



# **Village of Oil Springs**

## **Water Distribution**

**Annual Summary Report**

**2018**

This summary report has been prepared by **JACOBS** (formerly CH2M) for the Village of Oil Springs. The purpose of the report is to meet the requirements of the Safe Drinking Water Act, 2002 and Ontario Regulation 170/03, Schedule 22, which requires that a Summary Report be prepared each year no later than March 31<sup>st</sup> and given to the municipal council in the case of a drinking water system owned by a municipality. Schedule 22-2(1)

The report summarizes the water quality information for the Oil Springs Water Distribution System, Water Works number 60046761 for the period of **January 1, 2018 to December 31, 2018**. The Oil Springs Water Distribution System is categorized as a Large Municipal Residential Drinking Water System.

The annual MOECP inspection for the Oil Springs Distribution System was completed on June 28<sup>th</sup>, 2018  
The overall Inspection rating was 85.34%

### **Statement of compliance.**

The Oil Springs Water Distribution System is operated and maintained by **JACOBS** on behalf of the Village of Oil Springs. The water supplied to the consumers serviced by the system followed the requirements of the Safe Drinking Water Act all applicable regulations made in accordance with that Act, the Drinking Water Works Permit Number: 251-201 Issue Number: 2 and the Municipal Drinking Water License Number: 251-101 Issue Number: 2

### **Review of Distribution system**

JACOBS (formerly CH2M) assumed operations of Oil Springs distribution system Oct 6<sup>th</sup>/16

The Village of Oil Springs is the Owner of the distribution system with 280 services that directly supplies a population of approximately 704 residents. The Oil Springs water distribution system consists of a 50 mm to a 300 mm diameter water main.

The distribution system includes fire hydrants, blow offs at dead ends, main isolation valves and residential services (curb stops)

The Oil Springs system is connected to the Township of Enniskillen Water Distribution System. The water is purchased from & supplied by the Township of Enniskillen via two (2) meter chambers.

There are no chemicals added to system by the Village of Oil Springs. Immediately upstream of the system a 12% chlorine solution of sodium hypochlorite is used at the Enniskillen Water Reservoir which feeds the Oil Springs Distribution System. The Enniskillen reservoir has an on-line chlorine analyzer with alarm monitoring. A continuous monitoring chlorine analyzer is located at the municipal office in the basement. The chlorine residual information from the analyzer is stored on a designated computer and a paper copy back up is kept in a binder located at the Water Department. The analyzer is connected to a "RACO-Guard It" alarm dialer for emergency call out purposes.

The distribution system for The Village Oil Springs has qualified for a reduced Lead sampling schedule and is not required to perform Lead sampling until 2019.

As per O, Reg 170/03, Schedule 13-6.1 (1) - Starting in July 2017 Oil Springs now must sample for HAA's (Haloacetic Acids) each quarter.

Hydrants are flushed semi-annually, and the water main isolation valves are exercised annually to ensure operation during an emergency.

## Repairs & Maintenance

- Jan 22<sup>nd</sup> – installed new hosing on analyzer
- Mar 9<sup>th</sup> –installed new water meter on Oil Springs Line (Municipal boundary)
- May 4<sup>th</sup> –repairs to water service @ 4109 Oil Heritage Road (replaced “T” to service)
- May 7<sup>th</sup> – software upgrades, new computer and “plant viewer” program
- June 13<sup>th</sup> – Hach installed a pressure regulator on the chlorine analyzer
- June 20<sup>th</sup> – Hach installed a new main circuit board and colourimeter on analyzer
- July 23<sup>rd</sup> – repairs to water service on Cook Street
- July 26<sup>th</sup> – new battery back-up to the chlorine analyzer data computer
- Sept 4<sup>th</sup> – repairs to water service on Cook Street
- Hydrants were flushed during the months of May & Oct /2018
- Water Distribution valves were exercised during the month of November/2018 and all caps painted
- Replaced 5 residential water meters

## Health Samples

The health samples include tests for the presence of E-coli, Total coliforms and HPC (Heterotrophic Plate Count) Any presence of E-coli or Total coliforms would be considered adverse and must be reported. They are taken on a weekly basis at 2 locations within the Village of Oil Springs:

1. Oil Springs Municipal office
2. Oil Springs Community Hall

**Free chlorine samples are also analyzed at each site when collecting the health samples. Sample results less than 0.20 mg/L are of concern and results less than 0.05 mg/L are considered adverse and must be reported.**

Chlorine residuals collected during sampling ranged from 0.91 mg/L (Oct 15<sup>th</sup>) to 1.66 mg/L (July 3<sup>rd</sup>)

Health samples for HPC (Heterotrophic plate count) ranged from 0 cfu/mL to 10 cfu/mL

All THM (Trihalomethane) samples were collected from the dead-end hydrant # 38 located on Gypsie Flatt Rd: Jan 22<sup>nd</sup>, April 9<sup>th</sup>, July 23<sup>rd</sup>, Oct 15<sup>th</sup>

As per the MOECP HAA bulletin (dated May 9<sup>th</sup> /2018) “Haloacetic Acids Sampling Concerns” – more than one sampling location is needed to characterize the HAA levels throughout a municipal distribution system. HAA samples were collected on Jan 22<sup>nd</sup> at hydrant # 34, April 9<sup>th</sup> at hydrant # 34, July 23<sup>rd</sup> at the Municipal office, Oct 15<sup>th</sup> at hydrant # 38

## 2018 Water purchased from Enniskillen Township (m3)

| Month     | Oil Heritage Road | Oil Springs Line  | Monthly Total |
|-----------|-------------------|-------------------|---------------|
| January   | 1124              | 2584              | 3708          |
| February  | 1962              | 2127              | 4089          |
| March     | 1346              | 2037              | 3383          |
| April     | 1263              | 2513              | 3776          |
| May       | 1606              | 2254              | 3860          |
| June      | 2357              | 2552              | 4909          |
| July      | 1907              | 2924              | 4831          |
| August    | 976               | 3049              | 4025          |
| September | 967               | 2851              | 3818          |
| October   | 1199              | 2732              | 3931          |
| November  | 1506              | 2175              | 3681          |
| December  | 1360              | 1864              | 3224          |
| Total     |                   |                   |               |
|           |                   | 2018 Annual Total | 47235         |
|           |                   | Monthly Average   | 3936          |
|           |                   | Daily Average     | 129.4         |

The annual total amount purchased includes water sold to customers in the Oil Springs distribution system and other water uses including hydrant flushing, fire flows, new watermain construction, repairs to watermain etc...

**Previous Annual water (m3) purchased from Enniskillen**

| <b>Year</b> | <b>Amount Purchased (m3)</b> |
|-------------|------------------------------|
| <b>2017</b> | <b>46,167</b>                |
| <b>2016</b> | <b>50,751</b>                |
| <b>2015</b> | <b>50,959</b>                |
| <b>2014</b> | <b>49,823</b>                |
| <b>2013</b> | <b>49,230</b>                |
| <b>2012</b> | <b>48,657</b>                |
| <b>2011</b> | <b>60,678</b>                |
| <b>2010</b> | <b>63,392</b>                |
| <b>2009</b> | <b>55,811</b>                |
| <b>2008</b> | <b>56,480</b>                |

The water loss factor (%) for 2018 is 7.76 %

**Previous water loss factor**

| <b>Year</b> | <b>Factor (%)</b> |
|-------------|-------------------|
| <b>2017</b> | <b>5.27</b>       |
| <b>2016</b> | <b>7.58</b>       |
| <b>2015</b> | <b>6.64</b>       |
| <b>2014</b> | <b>8.61</b>       |
| <b>2013</b> | <b>3.91</b>       |
| <b>2012</b> | <b>2.06</b>       |
| <b>2011</b> | <b>17.01</b>      |
| <b>2010</b> | <b>8.21</b>       |
| <b>2009</b> | <b>8.81</b>       |
| <b>2008</b> | <b>6.63</b>       |

The agreement with the Township of Enniskillen provides for the supply of water for an ultimate population of 1200 in the Village of Oil Springs. The estimates of water consumption is based on a 66 imp. gallons/capita/day (0.3 m3/capita/day) for a population of 1200, the average daily consumption is 79,000 imp. gallons/day (359 m3/day) with an average flow rate of 55 imp. gpm (0.25 m3/min) Maximum daily flow rate of 138 imp gpm (0.63 m3/min) and a peak hourly flow rate of 206 imp gpm (0.94 m3/min)