad Faught

Quality Management System Representative

**Ten year water consumption statistics**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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|  | |  | |  |  | |  | |  | |  |  | | |  |
|  | **1st Quarter** | | **2nd Quarter** | | | **3rd Quarter** | | **4th Quarter** | | **Total** | | | | **% Deviating from Average** | | |
|  |  | |  | | |  | |  | |  | | | |  | | |
| **2014** | **8,572,421** | | **10,951,915** | | | **13,112,594** | | **13,004,686** | | **45,643,630** | | | | **-8.475607805** | | |
| **2015** | **13,457,180** | | **16,916,645** | | | **16,032,685** | | **12,440,670** | | **58,849,195** | | | | **18.00412902** | | |
| **2016** | **11,976,910** | | **14,558,170** | | | **15,791,380** | | **12,040,490** | | **54,368,966** | | | | **9.020394904** | | |
| **2017** | **10,709,380** | | **11,996,820** | | | **12,318,240** | | **11,742,610** | | **46,769,067** | | | | **-6.218886826** | | |
| **2018** | **12,022,340** | | **13,355,100** | | | **14,025,550** | | **12,062,490** | | **51,467,498** | | | | **3.202384917** | | |
| **2019** | **11,904,640** | | **12,334,476** | | | **12,725,130** | | **10,507,288** | | **47,473,553** | | | | **-4.806254812** | | |
| **2020** | **10,806,026** | | **9,673,730** | | | **13,064,392** | | **11,786,940** | | **45,333,108** | | | | **-9.098265059** | | |
| **2021** | **12,271,468** | | **15,380,310** | | | **14,881,460** | | **13,855,050** | | **56,390,309** | | | | **13.07358238** | | |
| **2022** | **11,369,270** | | **12,939,300** | | | **12,195,370** | | **11,152,240** | | **47,658,202** | | | | **-4.435997506** | | |
| **2023** | **10,061,194** | | **10,676,996** | | | **12,491,270** | | **11,519,530** | | **44,751,013** | | | | **-10.26547921** | | |
| **10 year average** | **11,315,083** | | **12,878,346** | | | **13,663,807** | | **12,011,199** | | **49,870,454** | | | |  | | |

**Acronyms**

MECP – Minstry of Energy, Conservation and Parks

ODWS – Ontario Drinking Water Standards

MAC – Maximum Acceptable Concentration

IMAC – Interim Maximum Acceptable Concentration