

Wastewater Treatment and Collection System

Washago 2020 Annual Report

Table of Contents

| Executive Summary | 3 |
|--|------------|
| Introduction | 3 |
| Facility Technical Information | 3 |
| Performance Criteria | 5 |
| Monitoring and Treatment Protocol | 5 |
| Raw Sewage Monitoring | 6 |
| Sewage Flow Monitoring | 6 |
| Treatment and Sampling Protocol | 7 |
| Treatment / Discharge | 8 |
| Spring Discharge | 8 |
| Fall Discharge | 10 |
| Efforts and Results in Meeting Effluent Objectives of Co | ertificate |
| of Approval | 12 |
| 2020 Operating Year Summary | 12 |
| Conclusions and Recommendations | 13 |
| Appendix A | 14 |
| Certificate of Approval | |
| Appendix B | 18 |
| Municipality Monitoring Program Mechanical Plants Forms | |
| Appendix C | 50 |
| Sewage Pump Station Draw Down Tests | |
| Appendix D | 53 |
| | |

| Alum Dosing Formula | |
|-----------------------------|----|
| Appendix E | 55 |
| Lagoon Stage Storage Graphs | |
| Appendix F | 5 |
| Laboratory Analysis Reports | |

Executive Summary

Washago utilizes a dual-cell facultative lagoon system for sewage treatment. The effluent quality is monitored before, during and after treatment to verify compliance with the Ministry of the Environment, Conservation and Parks (MECP) Certificate of Approval (C of A). Only Cell No. 1 is equipped to discharge into the Green River. Cell No. 2 is used for the retention of incoming sewage while Cell No. 1 is for discharging. River samples are taken before and during discharge to monitor the effects of the discharge on water quality.

Cell No. 1 was discharged in the spring and the fall of 2020. The mean concentrations and total loadings of all parameters were below their respective C of A compliance limits.

There was no impact on the quality of the Green River due to the spring and fall discharges. The total volume of effluent discharged was 58,556 m³ - approximately 72% of the facility's operating capacity of 81,900 m3/year.

No bypass occurred during the 2020 operating year.

Introduction

Washago is situated approximately 20 km north of Orillia near the intersection of Highway No. 11 and County Road No. 169. The lagoon is located approximately 1.5 km north west of the village core. Treated effluent from the facility is discharged to the Green River.

Facility Technical Information

The lagoon is operated under C of A No. 3-1081-83-006. A copy of the C of A is enclosed in Appendix A.

The lagoon consists of two cells operated in series. Sewage is pumped from the main pumping station in Washago into Cell No. 2. Sewage then flows into Cell No. 1 through a valved transfer pipe located in the berm separating the cells.

Storage and treatment of raw sewage are provided in Cell No. 2 during the treatment of Cell No.1. Cell No. 1 discharges to the Green River via an outfall that

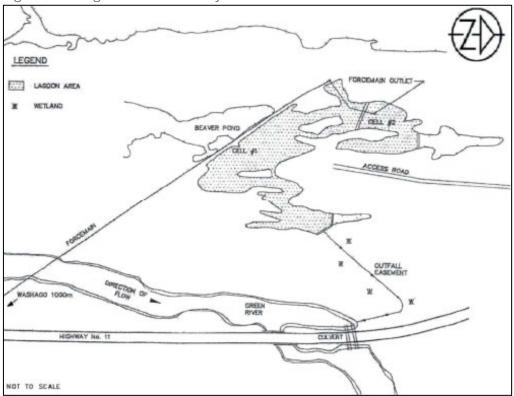
runs through the adjacent wetland. According to the C of A, the seasonal operating capacity of the facility is 40,950 m³ based on an average day flow of 227.5 m³/day over 180 days. A breakdown of the lagoon capacity is shown in Table 1.

Table 1: Lagoon Capacity

| | Dead | Active Storage | Active Storage | Total |
|------------|---------|----------------|----------------|---------|
| | Storage | below 0.6 m | including | Storage |
| | (m³) | Freeboard (m³) | Freeboard (m³) | (m³) |
| Cell No. 1 | 1,700 | 38,150 | 63,880 | 65,580 |
| Cell No. 2 | 55 | 6,195 | 12,745 | 12,800 |
| Total | 1755 | 44,345 | 76,625 | 78,380 |

The configuration of the lagoon and outfall easement are shown on Figure 1.

Figure 1: Sewage Treatment Facility Site Plan



Performance Criteria

The C of A objective and compliance limits for effluent quality and the waste loading limits are summarized in Table 2.

Table 2: Performance Criteria

| Parameter | Objective Limits | | Compliance Limits | |
|------------------|------------------|--------------|-------------------|--------------|
| | Concentration | Semi-Annual | Concentration | Semi-Annual |
| | (mg/L) | Loading (kg) | (mg/L) | Loading (kg) |
| BOD ₅ | 15 | 614 | 25 | 1,024 |
| TSS | 20 | 815 | 25 | 1,024 |
| Pt | 1 | 41 | 1 | 41 |

Monitoring and Treatment Protocol

Raw sewage samples were collected from Washago Sewage Pumping Station #1 on a monthly basis and analyzed for TSS, BOD₅, P_t and TKN. Results of the analysis are shown on the Municipality Monitoring Program Mechanical Plants forms enclosed in Appendix B and summarized in Table 3.

Raw Sewage Monitoring

Table 3: Raw Sewage Monitoring Results

| Date | TSS | BOD ₅ | Pt | TKN |
|--------------------|--------|------------------|------|--------|
| | (mg/L) | (mg/L) | | (mg/L) |
| January 8, 2020 | 97 | 230 | 4.78 | 58.9 |
| February 12, 2020 | 132 | 264 | 4.30 | 44.7 |
| March 5, 2020 | 142 | 181 | 3.51 | 35.9 |
| April 8, 2020 | 217 | 226 | 2.49 | 27.7 |
| May 6, 2020 | 103 | 135 | 3.69 | 42.4 |
| June 3, 2020 | 124 | 136 | 2.62 | 28.1 |
| July 7, 2020 | 177 | 210 | 4.95 | 45.4 |
| August 11, 2020 | 114 | 181 | 4.12 | 43.0 |
| September 9, 2020 | 114 | 66 | 2.85 | 35.6 |
| October 5, 2020 | 144 | 130 | 5.89 | 54.5 |
| November 11, 2020 | 64 | 159 | 2.24 | 25.0 |
| December 9, 2020 | 226 | 264 | 3.97 | 42.6 |
| Mean Concentration | 138 | 182 | 3.78 | 40.3 |

Sewage Flow Monitoring

The volume of sewage pumped from Washago Sewage Pumping Station #1 to the lagoon is estimated on a monthly basis by multiplying the elapsed run time of each pump in the station by the capacity of the pump. Draw down tests are completed by Township staff in the spring and the fall to confirm pump capacity. Draw down test calculations are enclosed in Appendix C. Raw sewage flows are shown on the Municipality Monitoring Program Mechanical Plants forms enclosed in Appendix B.

Based on the influent volumes reported in the Municipal Utility Monitoring Report, the total estimated volume of sewage transferred to the lagoon during the October 14, 2019 to April 3, 2020 winter operating season was 16, 388 m³. The total estimated volume of sewage transferred to the lagoon during the April 4, 2020 to November 9, 2020 summer operating season was 17,278 m³. The total volume of

sewage transferred to the lagoon during the winter and summer operating seasons was 33, 666 m³. Sewage flows are summarized in Table 4.

Table 4: Sewage Flow to Lagoon

| Winter Operating Sea | Winter Operating Season | | son |
|----------------------|-------------------------|---------------------|-------------|
| Date | Volume (m³) | Date | Volume (m³) |
| October 14-31, 2019 | 1,921 | April 4-30, 2020 | 3,186 |
| November 2019 | 2,792 | May 2020 | 1,798 |
| December 2019 | 1,741 | June 2020 | 4,507 |
| January 2020 | 2,773 | July 2020 | 1,374 |
| February 2020 | 1,650 | August 2020 | 1,360 |
| March 2020 | 5,157 | September 2020 | 2,292 |
| April 1-3, 2020 | 354 | October 2020 | 2,140 |
| | | November 1-9, 2020 | 621 |
| Sub-Total | Sub-Total | 17,278 | |
| Total Volume - Summe | r and Winter Ope | erating Season (m³) | 33,666 |

Treatment and Sampling Protocol

Final treatment of the sewage begins by isolating Cell No. 1 for a period of approximately 30 days. depending on operational constraints. During this period, all sewage received at the lagoon is retained in Cell No. 2. To ensure adequate storage volume in Cell No. 2 during the treatment period, the operator transfers as much of the volume of Cell No. 2 to Cell No. 1 by pump.

During the treatment period, composite samples are collected to determine the quality of the effluent. If the effluent quality is below the C of A compliance limits, the cell is discharged without further treatment. If treatment is required, it is accomplished by batch chemical treatment with liquid aluminum sulphate (alum). Alum is added to the lagoon contents to initiate precipitation of the suspended matter. Although the treatment is essentially to reduce P_t levels, a significant reduction of BOD $_5$ and TSS is also achieved. The volume of alum required to treat

the cell is calculated based on jar test results to determine the optimum alum concentration and the estimated gross volume of liquid in the cell. The formulae for calculating the required volume of alum are presented in Appendix D. The stage-storage curves used to estimate the gross volume of liquid in the cells are presented in Appendix E. The addition of liquid alum is carried out using the procedure outlined and recommended by the MECP in a technical report issued January 16, 1974.

Pre and post-treatment samples are obtained from representative locations in Cell No. 1 and analyzed for BOD₅, P_t, TSS, pH, TA, TKN and Alkalinity. Discharge samples are collected from the downstream end of the Cell No. 1 discharge pipe and analyzed for the same parameters.

Grab samples are obtained from the Green River, upstream and downstream of the lagoon discharge point to monitor impacts of the discharge on the river. Samples are analyzed for BOD5, Pt, TSS, pH, TA, TKN and Alkalinity.

Laboratory analysis reports for effluent and river samples are enclosed in Appendix F.

Treatment / Discharge

Spring Discharge

Three pre-discharge samples were taken from Cell No.1 for the spring discharge and three more during discharge to confirm effluent quality. The concentrations of P_t, TSS and BOD₅ reported in the pre-discharge samples were below the compliance limit. Based on the results of the pre-discharge samples, the discharge of Cell No. 1 commenced without batch chemical treatment. Results of the analysis are outlined in Table 5.

Table 5: Pre-Discharge Sampling – Spring Discharge

| | Date | TSS | BOD ₅ | Pt | TA |
|-------------------|----------------|--------|------------------|--------|--------|
| | | (mg/L) | (mg/L) | (mg/L) | (mg/L) |
| Sample 1 | April 9, 2020 | 12 | 15 | 0.17 | 14.6 |
| Sample 2 | April 16, 2020 | 16 | 18 | 0.09 | 3.8 |
| Sample 3 | April 21, 2020 | 19 | 17 | 0.05 | 2.9 |
| C of A Objective | | 20 | 15 | 1 | N/A |
| C of A Compliance | | 25 | 25 | 1 | N/A |

The spring discharge commenced on May 13, 2020. The total volume of effluent discharged was 23, 666 m³ at a mean discharge rate of 1,127 m3/day. During the discharge, the mean concentrations of TSS, BOD_5 and P_t were below compliance limits. A summary of the effluent quality and waste loadings is illustrated in Table 6.

Table 6: Effluent Discharge Summary – Spring Discharge

| | Date | TSS | BOD ₅ | Pt | TA |
|------------------------|--------------|--------|------------------|--------|--------|
| | | (mg/L) | (mg/L) | (mg/L) | (mg/L) |
| Start Discharge | May 13, 2020 | 3 | <4 | 0.11 | 2.9 |
| Mid Discharge | May 19, 2020 | 3 | <4 | 0.16 | 2.9 |
| End Discharge | June 2, 2020 | 5 | <4 | 0.35 | 3.0 |
| Mean Concentration | | 3.7 | <4 | 0.21 | 2.9 |
| C of A Objective | | 20 | 15 | 1 | N/A |
| C of A Compliance | | 25 | 25 | 1 | N/A |
| Effluent Waste loading | | 88 | 95 | 4.97 | 69 |

Samples were obtained from the Green River, upstream and downstream of the lagoon discharge point, at the start, middle and end of the discharge. Results of the analysis are illustrated in Table 7. Analysis of the receiving stream samples showed no impact on the Green River due to the discharge of Cell No.1.

Table 7: Green River Monitoring – Spring Discharge

| | Date | TSS | BOD ₅ | Pt | TA |
|-----------------|--------------|--------|------------------|--------|--------|
| | | (mg/L) | (mg/L) | (mg/L) | (mg/L) |
| Start Discharge | May 13, 2020 | | | | |
| Upstream | | 2 | <4 | <0.03 | <0.1 |
| Downstream | | 2 | <4 | <0.03 | <0.1 |
| Mid Discharge | May 19, 2020 | | | | |
| Upstream | | <2 | <4 | <0.03 | <0.1 |
| Downstream | | 2 | <4 | <0.03 | <0.1 |
| End Discharge | June 2, 2020 | | | | |
| Upstream | | <2 | 7 | 0.03 | <0.1 |
| Downstream | | <2 | <4 | <0.03 | <0.1 |

Fall Discharge

Three pre-discharge samples were taken from Cell No. 1 to confirm effluent quality prior to the fall discharge. All parameters were below the C of A compliance limits. Based on these results, the discharge of Cell No. 1 commenced without batch chemical treatment. Results of the analysis are illustrated in Table 8.

Table 8: Pre-Discharge Sampling – Fall Discharge

| | Date | TSS (mg/L) | BOD ₅ (mg/L) | P _t (mg/L) | TA (mg/L) |
|-------------------|--------------|---------------|----------------------------|--------------------------|--------------|
| Sample 1 | Nov 16, 2020 | <2 | 5 | 0.20 | 4.8 |
| Sample 2 | Nov 24, 2020 | 2 | 4 | 0.21 | 5.0 |
| Sample 3 | Nov 30, 2020 | 5 | 4 | 0.19 | 5.3 |
| C of A Objective | | 20 | 15 | 1 | N/A |
| C of A Compliance | | 25 | 25 | 1 | N/A |

The discharge of Cell No. 1 commenced December 14, 2020. The total volume of effluent discharged was 34,890 m³ at a mean discharge rate of 5,815 m³/day. During the discharge, the mean concentrations of TSS, BOD_5 and P_t were below compliance limits. A summary of the effluent quality and waste loadings is illustrated in Table 9.

Table 9: Effluent Discharge Summary – Fall Discharge

| | Date | TSS | BOD ₅ | Pt | TA |
|------------------------|--------------|--------|------------------|--------|--------|
| | | (mg/L) | (mg/L) | (mg/L) | (mg/L) |
| Start Discharge | Dec 14, 2020 | <2 | <4 | 0.17 | 4.5 |
| Mid Discharge | Dec 17, 2020 | 3 | 4 | 0.21 | 6.2 |
| End Discharge | Dec 21, 2020 | 10 | 10 | 0.35 | 13.6 |
| Mean Concentration | | 5.0 | 6.0 | 0.24 | 8.1 |
| C of A Objective | | 20 | 15 | 1 | N/A |
| C of A Compliance | | 25 | 25 | 1 | N/A |
| Effluent Waste loading | | 175 | 209 | 8.4 | 283 |

Samples were obtained from the Green River, upstream and downstream of the lagoon discharge point, at the start, middle and end of the discharge. Analysis of the receiving stream samples showed no impact on the Green River due to the discharge of Cell No. 1. Results of the analysis are illustrated in Table 10.

Table 10: Green River Monitoring - Fall Discharge

| | Date | TSS | BOD ₅ | Pt | TA |
|-----------------|--------------|--------|------------------|--------|--------|
| | | (mg/L) | (mg/L) | (mg/L) | (mg/L) |
| Start Discharge | Dec 14, 2020 | | | | |
| Upstream | | <2 | <4 | <0.03 | <0.01 |
| Downstream | | <2 | <4 | <0.03 | <0.01 |
| Mid Discharge | Dec 17, 2020 | | | | |
| Upstream | | <2 | <4 | <0.03 | <0.01 |
| Downstream | | 10 | <4 | <0.03 | <0.01 |
| End Discharge | Dec 21, 2020 | | | | |
| Upstream | | 2 | <4 | <0.03 | <0.01 |
| Downstream | | <2 | <4 | <0.03 | <0.01 |

Efforts and Results in Meeting Effluent Objectives of Certificate of Approval

The lagoon is operated and maintained such that all effluent quality objectives are strived for. Objectives and limits are based on an average.

The BOD objective on the pre-discharge sampling on the spring discharge exceeded the objective of 15 mg/L. The average BOD for the spring discharge was 16.7mg/L.

2020 Operating Year Summary

The volumes of influent received, and effluent discharged from the lagoon during the 2020 operating year are summarized in Table 11. The total volume of sewage received plus the net precipitation during the 2020 operating year was 58,556 m³. A total effluent volume of 58,556 m³ was discharged from the lagoon.

Table 11: Influent and Discharge Volume Summary

| Total Influent Volume Sewage | 33,666 m³ |
|------------------------------|-----------------------|
| Total Effluent Discharged | 58,556 m ³ |
| Approx. Precipitation Volume | 24,890 m³ |

The waste loadings during the 2020 operating year are summarized in Table 12.

Table 12: Waste Loading Summary

| | Spring 2020 (kg) | Fall 2020 (kg) | Total Loading (kg) |
|------|------------------|----------------|--------------------|
| TSS | 88 | 175 | 263 |
| BOD5 | 95 | 209 | 304 |
| Pt | 4.97 | 8.4 | 13.37 |
| TA | 69 | 283 | 352 |

Conclusions and Recommendations

The performance of the Washago Sewage Treatment Works during the 2020 operating year satisfied all requirements of the Certificate of Approval. To ensure that the seasonal operating capacity of the lagoon is not exceeded, the spring and fall discharges should continue to be scheduled as early in the spring and as late in the fall as practical to reduce the length of the winter operating season, when the volume of precipitation accumulation is the greatest and the rate of evaporation is the lowest.

Appendix A

Certificate of Approval

| Certi | ate | No. | | | | ٠ | | 3 | - | 1 | Ò | 8 | 1 | - | 8 | 3 | }- | 0 | 0 | é | |
|-------|-----|-----|--|--|--|---|--|---|---|---|---|---|---|---|---|---|----|---|---|---|--|
| | | | | | | | | | | | | | | | | | | | | | |



Certificate of Approval (Sewage)

| Whereas | TOWNSHIP | 0F | ORILLIA | | |
|---------|--------------|----|---------|------|------|
| | | | | | |

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of:the construction of a 4.77 ha two celled seasonal discharge waste stabilization pond to be located approximately 1700 m north and northwest of Hamilton Street -Washago (Part of Lots 10 and 11, Concession XV, Township of Orillia) in a natural rock basin and including an influent structure; four (4) berms; interconnecting piping; and outfall structure and all necessary appurtenances (Total effective storage volume at 1.5 m effective liquid depth = $47,800 \text{ m}^3$; BOD loading rate = 8.11 kg/ha/d) with effluent discharge via an existing natural drainage coarse to the Severn River,

all in accordance with the final plans prepared by Reid and Associates Limited, Consulting Engineers, at a total estimated cost, including land charges, engineering and contingencies, of ONE HUNDRED THOUSAND DOLLARS (\$100,000.00), subject to the following special terms and conditions which are considered necessary by the undersigned.

- SPECIAL TERMS AND CONDITIONS The Township will notify homeowners along the Severn River, in the area immediately east of the Highway No. 11 bridge, prior to the discharge of the waste stabilization pond effluent.
- (2) TYPE OF SAMPLE

Grab Sample

a) The waste stabilization pond shall be operated in such a manner and with such facilities as to maintain the following objectives in terms of effluent concentrations and waste loadings:

| Effluent Parameter | Effluent Concentration | Effluent Waste Loading |
|-----------------------|---------------------------|---------------------------|
| B005 | 15 mg/L | 614 kg |
| Suspended Solids | 20 mg/L | 815 kg |
| Total Phosphorus | 1.0 mg/L | 41 kg |

Now therefore this is to certify that after due enquiry the said proposed works have been approved under Section 24 of the Ontario Water Resources Act.

1983 DATED AT TORONTO this day of November

Attn:-Mr. J.B. Mather, Clerk, Twp. of Orillia cc:-Mr. G. Mierzynski, MOE C, Reg. Dir.

-Reid and Associates Limited -Mr. W.A.S. Marshall, Project Supervisor

-Mr. J. Toth, Value Engineering

Ontario

Certificate of Approval (Sewage)

Whereas

of

- 2 -

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of:— Special Terms and Conditions Cont'd.

b) Non-compliance is deemed to occur when any of the following effluent concentrations and/or waste loadings is exceeded based on the analytical results of the sampling programme described in paragraph 2c).

| Effluent Parameter | Effluent Concentration | Effluent n Waste Loading |
|-----------------------|---------------------------|-----------------------------|
| B0D5 | 25 mg/L | 1024 kg |
| Suspended Solids | 25 mg/L | 1024 kg |
| Total Phosphorus | 1 mg/L | 41 kg |

NOTE:

The foregoing effluent waste loading objectives and effluent waste loading non-compliance values are based upon an average daily inflow to the waste stabilization pond of 227.5 $\rm m^3/d$ over 180 days and represent the total load discharged to the receiving stream over the discharge period.

c) The minimum sampling programme to be followed in assessing noncompliance of the BOD5, Suspended Solids and Total Phosphorus effluent parameters is as follows:

The waste stabilization pond must be sampled after treatment prior to discharge for checking compliance against the critical parameter (i.e. Total Phosphorus) as noted in Condition 2b).

The waste stabilization pond must be sampled for the effluent parameters noted in Condition 2a) once during discharge and on the final day of discharge.

d) Non-compliance with respect to effluent concentrations is considered to occur when the arithmetic mean of either BOD₅, SS or phosphorus concentration of samples collected during the discharge period exceeds the corresponding value as stated in Condition 2b above.

Now therefore this is to certify that after due enquiry the said proposed works have been approved under Section 24 of the Ontario Water Resources Act.

DATED AT TORONTO this

18th

day of

November

19 83

Director

Certificate of Approval (Sewage)

Whereas

- 3 -

0

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of:-

Special Terms and Conditions Cont'd.

e) Non-compliance with respect to effluent waste loadings is considered to occur when the arithmetic mean of either BOD5, suspended solids or phosphorus concentration of samples collected during the discharge period incorporated with the total flow over the discharge period exceeds the corresponding value as stated in Condition 2b above.

NOTE

The total flow referred to above shall be the total flow registered by the magnetic flow meter at the Main Sewage Pumping Station between the end of one discharge period and the end of the next discharge period.

- f) Procedures related to the sampling programme shall be in accordance with the attached Appendix A.
- (3) A routine sampling and analysis programme shall be implemented and maintained in accordance with the following:

SAMPLE LOCATIONS

- Raw Sewage (Main Sewage Pumping Station Wet Well)
- Final Effluent (Waste Stabilization Pond)

ANALYSIS SAMPLING PARAMETERS

- BOD5
- Suspended Solids
- Total Phosphorus
- Ammonia plus ammonia nitrogen (effluent stream only)

SAMPLING FREQUENCY

Raw Sewage - minimum one (1) grab sample per month Final Effluent - as per Condition 2c above.

Now therefore this is to certify that after due enquiry the said proposed works have been approved under Section 24 of the Ontario Water Resources Act.

DATED AT TORONTO this

18th

day of

November

1983

/an

Director

MOE 0731 9/81

Appendix B Municipality Monitoring Program Mechanical Plants Forms



Ministry of

Municipal Utility Monitoring Program (MUMP) Lagoons

| Project Na | ame | | | | |
|------------|-----------------------------------|---------------------------------------|---------------------|-----------------|--|
| - | o Lagoon | | | | |
| Mailing Ac | | | | | |
| Unit No. | | et Name | | | PO Box |
| | 1024 Hur | lwood Lane | | | 159 |
| Municipali | lity/City/Town | | | Province | Postal Code |
| Orillia | , | | | ON | L3V 6J3 |
| | g Authority | | | | 23 1 003 |
| | poration of the Township of S | Severn | | | |
| Mailing Ac | | | | | |
| Jnit No. | | et Name | | | PO Box |
| | 1024 Hur | lwood Lane | | | 159 |
| Municipali | lity/City/Town | | | Province | Postal Code |
| Orillia | | | | ON | L3V 6J3 |
| | | | Data Period | | |
| File No. | Works Number | er | Month Year | Days Discharg | le Type Update Code |
| 4 6 | 1 2 0 0 0 2 | 2 7 3 | 0 1 20 | 3 1 2 | R |
| | | | | | |
| 1 2 | 3 | 11 | 16 19 | 20 21 22 | 80 |
| C.P. | | | | | |
| 3 5 | FLOWS | | Parameter Code De | ec Monthly Resu | ılts |
| 12 13 | Total Flow | (10 ³ m ³) 5 | 0 0 1 0 3 | 2 | . 7 7 3 |
| | Average Daily Flow | (10 ³ m ³ /d) 5 | 0 0 1 5 | 0 | . 0 9 0 |
| | Maximum Daily Flow | (10 ³ m ³ /d) 5 | 0 0 2 0 3 | N A | .] |
| | 7 000 | 30 | 34 35 | 38 | 46 |
| 3 5 | BYPASS | | | | No. of Occurrence |
| 12 13 | Plant Bypass Volume | (10 ³ m ³) 5 | 0 2 7 0 3 | | |
| | Duration | (hrs) 8 | 1 6 8 0 1 | | |
| 3 6 | RAW SEWAGE | 30 | 34 35 | 5 38 | No. of Sample |
| 12 13 | BOD ₅ | (mg/L) 0 | 0 0 0 1 0 | 2 3 0 | |
| | Suspended Solids | (mg/L) 0 | 0 0 0 6 0 | | 1 |
| | TKN | (mg/L) 0 | 0 0 2 0 2 | | . 9 1 |
| | Total Phosphorus | (mg/L) 0 | 0 0 3 3 1 | | |
| | Total Phosphorus | (HIg/L) 0 1 30 | 34 35 | | <u>. 8</u> <u>1 48</u> <u>9</u> |
| 3 9 | FINAL EFFLUENT | 00 | 04 00 | | 40 |
| | Total Effl. Volume To Watercourse | (10^3m^3) 5 | 0 2 8 0 3 | | |
| | Flow Duration | (hrs) 8 | 1 6 8 0 1 | | . |
| | Cell Depth | | 0 2 9 0 1 | | . |
| | BOD ₅ | (mg/L) 0 | 0 0 0 1 1 | | |
| | Suspended Solids | (mg/L) 0 | 0 0 0 6 1 | | . |
| | Ammonia + Ammonium | (mg/L) 0 | 0 0 1 9 2 | | |
| | TKN | (mg/L) 0 | 0 0 2 0 2 | | |
| | Total Phosphorous | (mg/L) 0 | 0 0 3 3 2 | | |
| | <u> </u> | 30 | 34 35 | | 48 |
| 0 9 | DISINFECTION | | | <u> </u> | |
| 12 13 | Chlorine Used | (kg as Cl ₂) 5 | 0 3 2 0 1 | | |
| | Chlorine Dosage (m | g/L as Cl ₂) 8 | 0 4 1 0 1 | | · |
| | Chlorine Residual (m | g/L as Cl ₂) 8 | 0 4 2 0 1 | | |
| | (Representative of Final Disch | | 34 35 | 38 | 48 |
| | Telephone Number | Email Addre | | | |
| 705-325- | | utilities@to | ownshipofsevern.com | | |
| Comment | ts | | | | |
| | | | | | |
| | | | | | |

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at <u>WasteWaterReporting@Ontario.ca</u> AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

S1



Municipal Utility Monitoring Program (MUMP) **S2** Lagoons

| Project Na | | | | | | | | | | | | | | | | | | | | |
|-------------|-----------------------|------------|-------|----------|-------|----------|-------|-----------|----------------|-----|--------|------|----------|----------------|---------------|------|--------------|--|--|-----|
| Washago | | | | | | | | | | | | | | | | | | | | |
| Mailing Ad | | | | | | | | | | | | | | | i | | | | | |
| Unit No. | Street No. | Street N | | | | | | | | | | | | | | PO E | | | | |
| | 1024 | Hurlwo | od La | ne | | | | | | | | | | | | 159 | | | | |
| | y/City/Town | | | | | | | | Provir | nce | | | | | | | tal Cod | le | | |
| Orillia | | | | | | | | | ON | | | | | | | L3V | / 6J3 | | | |
| Operating . | | | | | | | | | | | | | | | | | | | | |
| | oration of the Townsh | ip of Seve | rn | | | | | | | | | | | | | | | | | |
| Mailing Ad | | 1 | | | | | | | | | | | | | ı | | _ | | | |
| Unit No. | Street No. | Street N | | | | | | | | | | | | | | PO E | | | | |
| | 1024 | Hurlwo | od La | ne | | | | | Τ | | | | | | | 159 | | | | |
| | y/City/Town | | | | | | | | Provir | nce | | | | | | | tal Cod | le | | |
| Orillia | | | | | | | | | ON | | | | | | | L3V | / 6J3 | | | |
| File No. | Morks | Number | | | | Data | Perio | od | D | ays | | Г | Dischar | ao Ty | vno | | | Lind | ate Co | odo |
| FIIE NO. | VVOIKS | INUITIDEI | | | M | lonth | Υ | ear / | D | iys | | | Jiscilai | ge i | ype | | | Opua | 11 0 00 | Jue |
| 4 6 | 1 2 0 0 | 0 2 2 | 2 7 | 3 | 0 | 1 | | 20 | 3 | 1 | | | | 2 | | | | | R | |
| 1 2 | 3 | * - · | | 11 | 16 | | | 19 | 20 | 21 | | | | 2 | _ | | | L | 80 | _ |
| | | | | | 10 | | | 10 | 20 | | | | - | _ | | | | | 00 | |
| C.P. | RAW SEWAGE | 11.7 | | | | 0 1 | | | | | | | | | | | | | | |
| 3 6 | Parameter | Unit | | Para | meter | Code | | Dec | Monthly Averaç | | | | | verage Results | | | | D. Of S | Sample | es |
| 12 13 | | | | | | | | | | | | | | | | | <u> </u> | <u> </u> | | |
| | | | | | | | | | | | | | | | | | | <u> </u> | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | • | 30 | | | | 34 | 35 | 38 | | | | • | | | | | | | |
| 3 9 | FINAL EFFLUENT | | | | | | | | | | | | | | | | | | | |
| 12 13 | Parameter | Unit | | Para | meter | Code | | Dec | | Mor | thly A | Vera | age Res | sults | | | N | o of S | Sample | es |
| | Unionized Ammon | mg/L | | 1 | | | | | | 1 | I | | | T | | | | | , cp. | |
| | Alkalinity | mg/L | | | | | | | | | | | +- | | | | - | - | | |
| | pH | mg/L | + | | | | | \vdash | | | + | | - • | 1 | ++ | | - | | | |
| | hii | | | | | | | \vdash | | | | | - | 1 | + | | - | \vdash | \vdash | |
| | | | - | | | | | \vdash | | | 1 | | | 1 | ++ | _ | | ├─ | | |
| | | _ | + | | | \vdash | | \vdash | - | _ | + | | | 1 | + | _ | - | \vdash | | |
| | | | | | | | | \vdash | | | + | | - | 1 | | _ | - | | | |
| | | | _ | | | | | \vdash | | _ | - | _ | - | 1 | + | _ | <u> </u> | ₩ | <u> </u> | |
| | | | _ | | | | | \vdash | | | - | | - | - | | _ | <u> </u> | | <u> </u> | |
| | | | | | | | | \vdash | | | | | | - | $\sqcup \bot$ | | | <u> </u> | <u> </u> | |
| | | | | | | | | \square | | | | | | 1 | | | <u> </u> | <u> </u> | <u> </u> | |
| | | | | | | | | | | | | | | | | | | <u> </u> | <u> </u> | |
| | | | 30 | | | | 34 | 35 | 38 | | | | | | | | | | | |
| | elephone Number | | | il Addre | | | | | | | | | | | | | | | | |
| 705-325-2 | | | utili | ties@t | owns | hipofs | evern | .com | | | | | | | | | | | | |
| Comments | ; | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

2063 (2011/03) Page 2 of 2



Municipal Utility Monitoring Program (MUMP) S Lagoons

S1

| Project Na | ıme | | | | | | | | | | | | | | | | | | |
|-------------|------------------|------------|--------------------------|------------------------------------|-------|--|-----------|-----|------------|--------|--|----------|--|--------|---|--------|-------|----------|----------|
| Washago | Lagoon | | | | | | | | | | | | | | | | | | |
| Mailing Ad | Idress | | | | | | | | | | | | | | | | | | |
| Unit No. | Stree | et No. | Street Na | ame | | | | | | | | | | | | РО Во | ıχ | | |
| | 1024 | 4 | Hurlwo | od Lane | | | | | | | | | | | | 159 | | | |
| Municipalit | ty/City/Town | | • | | | | | | Provi | nce | | | | | | Postal | Code | | |
| Orillia | | | | | | | | | ON | | | | | | | L3V | 6J3 | | |
| Operating | Authority | | | | | | | | | | | | | | | | | | |
| | oration of tl | ne Towns | ship of Seve | rn | | | | | | | | | | | | | | | |
| Mailing Ad | | | | | | | | | | | | | | | | | | | |
| Unit No. | Stree | et No. | Street Na | ame | | | | | | | | | | | | РО Во | ıχ | | |
| | 1024 | 4 | Hurlwo | od Lane | | | | | | | | | | | | 159 | | | |
| Municipalit | ty/City/Town | | • | | | | | | Provi | nce | | | | | | Postal | Code | | |
| Orillia | | | | | | | | | ON | | | | | | | L3V | 6J3 | | |
| | | | | | | Data | a Period | | | | | | | | • | 1 | | | |
| File No. | | Work | s Number | | | Month | Yea | r | D | ays | | Dis | char | је Тур | е | | U | Jpdate (| Code |
| | | | | T_T_ | | | + | | | | L | | | | | J | | T_ | |
| 4 6 | 1 2 | 0 0 | 0 2 2 | 2 7 3 | (| 0 2 | 20 | | 2 | 9 | | | 2 | | | | | R | |
| 1 2 | 3 | | | 11 | 1 | 16 | | 19 | 20 | 21 | | | 22 | 2 | | | | 80 | |
| C.P. | 1 | | | | | | | | | | | | | | | | | | |
| 3 5 | FLOWS | | | | Parai | meter Co | ode | Dec | | | М | onthly | Resu | ılts | | | | | |
| 12 13 | Total Flow | | (1 | 0 ³ m ³) 5 | 0 | 1 . 1 | 1 0 | 3 | - | | | | 1 | . 6 | 5 | 0 | | | |
| | Average Dai | ly Flow | | ³ m ³ /d) 5 | 0 | <u> </u> | 1 5 | 3 | - | | | | 0 | . 0 | | 0 | | | |
| | Maximum Da | - | • | 3 m ³ /d) 5 | 0 | | 2 0 | 3 | + - | - | | N | A | - 0 | - | +0 | | | |
| | Maximum D | ally Flow | (10 | 30 | U | 0 | 34 | 35 |] <u> </u> | R | | IN | A | • | | 46 | | | |
| 3 5 | BYPASS | | | 00 | | | 0. | 00 | ŭ | | | | | | | | No. c | of Occu | rrences |
| 12 13 | Plant Bypas | s Volume | (| 10 ³ m ³) 5 | 0 | 2 | 7 0 | 3 | ΙΓ | | | | | _ [| | | | | |
| | Duration | | ` | (hrs) 8 | 1 | | 8 0 | 1 | - | | | | | - | | | | | <u> </u> |
| | 24.4 | | | 30 | | | 34 | 35 | 」 | 8 | | | l l | | | | 48 | | 51 |
| 3 6 | RAW SEW | AGE | | | | | | | | | | | | | | | No | . of Sar | nples |
| 12 13 | BOD ₅ | | | (mg/L) 0 | 0 | 0 | 0 1 | 0 | | | 2 | 2 6 | 4 | | | | 1 | | |
| | Suspended | Solids | | (mg/L) 0 | 0 | 0 | 0 6 | 0 | | | 1 | 1 3 | 2 | | | | 1 | | |
| | TKN | | | (mg/L) 0 | 0 | 0 | 2 0 | 2 | | | | 4 | 4 | _ 7 | | 1 | 1 | | |
| | Total Phosp | horus | | (mg/L) 0 | 0 | | 3 3 | 1 | - | | | <u> </u> | 4 | . 3 | | J | 1 | | |
| | _ | | | 30 | | | 34 | 35 | 3 | В | | | | - - | | | 48 | | 51 |
| 3 9 | FINAL EFF | LUENT | | | | | | | | | | | | | | | | | |
| | Total Effl. Volu | ıme To Wat | ercourse (| 10 ³ m ³) 5 | 0 | 2 | 8 0 | 3 | | | | | | | | | | | |
| | Flow Duration | n | | (hrs) 8 | 1 | 6 | 8 0 | 1 | | | | | | | | | | | |
| | Cell Depth | | | (m) 5 | 0 | 2 | 9 0 | 1 | | | | | | | | | | | |
| | BOD ₅ | | | (mg/L) 0 | 0 | | 0 1 | 1 | | | | | | | | | | | |
| | Suspended | Solids | | (mg/L) 0 | 0 | | 0 6 | 1 | 1 | | | | | | | | | | |
| | Ammonia + | | | (mg/L) 0 | 0 | | 1 9 | 2 | 1 | 1 | | 1 | † † | | | 1 | | | |
| | TKN | | | (mg/L) 0 | 0 | | 2 0 | 2 | 1 | | | | | | + | 1 | | | |
| | Total Phosp | horous | | (mg/L) 0 | 0 | | 3 3 | 2 | 1 | + | | + | + | - | + | 1 | | -+ | |
| | | | , | 30 | 1 5 | | 34 | 35 | 3 | B | I | | 11 | • | 1 | J | 48 | | 51 |
| 0 9 | DISINFEC | TION | | | | | | | | | | | | | | | | | |
| 12 13 | Chlorine Use | | (ka a | as Cl ₂) 5 | 0 | 3 | 2 0 | 1 | 1 [| | | | | . | | | | | |
| | Chlorine Dos | | (mg/L | · — | 0 | | 1 0 | 1 | 1 | \top | | | | | | | | | |
| | Chlorine Res | - | | as Cl ₂) 8 | 0 | | 2 0 | 1 | 1 | + | | - | \vdash | - | 1 | 1 | | | |
| | | | ۱۰۰۰) Final Discharge | -, | | | 34 | 35 | 38 | 3 | <u>i </u> | | <u>i </u> | - | 1 | J | 48 | | 51 |
| Operator T | Telephone Nu | | | Email Add | ress | | | | | | | | | | | | | | |
| 705-325- | | | | utilities@ | | shipofs | severn.co | om | | | | | | | | | | | |
| Comments | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at <u>WasteWaterReporting@Ontario.ca</u> AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)



Municipal Utility Monitoring Program (MUMP) **S2** Lagoons

| Project Na | | | | | | | | | | | | | | | | | | | | |
|------------|---|------------|-------|-----------|-------|----------------|--------------|----------|----------|-------|---------|-------|---------|-------|----------|-----|------------|----------|----------|----------|
| Washago | | | | | | | | | | | | | | | | | | | | |
| Mailing Ad | | 1 | | | | | | | | | | | | | 1 | | | | | |
| Unit No. | Street No. | Street N | | | | | | | | | | | | | | РО | | | | |
| | 1024 | Hurlwo | od La | ne | | | | | • | | | | | | | 159 | | | | |
| | ty/City/Town | | | | | | | | Provi | nce | | | | | | | tal Co | de | | |
| Orillia | | | | | | | | | ON | | | | | | | L3V | V 6J3 | | | |
| Operating | | | | | | | | | | | | | | | | | | | | |
| | oration of the Townsh | ip of Seve | rn | | | | | | | | | | | | | | | | | |
| Mailing Ad | | 1 | | | | | | | | | | | | | ı | | _ | | | |
| Unit No. | Street No. | Street N | | | | | | | | | | | | | | PO | | | | |
| | 1024 | Hurlwo | od La | ine | | | | | 1 = . | | | | | | | 159 | | | | |
| | ty/City/Town | | | | | | | | Provi | nce | | | | | | | tal Co | | | |
| Orillia | | | | | | | | | ON | | | | | | | L3\ | V 6J3 | | | |
| File No. | Morko | Number | | | | Data | Perio | od | D | 21.70 | | | Diachar | T | | | | Llnd | ate Co | , do |
| File No. | VVOIKS | Number | | | M | lonth | Y | ear / | Da | ays | | L | Dischar | ge i | ype | | L | Opa | ale Co | oue |
| 4 6 | 1 2 0 0 | 0 2 2 | 2 7 | 3 | 0 | 2 | | 20 | 2 | 9 | | | | 2 | | | | | R | |
| 1 2 | 3 | <u> </u> | | 11 | 16 | | | 19 | 20 | 21 | | | | 22 | J | | | L | 80 | |
| | | | | | 10 | | | 19 | 20 | 21 | | | 4 | | | | | | 00 | |
| C.P. | RAW SEWAGE B Parameter Unit Parameter Code Dec Monthly Average Results No. of Samples | | | | | | | | | | | | | | | | | | | |
| 3 6 | Parameter | Unit | | Para | meter | Code | | Dec | | Mor | thly / | Avera | age Re | sults | | | N | o. of \$ | Sampl | es |
| 12 13 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | 1 | | |
| | | | 30 | | 1 | | 34 | 35 | 38 | | 1 | | | | <u> </u> | | | | | l |
| 3 9 | FINAL EFFLUENT | • | | | | | | | | | | | | | | | | | | |
| 12 13 | Parameter | Unit | | Para | meter | Code | | Dec | | Mor | thly A | Avers | age Re | eulte | | | N | lo of | Sampl | 20 |
| 12 10 | Unionized Ammon | mg/L | | 1 ara | | Oode | | DCC | | TVIOI | Tilly / | WCIE | age ric | T | | | - 1 | T | Tampi | |
| | | | | | | | | | | | + | | | | | | | + | - | |
| | Alkalinity | mg/L | | | | | | \vdash | \vdash | _ | | | - | - | - | | - | +- | + | |
| | pH | | - | | | \vdash | | \vdash | \vdash | | 1 | | - | | \vdash | _ | \vdash | +- | + | \vdash |
| | | | | | | | | \vdash | \vdash | | - | | | - | | _ | \vdash | ₩ | ₩ | |
| | | | _ | | | | | \vdash | \vdash | | | | - | - | | _ | - | ₩ | ₩ | |
| | | | | | | | | | \vdash | | | | - | - | | | | ₩ | | |
| | | | | | | | | \vdash | \vdash | | - | | | | | | \vdash | ↓ | ₩ | |
| | | | | | | | | | | | | | | | | | | ↓ | <u> </u> | |
| | | | | | | | | | | | | | | | | | \vdash | ↓ | ↓ | |
| | | | | | | | | | | | | | | | | | | | <u> </u> | |
| | | | | | | | | | | | | | | | | | | | | |
| | | · | 30 | | | | 34 | 35 | 38 | | _ | _ | | | | | · <u> </u> | _ | | _ |
| Operator T | Telephone Number | | Ema | ail Addre | ss | | | | | | | | | | | | | | | |
| 705-325- | | | utili | ities@t | owns | <u>hipof</u> s | <u>evern</u> | .com | | | | | | | | | | | | |
| Comments | <u></u> | | | | | - | | | | | | | | | | | · <u></u> | | · | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at <u>WasteWaterReporting@Ontario.ca</u> AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

2063 (2011/03) Page 2 of 2



Municipal Utility Monitoring Program (MUMP) Lagoons

| | | = | | | |
|-----------------------------|--|----------------------|---------------|--|-------------------|
| Project Name | | | | | |
| Washago Lagoon | | | | | |
| /lailing Address | | | | <u>.</u> | |
| Jnit No. Street No. | Street Name | | | PO | Box |
| 1024 | Hurlwood Lane | | | 159 |) |
| /lunicipality/City/Town | | | Province | Pos | tal Code |
| Drillia | | | ON | L3V | V 6J3 |
| Operating Authority | | | | | |
| The Corporation of the Town | ship of Severn | | | | |
| Aailing Address | • | | | | |
| Jnit No. Street No. | Street Name | | | PO | |
| 1024 | Hurlwood Lane | | | 159 | |
| /Junicipality/City/Town | | | Province | | tal Code |
| <u> Drillia</u> | | | ON | L3V | V 6J3 |
| | | Data Period | _ | | |
| File No. Work | s Number | Month Year | Days | Discharge Type | Update Code |
| 4 6 1 2 0 0 | 0 2 2 7 3 | 0 3 20 | 3 1 | 2 | R |
| 1 2 3 | 11 | 16 19 | 20 21 | 22 | 80 |
| | 11 | 10 19 | 20 21 | 22 | 60 |
| C.P. | | | 1 - | | ٦ |
| 5 FLOWS | | Parameter Code Dec | 4 | Monthly Results | |
| 2 13 Total Flow | (10^3m^3) 5 | 0 0 1 0 3 | | 5 . 1 5 7 | |
| Average Daily Flow | $(10^3 \text{m}^3/\text{d})$ 5 | 0 0 1 5 3 | | 0 . 1 6 6 | |
| Maximum Daily Flow | $(10^3 \text{m}^3/\text{d})$ 5 | 0 0 2 0 3 | | N A . | |
| - DVDAGG | 30 | 34 35 | 38 | 46 | N |
| BYPASS | (402 2) 5 | | 1 | | No. of Occurrence |
| 12 13 Plant Bypass Volume | (10^3m^3) 5 | 0 2 7 0 3 | | 1 1 1 1 1 1 1 | |
| Duration | (hrs) 8 | 1 6 8 0 1 | | | |
| 3 6 RAW SEWAGE | 30 | 34 35 | 38 | | No. of Samples |
| 12 13 BOD ₅ | (mg/L) 0 | 0 0 0 1 0 | 1 | 1 8 1 . | 1 |
| Suspended Solids | (mg/L) 0 | 0 0 0 6 0 | 1 - 1 - 1 - 1 | 1 4 2 . | 1 |
| TKN | ` ` ' | 0 0 2 0 2 | 1 - 1 - 1 - 1 | 3 5 . 9 | |
| | (3 / | 0 0 2 0 2 | 1 | | 1 |
| Total Phosphorus | (mg/L) 0 | 34 35 | 38 | 3 . 5 | 48 5 |
| 9 FINAL EFFLUENT | 30 | 54 55 | 30 | | 40 0 |
| Total Effl. Volume To Wa | ercourse (10 ³ m ³) 5 | 0 2 8 0 3 | | | |
| Flow Duration | (hrs) 8 | 1 6 8 0 1 | 1 | | _ |
| Cell Depth | (m) 5 | 0 2 9 0 1 | 1 | | |
| BOD₅ | (mg/L) 0 | 0 0 0 1 1 | 1 | | |
| Suspended Solids | (mg/L) 0 | 0 0 0 6 1 | 1 | | |
| Ammonia + Ammoniu | | 0 0 1 9 2 | 1 | | |
| TKN | (mg/L) 0 | 0 0 2 0 2 | 1 | | |
| Total Phosphorous | (mg/L) 0 | 0 0 3 3 2 | 1 | | |
| | 30 | 34 35 | 38 | | 48 5 |
| 9 DISINFECTION | | | | | |
| 2 13 Chlorine Used | (kg as Cl ₂) 5 | 0 3 2 0 1 | | | |
| Chlorine Dosage | (mg/L as Cl ₂) 8 | 0 4 1 0 1 | 1 | | |
| Chlorine Residual | (mg/L as Cl ₂) 8 | 0 4 2 0 1 | 1 | | |
| (Representative of | Final Discharge) 30 | 34 35 | 38 | | 48 5 |
| perator Telephone Number | Email Addı | | | | |
| 705-325-2315 | utilities@ | townshipofsevern.com | | | |
| | | | | | |

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at <u>WasteWaterReporting@Ontario.ca</u> AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

S1



Municipal Utility Monitoring Program (MUMP) **S2** Lagoons

| Project Na | | | | | | | | | | | | | | | | | | | | | |
|-------------|-----------------------|------------|-------|----------|-------|--------|-------|----------|----------------------|----------|--------|-------|------------------|---------|----------------|----------|----------|-------------|--|-----|--|
| Washago | | | | | | | | | | | | | | | | | | | | | |
| Mailing Ad | | | | | | | | | | | | | | | | | | | | | |
| Unit No. | Street No. | Street N | | | | | | | | | | | | | | PO | | | | | |
| | 1024 | Hurlwo | od La | ne | | | | | | | | | | | | 159 | | | | | |
| Municipalit | y/City/Town | | | | | | | | Provir | nce | | | | | | | tal Co | de | | | |
| Orillia | | | | | | | | | ON | | | | | | | L3V | V 6J3 | | | | |
| Operating . | Authority | | | | | | | | | | | | | | | | | | | | |
| | oration of the Townsh | ip of Seve | rn | | | | | | | | | | | | | | | | | | |
| Mailing Ad | | | | | | | | | | | | | | | | | | | | | |
| Unit No. | Street No. | Street N | ame | | | | | | | | | | | | | PO | Box | | | | |
| | 1024 | Hurlwo | od La | ne | | | | | | | | | | | | 159 | 1 | | | | |
| Municipalit | y/City/Town | | | | | | | | Provir | nce | | | | | | Pos | tal Co | de | | | |
| Orillia | | | | | | | | | ON | | | | | | | L3V | V 6J3 | | | | |
| | | | | | | Data | Perio | hd | | | | | | | | | Г | | | | |
| File No. | Works | Number | | | l M | lonth | 1 | ear | Da | ays | | [| Dischar | ge T | ype | | | Upd | ate Co | ode | |
| | 1 2 0 0 | | | | | | | | _ | | | | | | | _ | L | | | Т | |
| 4 6 | | 0 2 2 | 2 7 | 3 | 0 | 3 | | 20 | 3 | I | | | | 2 | | R | | | | | |
| 1 2 | 3 | | | 11 | 16 | | | 19 | 20 | 21 | | | 2 | 22 | | | | | 80 | | |
| C.P. | | | | | | | | | | | | | | | | | | | | | |
| 3 6 | Parameter | Unit | | Para | meter | Code | | Dec | ec Monthly Average F | | | | | Results | | | | o. of | Sampl | es | |
| 12 13 | | | | | | | | | | | | | | | | | | T | | | |
| | | | | | | | | | | | | | - - | | | | | + | 1 | | |
| | | | | | | | | | | | | | + | | | | | + | | | |
| | | | | | | | | | | | | | - | | | | - | + | | | |
| | | | | | | | | | | | | | | | | | - | +- | + | | |
| | | | | | | | | | | | 1 | | | | | | | + | | | |
| | | | | | | | | | | | | | - | | | | | +- | | | |
| | | | | | | | | | | | - | | - | - | | | | | | | |
| | | | | | | | | | | | | | - | | | | <u> </u> | ــــــ | <u> </u> | | |
| | | | | | | | | | | | | | | | | | | <u> </u> | <u> </u> | | |
| | | | | | | | | | | | | | | | | | | ↓ | <u> </u> | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | 30 | | | | 34 | 35 | 38 | | | | | | | | | | | | |
| 3 9 | FINAL EFFLUENT | | | | | | | | | | | | | | | | | | | | |
| 12 13 | Parameter | Unit | | Para | meter | Code | | Dec | | Mor | thly A | \vera | age Re | sults | | | N | o. of | Sampl | es | |
| | Unionized Ammon | mg/L | | | | | | | | | | | | | | | | | T | | |
| | Alkalinity | mg/L | | | | | | | | | | | | | | | | 1 | 1 | | |
| | pH | | | | | | | | | | | | | + | 1 1 | | | 1 | 1 | | |
| | P** | | | | | | | \vdash | | | | | - • | | | = | | + | + | | |
| | | | + | | | | | \vdash | | \dashv | | | + | + | + + | \dashv | - | + | + | | |
| | | | | | | | | \vdash | | - | + | | - • | + | \vdash | - | - | + | + | | |
| | | | + | | | | | \vdash | | - | | | - - | + | + + | \dashv | \vdash | + | +- | | |
| | | | - | - | | | | \vdash | | _ | 1 | | | - | \vdash | _ | - | + | + | | |
| | | | - | | | | | \vdash | | | | | - - | | - | _ | - | ₩ | | | |
| | | | _ | | | | | \vdash | | _ | - | | - - | - | | _ | <u> </u> | ₩ | | | |
| | | | | | | | | | | | | | - | | | | | ₩ | | | |
| | | | | | | | 0. | | | | | | | | | | | <u> </u> | <u> </u> | | |
| _ | | | 30 | | | | 34 | 35 | 38 | | | | | | | | | | | | |
| | elephone Number | | | il Addre | | | | | | | | | | | | | | | | | |
| 705-325-2 | | | utili | ties@t | owns | hipofs | evern | .com | | | | | | | | | | | | | |
| Comments | 3 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

2063 (2011/03) Page 2 of 2



Municipal Utility Monitoring Program (MUMP) Lagoons

| Project Na | | | | | | | | | | | | | | | |
|------------------------------|------------------|-------------|----------|---------|------------------------|---------------------------------|------|------|---------|--------|---------|-------------|--------------|-----|--|
| <u>Washago</u> | | on | | | | | | | | | | | | | |
| Mailing Ad Unit No. | aress | Street N | .la | ء ا | Street Nar | | | | | | | | | | PO Box |
| JNIL NO. | | 1024 | NO. | | Street ivar Hurlwoo | | | | | | | | | | |
| M i i 114 | | | | 1 | Turiwoo | a Lan | ie | | | | | | Daniel | | 159 |
| Municipalit | ly/City/ i | IOWN | | | | | | | | | | | Provi | nce | Postal Code L3V 6J3 |
| O <u>rillia</u> Operating | Authori | it. | | | | | | | | | | | UN | | L3 V 6J3 |
| Deraung Γhe Corp | | - | Тотт | ahin a | of Cover | | | | | | | | | | |
| Mailing Ad | | ii oi tile | TOWIS | sinp c | or severi | .1 | | | | | | | | | |
| Jnit No. | uicoo | Street N | No | 5 | Street Nar | ne | | | | | | | | | PO Box |
| | | 1024 | | - | Hurlwoo | | ie. | | | | | | | | 159 |
| Municipalit | tv/Citv/7 | | | | 101111100 | | | | | | | | Prov | nce | Postal Code |
| Orillia | .,,. | | | | | | | | | | | | ON | | L3V 6J3 |
| 1 | | | | | | | | | De | ata Pe | riad | | | | 1 |
| File No. | | | Work | ks Nur | mber | | | | Month | 1 | Year | | D | ays | Discharge Type Update Co |
| 4 0 | _ | | Π_ | | 2 2 | 7 | _ | | | | | | | | |
| 4 6 | 1 | 2 (| 0 | 0 | 2 2 | 7 | 3 | | 0 4 | • | 20 | | 3 | 0 | |
| 1 2 | 3 | | | | | | 11 | | 16 | | 1 | 19 | 20 | 21 | 22 80 |
| C.P. | | | | | | | | | | | | | | | |
| 3 5 | FLOV | NS | | | | | | Para | meter (| Code | | Dec | | | Monthly Results |
| 2 13 | Total I | Flow | | | (10 | ³ m ³) | 5 | 0 | 0 | 1 | 0 | 3 | | | 3 . 5 4 1 |
| | Avera | ge Daily l | Flow | | (10 ³ r | n³/d) | 5 | 0 | 0 | 1 | 5 | 3 | | | 0 . 1 1 8 |
| | Maxim | num Daily | Flow | | (10 ³ r | n³/d) | 5 | 0 | 0 | 2 | 0 | 3 | | | N A . |
| | | | | | | | 30 | | | | 34 | 35 | 3 | 8 | 46 |
| 3 5 12 13 | BYPA | | , , | | (4.0 | .з з. Г | | _ | | - | | | 1 - | 1 | No. of Occurre |
| 12 13 | | Bypass V | olume | | , |) ³ m ³) | 5 | 0 | 2 | 7 | 0 | 3 | ∤ - | | + |
| | Durati | on | | | | (hrs) | 30 | 1 | 6 | 8 | 0 34 | 1 | J L | • | 48 |
| 3 6 | RAW | SEWA | GE | | | | 30 | | | | 34 | 33 | 3 | 0 | No. of Samp |
| 12 13 | BOD ₅ | | | | (n | ng/L) | 0 | 0 | 0 | 0 | 1 | 0 | 1 [| | 2 2 6 . 1 |
| | | ended Sol | lids | | | ng/L) | 0 | 0 | 0 | 0 | 6 | 0 | 1 | | 2 1 7 . 1 |
| | TKN | | | | | ng/L) | 0 | 0 | 0 | 2 | 0 | 2 | 1 | | 2 7 . 7 |
| | | Phosphor | us | | | ng/L) | 0 | 0 | 0 | 3 | 3 | 1 | 1 | | 2 . 5 |
| | - | • | | | ` | J / L | 30 | | | | 34 | 35 | 3 | 8 | 48 |
| 3 9 | J | L EFFL | | | | - | | | | | | | _ | | |
| | | ffl. Volume | e To Wat | tercour | rse (10 |) ³ m ³) | 5 | 0 | 2 | 8 | 0 | 3 | | | |
| | | Duration | | | | (hrs) | 8 | 1 | 6 | 8 | 0 | 1 | 1 L | | |
| | Cell D | | | | | (m) | 5 | 0 | 2 | 9 | 0 | 1 | 1 L | | |
| | BOD ₅ | | | | | ng/L) | 0 | 0 | 0 | 0 | 1 | 1 | 1 L | | |
| | | ended Sol | | | | ng/L) | 0 | 0 | 0 | 0 | 6 | 1 | . L | | |
| | | onia + Am | moniur | m | | ng/L) | 0 | 0 | 0 | 1 | 9 | 2 | 1 L | _ | |
| | TKN | Dia ' | | | | ng/L) | 0 | 0 | 0 | 2 | 0 | 2 | Į ∟ | | |
| | ı otal I | Phosphor | ous | | (n | ng/L) | 30 | 0 | 0 | 3 | 34 | 2 35 | Ţ | 8 | 48 |
| 0 9 | DISIN | NFECTIO | ON | | | | JU | | | | 54 | 35 | 3 | U | 48 |
| 12 13 | • | ne Used | | | (kg as | Clo) | 5 | 0 | 3 | 2 | 0 | 1 |] [| | |
| | | ne Dosag | je | | (mg/L as | | 8 | 0 | 4 | 1 | 0 | 1 | 1 | | |
| | | ne Resid | | | (mg/L as | · - | 8 | 0 | 4 | 2 | 0 | 1 | 1 | | |
| | | Represent | | Final D | . • | / [| 30 | | | | 34 | 35 | 3 | 8 | 48 |
| Operator T | elepho | | | | | Email | | | | | | | | | |
| 705-325- | | | | | | utilit | ies@ | towi | ishipo | fseve | ern.co | m | | | |
| Comments | | | | | | | | | | | | | | | |

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at <u>WasteWaterReporting@Ontario.ca</u> AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

S1



Municipal Utility Monitoring Program (MUMP) Lagoons

S2

| Mailing Ado Unit No. | 11622 | Street No |). | 8 | Stree | t Nan | ne | | | | | | | | | | | | | 11 | PO Bo | Х | | | |
|-------------------------|-------------|--------------------|-------|----------|-------|-------|-------|----------|----------|--------------|-------|-----------|-------|-----|-------|------|-------|-------|------|----|---------------|------------|---------|--|----------|
| | | 1024 | | | | | d Laı | ne | | | | | | | | | | | | | 159 | | | | |
| Municipalit | y/City/ | Town | | | | | | | | | | | Provi | nce | | | | | | | Postal | | Э | | |
| <u>Orillia</u> | | | | | | | | | | | | | ON | | | | | | | | L3V 6 | 5J3 | | | |
| Operating A | | ity n of the Te | | . المناب | ec. | | | | | | | | | | | | | | | | | | | | |
| Mailing Add | | n or me r | OWIIS | sinp c | 31 30 | VEII | 1 | | | | | | | | | | | | | | | | | | |
| Jnit No. | | Street No |). | 5 | Stree | t Nar | ne | | | | | | | | | | | | | | РО Во | Х | | | |
| | | 1024 | | I | Hurl | woo | d Laı | ne | | | | | | | | | | | | | 159 | | | | |
| Municipalit | y/City/ | Town | | | | | | | | | | | Provi | nce | | | | | | | Postal | | Э | | |
| <u>Orillia</u> | | | | | | | | | | | | | ON | | | | | | | | L3V 6 | <u>.J3</u> | | | |
| File No. | | | Work | s Nu | mber | | | | N/ | Data onth | Perio | d ′ear | Da | ays | | | Disch | narge | Туре |) | | | Upd | ate Co | ode |
| 4 6 | 1 | 2 0 | 0 | 0 | 2 | 2 | 7 | 3 | 0 | 4 | | 20 | 3 | 0 | | | | 2 | | | l | | | R | T |
| 1 2 | 3 | | | | _ | | | 11 | 16 | | | 19 | 20 | 21 | _ | | | 22 | | | | | | 80 | J |
| C.P. | R | RAW SEW | ΔGF | : | | | | | | | | | | | | | | | | | | | | | |
| 3 6 | - | Paramet | | | Uı | nit | | Para | meter | Code | | Dec | | Мо | nthly | Aver | age I | Resul | ts | | | No | . of \$ | Sampl | les |
| 12 13 | | | | | | | | | | | | | | | T | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | _ | | | <u> </u> | <u> </u> |
| | | | | | | | | - | | | | | | | | | | | | | - - | _ | | <u> </u> | <u> </u> |
| | | | | | | | | - | | | | | | - | - | | | | | | - - | _ | | | <u> </u> |
| | | | | | | | | | | | | | | - | | | | : | | | | - | | 1 | \vdash |
| | | | | | | | | | | | | | | | | | | - | | | - | | | | T |
| | | | | | | | | | | | | | | | | | | | | | | | | | T |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 30 | | | | 34 | 35 | 38 | | | | | | | | | | | | |
| 3 9 | FIN | NAL EFFL | | IT | | | 1 | | | | | | | | | | | | | | | | | | |
| 12 13 | | Paramet | | | Uı | | | Para | meter | Code | | Dec | | Мо | nthly | Aver | age l | Resul | ts | | 4 | No | . of S | Sampl | es |
| | | nized Amm | ion | | mg/ | | | | | | | | | | - | | | | | | | _ | | | ╁ |
| | Alkal pH | imity | | | mg/ | L | | | | | | | | | | | | • | | | | \dashv | | | ╁ |
| | pm | | | | | | | | | | | | | | | | | • | | | - - | - | | | t |
| | | | | | | | | 1 | | | | | | | 1 | | | • | | | - - | \dashv | | 1 | T |
| | | | | | | | | 1 | L | | | | | | | | | _ | | | | | | | T |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | ⅃ | | | <u> </u> | |
| | | | | | | | | 1 | 1 | | | | | _ | | | | • | | _ | 4 | | | <u> </u> | Ļ |
| | | | | | | | | | | | | | | | - | | | | | | | _ | | | ╁ |
| | | | | | | | 30 | 1 | <u> </u> |] | 34 | 35 | 38 | | | | | • | | | l L | | | Ь | L |
| nerator T | elenho | ne Number | r | | | | | il Addre | 200 | | | | | | | | | | | | | | | | |
| 05-325-2 | | o rtamber | | | | | | | | hipofs | evern | .com | | | | | | | | | | | | | |
| Comments | | | | | | | | Ç-9 | | , | | | | | | | | | | | | | | | _ |

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at <u>WasteWaterReporting@Ontario.ca</u> AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

2063 (2011/03) Page 2 of 2



Municipal Utility Monitoring Program (MUMP) S Lagoons

S1

| Project Na | | | | |
|----------------|---|---|---------------------|--|
| Washago | | | | |
| Mailing Ad | | | | 1 |
| Unit No. | Street No. Street Na | | | PO Box |
| | 1024 Hurlwo | od Lane | <u></u> | 159 |
| | ty/City/Town | | Province | Postal Code |
| <u>Orillia</u> | | | ON | L3V 6J3 |
| Operating | | | | |
| | poration of the Township of Seve | rn | | |
| Mailing Ad | | | | l 50 5 |
| Unit No. | Street No. Street No. | | | PO Box |
| M ! - ! !!4 | 1024 Hurlwo | od Lane | Durantin and | 159 |
| | ty/City/Town | | Province | Postal Code |
| <u>Orillia</u> | | | ON | L3V 6J3 |
| File No. | Works Number | Data Period | Days Discharge Type | Update Code |
| 1 110 110. | vvolke rvalibel | Month Year | Days Discharge Type | opanic cour |
| 4 6 | 1 2 0 0 0 2 2 | 2 7 3 0 5 20 | 3 1 2 | R |
| 1 2 | 3 | 11 16 19 | 20 21 22 | 80 |
| C.P. |] | | | |
| 3 5 | FLOWS | Parameter Code De | Monthly Results | |
| 12 13 | | 0 ³ m ³) 5 0 0 1 0 3 | | 9 8 |
| 12 13 | • | ³ m ³ /d) 5 0 0 1 5 3 | | |
| | | 3 m 3 /d) 5 0 0 2 0 3 | | 5 8 |
| | Maximum Daily Flow (10 | 30 34 35 | | 46 |
| 3 5 | BYPASS | 00 04 00 | | No. of Occurren |
| 12 13 | 1 | 10 ³ m ³) 5 0 2 7 0 3 | | |
| | Duration | (hrs) 8 1 6 8 0 1 | | |
| | | 30 34 35 | | 48 |
| 3 6 | RAW SEWAGE | | _ | No. of Sample |
| 12 13 | BOD₅ (| (mg/L) 0 0 0 0 1 0 | | 1 |
| | Suspended Solids | (mg/L) 0 0 0 6 0 | | 1 |
| | TKN | (mg/L) 0 0 0 2 0 2 | | 1 |
| | Total Phosphorus | (mg/L) 0 0 0 3 3 1 | | 1 |
| _ _ | I EINAL EEELLENT | 30 34 35 | 38 | 48 |
| 3 9 | FINAL EFFLUENT Total Effl. Volume To Watercourse (2) | 40° 2 5 1 0 1 0 1 0 1 0 | | |
| | Flow Duration | 10 ³ m ³) 5 0 2 8 0 3 | | |
| | Cell Depth | (hrs) 8 1 6 8 0 1 | | |
| | | (m) 5 0 2 9 0 1 | | |
| | · | (mg/L) 0 0 0 0 1 1 1 | | |
| | · · · · · · · · · · · · · · · · · · · | (mg/L) 0 0 0 0 6 1 | | |
| | ' | (mg/L) 0 0 0 1 9 2 | | |
| | · | (mg/L) 0 0 0 2 0 2 | | |
| | Total Phosphorous | (mg/L) 0 0 0 3 3 2 2 | | 48 |
| 0 9 | DISINFECTION | 30 34 35 | 30 | 40 |
| 2 13 | | as Cl ₂) 5 0 3 2 0 1 | | |
| | Chlorine Dosage (mg/L a | | | |
| | Chlorine Residual (mg/L a | | | |
| | (Representative of Final Discharge | | | 48 |
| Operator T | elephone Number | Email Address | | |
| 05-325- | | utilities@townshipofsevern.com | | |
| Comments | | | | |
| | | | | |
| | | | | |

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at <u>WasteWaterReporting@Ontario.ca</u> AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)



Municipal Utility Monitoring Program (MUMP) Lagoons

S2

| Project Nar | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|----------------|-------|--------|-----------|------|----------|-------|--------|-------|-------|------|-------|------|-------|------|--------|-------|-----|---------|----------------------|----------|---------------|-------------------|----|--|
| Washago | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mailing Add | | | 1 _ | | | | | | | | | | | | | | | | 1 _ | | | | | | |
| Unit No. | Street N | lo. | | treet Nan | | | | | | | | | | | | | | | | O Box | | | | | |
| | 1024 | | Н | Iurlwood | d La | ne | | | | | | | | | | | | | | 59 | | | | | |
| | y/City/Town | | | | | | | | | | Prov | ince | | | | | | | | ostal C | | | | | |
| Orillia | A - 41:'4 | | | | | | | | | | ON | | | | | | | | L3V 6J3 | | | | | | |
| Operating A | | г | 1. | CC | | | | | | | | | | | | | | | | | | | | | |
| Mailing Add | oration of the | Iowns | snip o | of Severr | 1 | | | | | | | | | | | | | | | | | | | | |
| Unit No. | Street N | lo. | ١٥ | treet Nan | 20 | | | | | | | | | | | | | | Ιρ | О Вох | | | | | |
| OTHE INO. | 1024 | Ю. | | Iurlwood | | ne | | | | | | | | | | | | | | 59 | | | | | |
| Municipality | y/City/Town | | 111 | Turrwood | л Ца | iic | | | | | Prov | ince | | | | | | | | ostal C | `ode | | | | |
| Orillia | y/Oity/ TOWIT | | | | | | | | | | ON | 11100 | | | | | | | | 3V 6J | | | | | |
| Offilia | | | | | | | | | | | OIV | | | | | | | | 1 1 | <i>5</i> v 03 | _ | | | | |
| File No. | | Work | s Nun | nber | | | ١., | | Perio | | | ays | | | [| Discha | rge T | уре | | | ι | Jpdaf | te Co | de | |
| | | | | | | | | onth | | /ear | | 1 | | L | | 1 | | 1 | | | | _ | | T | |
| 4 6 | 1 2 0 | 0 | 0 | 2 2 | 7 | 3 | 0 | 5 | | 20 | 3 | 1 | | | | | 2 | | | | | | R | | |
| 1 2 | 3 | | | • | | 11 | 16 | • | | 19 | 20 | 2 | 1 | | | | 22 | _ | | | | | 80 | | |
| C.P. | RAW SEV | VAGE | | | | | | | | | | | | | | | | | | | | | | | |
| 3 6 | Parame | | | Unit | | Para | meter | Code | | Dec | | N | 1ont | hlv A | vera | age Re | sults | | | | No. | of S | ample | es | |
| 12 13 | | | | | | | | | | | | | | Ť | | Ť. | | | | | | | 一丁 | | |
| | | | | | | | | | | | | | | | | | | | | - | - | -+ | | | |
| | | | | | | | | | | | | | | | | + | | | | - | \dashv | -+ | | | |
| | | | - | | | | | | | | | | | | | | + | | 1 | | - | -+ | | | |
| | | | | | | | | | | | | | | | | - | - | | | - | - | \rightarrow | | | |
| | | | | | | | | | | | | | | | | - | | | | | - | - | | | |
| | | | | | | | | | | | | | | | | - | | | | - | \dashv | \dashv | \longrightarrow | | |
| | | | | | | | | | | - | | | | | | - | + | | - | l | -+ | \dashv | \dashv | | |
| | | | | | | | | | | - | | | | | | - | + | | - | l | -+ | \dashv | \dashv | | |
| | | | | | | | | | | | | | | | | - | - | | | - | + | \rightarrow | | | |
| | | | | | | | | | | | | | | | | - | - | | | - | + | \rightarrow | | | |
| | | | | | 30 | | | | 34 | 35 | 38 | | | | | | | | | i L | | | | | |
| | | | | | 30 | | | | 34 | 35 | 30 | | | | | | | | | | | | | | |
| 3 9 | FINAL EFF | | IT | | | | | | | | | | | | | | | | | . – | | | | | |
| 12 13 | Parame | | | Unit | | Para | meter | Code | | Dec | | N | 1ont | hly A | vera | age Re | sults | 1 | | l | No. | of Sa | ample | es | |
| | Unionized Am | mon | | mg/L | | | | | | | | | | | | | | | | I ∟ | \bot | \rightarrow | | | |
| | Alkalinity | | 1 | mg/L | | | | | | | | | | | | | | | | 1 L | | | | | |
| | pH | | | | | | | | | | | | | | | | | | | L | \perp | \perp | | | |
| | | | | | | | | | | | | | | | | | | | | ΙL | | | | | |
| | | | | | | | | | | | | | | | | | | | | ΙL | | | | | |
| | | | | | | | | | | | | | | | | | | | | ΙL | | | | | |
| | | | | | | | | | | | | | | | | | | | | ΙL | | | | | |
| | | | | | | | | | | | | | | | | | | | | L | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | _ | | | 30 | | | | 34 | 35 | 38 | | | | | | | | | | | | | | |
| Operator T | elephone Numbe | er | | | Ema | il Addre | ess | | | | | | | | | | | | | | | | | | |
| 705-325-2 | | | | | | ties@t | | hipofs | evern | i.com | | | | | | | | | | | | | | | |
| Comments | | | | | | | | - | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

2063 (2011/03) Page 2 of 2



Municipal Utility Monitoring Program (MUMP) S

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)



Municipal Utility Monitoring Program (MUMP) S2 Lagoons

| Project Na | ame | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|-------------------------|-----------|-------|---------|-------|--------|---------|-------|---|------------|----------|------|--------|------|----------|------|------|-----|---|---------|-------|---------|-------|----------|--|
| Washago | Lagoon | | | | | | | | | | | | | | | | | | | | | | | | |
| Mailing Ad | | | | | | | | | | | | | | | | | | | , | | | | | | |
| Unit No. | Street No. | Street Na | | | | | | | | | | | | | | | | | | PO E | Зох | | | | |
| | 1024 | Hurlwo | od La | ne | | | | | | | | | | | | | | | | 59 | | | | | |
| | ity/City/Town | | | | | | | | | | ovinc | е | | | | | | | | | al Co | | | | |
| Orillia Operating | A. Albanita | | | | | | | | | O] | N | | | | | | | | L | L3V 6J3 | | | | | |
| | oration of the Township | of Cava | ••• | | | | | | | | | | | | | | | | | | | | | | |
| Mailing Ad | ddress | o or seve | 111 | | | | | | | | | | | | | | | | | | | | | | |
| Unit No. | Street No. | Street Na | ame | | | | | | | | | | | | | | | | F | PO E | Зох | | | | |
| | 1024 | Hurlwo | od La | ne | | | | | | | | | | | | | | | 1 | 59 | | | | | |
| Municipali | ity/City/Town | | | | | | | | | Pr | ovinc | е | | | | | | | F | Post | al Co | de | | | |
| Orillia | | | | | | | | | | 0 | N | | | | | | | | I | _3V | 6J3 | | | | |
| | | | | | | Da | ta Peri | od | | | _ | | | | | | | | | | Γ | | | | |
| File No. | Works N | lumber | | | | Month | | Year | | | Day | s | | | Disc | harq | ge I | ype | | | | Upd | ate C | ode | |
| 4 6 | 1 2 0 0 0 | 2 2 | 2 7 | 3 | (| 6 | | 20 | | | 3 | 0 | | | | 2 | 2 | | | | | | R | | |
| 1 2 | 3 | | | 11 | 1 | 6 | | 19 | | _ | 20 | 21 | | | <u> </u> | 2 | 2 | | | | | | 80 | _ | |
| C.P. | RAW SEWAGE | | | | | | | | _ | | | | | | | | | | | _ | | | | | |
| 3 6 | Parameter | Unit | | Para | meter | Code | | Dec | | | | Mont | hly / | \ver | age [| Res | ults | | | | N | o. of S | ampl | es | |
| 12 13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | - | | | | | | | | | | | | | | | <u> </u> | |
| | | | | | | | | | _ | | | | | | | | | | | | | | | | |
| | | | | | | | | | - | | | | | | | | | | | _ | | | | - | |
| | | | | | | | | | _ | | | | | | | • | | | | | | | | - | |
| | | 1 | | | | - | | - | - | | | | | | | • | | | | _ | | | | - | |
| | | + | | | | | | | - | | | | | | | • | | | | | | | | \vdash | |
| | | | 30 | | | | 34 | 35 | J | 38 | | | | | | • | | | |] | | | | | |
| 3 9 | FINAL EFFLUENT | ٦ | - | | | | ٠. | - | | | | | | | | | | | | | | | | | |
| 12 13 | Parameter | Unit | | Para | meter | Code | | Dec |] | | - | Mont | thlv A | \ver | age F | Resi | ılts | | |] | N | o. of S | amnl | es | |
| 3 | Unionized Ammon | mg/L | | | | | | | 1 | | <u> </u> | | | | 0 | | 0 | 2 | 9 | | 3 | 7 | | | |
| | Alkalinity | mg/L | | | | | | | 1 | | | | | 9 | 2 | | | | | | 3 | | | | |
| | рН | | | | | | | | | | | | | | 7 | | 6 | | | | 3 | | | | |
| | • | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | 1 | | | | | 1 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 30 | | | | 34 | 35 | | 38 | | | | | | | | | | | | | | | |
| | Telephone Number | | | il Addr | | | _ | | | | | | | | | | | | | | | | | | |
| 705-325 | -2135 | | utili | ties@ | town | shipot | fsever | n.com | 1 | | | | | | | | | | | | | | | | |

2063 (2011/03) Page 2 of 3

| Comments | | | |
|----------|--|--|--|
| | | | |
| | | | |
| | | | |

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

2063 (2011/03) Page 3 of 3



Municipal Utility Monitoring Program (MUMP) Solution Science S

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)



Municipal Utility Monitoring Program (MUMP) S2 Lagoons

| Markage Japan Markage Markag | Project Na | ame | | | | | | | | | | | | | | | | | |
|--|------------|----------------|---|--------------|------------|---------|----------|-----|-------|-------|---------|----------|--------|-------|----------|-------------|----------|----------|----------|
| Mailing Address Street No. 1024 | Washago | Lagoon | | | | | | | | | | | | | | | | | |
| 1024 | | | | | | | | | | | | | | | | | | | |
| Municipality/City/Town | Unit No. | Street No. | Street Nam | ne | | | | | | | | | | | РО | Box | | | |
| On | | 1024 | Hurlwood | l Lane | | | | | | | | | | | | | | | |
| Operator Telephone Number | Municipali | ty/City/Town | | | | | | Pro | ovinc | е | | | | | Pos | tal Co | de | | |
| The Corporation of the Township of Severs | | | | | | | | Ol | N | | | | | | L3V | V 6J3 | | | |
| Multicipality/City/Town | | | | | | | | | | | | | | | | | | | |
| Unit No. Street No. Street Name Hurlwood Lane 159 | | | p of Severn | | | | | | | | | | | | | | | | |
| 1024 | | | • | | | | | | | | | | | | | | | | |
| Municipality/City/Town Orillia | Unit No. | | | | | | | | | | | | | | | | | | |
| Orillia Oril | | I . | Hurlwood | l Lane | | | | | | | | | | | | | | | |
| File No. | | ty/City/Town | | | | | | | | е | | | | | | | | | |
| File No. | Orillia | | | | | | | O | N | | | | | | L3V | V 6J3 | | | |
| A 6 1 2 0 0 0 2 2 7 3 0 7 20 3 1 2 22 80 | | | | | Dat | a Perio | d | | _ | | | <u> </u> | | | | Γ | | | |
| 1 | File No. | Works N | Number | | Month | Y | 'ear | | Day | s | | Disch | arge | Туре | | | Upd | ate C | ode |
| 1 | 4 6 | 1 2 0 0 0 | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | 7 3 | 0 7 | | 20 | | 3 | 1 | | | 2 | | | _ | | R | |
| C.P. RAW SEWAGE | | | | | | | | | | | | | | | | | L | | |
| 3 6 Parameter Unit Parameter Code Dec Monthly Average Results No. of Samples | | | _ | "" | 10 | | 19 | • | 20 | 21 | | | 22 | | | | | 00 | |
| 12 13 | — | | | | | | | | | | | | | | _ | | | | |
| 3 9 FINAL EFFLUENT 12 13 Parameter Unit Parameter Code Unionized Ammon mg/L | | Parameter | Unit | Param | neter Code | | Dec | - | | Month | nly Ave | rage F | esults | ; | | N | o. of S | ampl | es |
| 3 9 FINAL EFFLUENT 13 Parameter Unit Parameter Code Unionized Ammon mg/L Alkalinity mg/L PIH | 12 13 | | | | | | | | | | | | | | | | | | |
| 3 9 FINAL EFFLUENT | | | | | | | | | | | | | | | | | | | |
| 3 9 FINAL EFFLUENT | | | | | | | | | | | | | | | | | | | |
| 3 9 FINAL EFFLUENT 12 13 Parameter Unit Parameter Code Dec Monthly Average Results No. of Samples Unionized Ammon mg/L | | | | | | | | | | | | | | | | | | | |
| 3 9 FINAL EFFLUENT | | | | | | | | | | | | | | | | | | | |
| 3 9 FINAL EFFLUENT 12 13 Parameter Unit Parameter Code Unionized Ammon mg/L | | | | | | | | | | | | | | | | | | | |
| 3 9 FINAL EFFLUENT 12 13 Parameter Unit Parameter Code Unionized Ammon mg/L | | | | | | | | | | | | | | | | | | | |
| 3 9 FINAL EFFLUENT 12 13 Parameter Unit Parameter Code Unionized Ammon mg/L | | | | | | | | | | | | | | | | | | | |
| 3 9 FINAL EFFLUENT 12 13 Parameter Unit Parameter Code Unionized Ammon mg/L | | | | | | | | | | | | | | | | | | | |
| 12 13 Parameter Unit Parameter Code Unionized Ammon mg/L | | | | | | | | | | | | | | | | | | | |
| 12 13 Parameter Unit Parameter Code Unionized Ammon mg/L | | | | | | | | | | | | | | | | | | | |
| 12 13 Parameter Unit Parameter Code Unionized Ammon mg/L | | · | l l | 30 | ı . | 34 | 35 | 38 | | | ı | | | 1 | | | | | |
| 12 13 Parameter Unit Parameter Code Unionized Ammon mg/L | 3 9 | FINAL FEFLUENT | | | | | | | | | | | | | | | | | |
| Unionized Ammon mg/L | L | | Unit | Param | neter Code | | Dec | | - | Month | nlv Ave | rage R | esults | ; | | N | o of S | Sampl | es |
| Alkalinity mg/L | | | + + | | | | | | | T | 7 | | | | | | | | |
| pH Image: Control of the property of t | | | | | | | \vdash | - | | | | + | - | ++ | \dashv | | | \vdash | \vdash |
| Operator Telephone Number Email Address | | | mg/L | | | | | | | | | 1 | - | + + | | | | | |
| Operator Telephone Number Email Address | | pii | + | | | | | | | | | | | 1 | | | | \vdash | |
| Operator Telephone Number Email Address | | | | | | | | | | | | - | - | - | | | <u> </u> | <u> </u> | |
| Operator Telephone Number Email Address | | | | | | | | | | | | | | + + | | | | <u> </u> | |
| Operator Telephone Number Email Address | | | | | | | - | | | | | | • | + + | | | | | - |
| Operator Telephone Number Email Address | | | | | | | - | | | | | - | | | | | ļ! | <u> </u> | |
| Operator Telephone Number Email Address | | | | | | | | | | | | | | | | | <u> </u> | | |
| Operator Telephone Number Email Address | | | | | | | | | | | | | | | | | | | |
| Operator Telephone Number Email Address | | | | | | | | | | | | | | 1 | | | ļ | | |
| Operator Telephone Number Email Address | | | | | | | | | | | | | | | | | | <u> </u> | |
| | | | | | | 34 | 35 | 38 | | | | | | | | | | | |
| 705-325-2135 utilities@townshipofsevern.com | | • | | | | | | | | | | | | | | | | | |
| | 705-325- | -2135 | 1 | utilities@to | ownshipof | severn | .com | | | | | | | | | | | | |

2063 (2011/03) Page 2 of 3

| Comments | | | |
|----------|--|--|--|
| | | | |
| | | | |
| | | | |

Return completed form to:

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

2063 (2011/03) Page 3 of 3



Municipal Utility Monitoring Program (MUMP) S

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)



Municipal Utility Monitoring Program (MUMP) S2 Lagoons

| Project Na | | | | | | | | | | | | | | | |
|---------------|-----------------------|--------------|--------------|-------------------|------------------------|-----|----------|----------|--|--|----------|----------|-------------|--------|------------------------|
| Washago | | | | | | | | | | | | | | | |
| Mailing Ad | | 1 | | | | | | | | | 1 | | | | |
| Unit No. | Street No. | Street Nam | | | | | | | | | PO E | | | | |
| | 1024 | Hurlwood | Lane | | | | | | | | 159 | | | | |
| | ty/City/Town | | | | | | rovince | | | | | al Co | | | |
| Orillia | | | | | | (|)N | | | | L3V | / 6J3 | | | |
| Operating | | | | | | | | | | | | | | | |
| | oration of the Townsh | ip of Severn | | | | | | | | | | | | | |
| Mailing Ad | | | | | | | | | | | l 50 f | - | | | |
| Unit No. | Street No. | Street Nam | | | | | | | | | PO E | | | | |
| NA i . i.e II | 1024 | Hurlwood | Lane | | | | | | | | 159 | | .1. | | |
| | ty/City/Town | | | | | | rovince | | | | | al Co | | | |
| Orillia | | | | | | | <u>N</u> | | | | L3 V | / 6J3 | | | |
| File No. | Works | Number | | | Period | | Days | | Dischar | ge Type | | | LInd: | ate Co | ode |
| 1 110 110. | VVOING | T I I | | Month | Year | 4 ∤ | Days | | District | 90 1990 | | L | | | |
| 4 6 | 1 2 0 0 | 0 2 2 | 7 3 | 0 8 | 20 | | 3 1 | | : | 2 | | | | R | |
| 1 2 | 3 | | 11 | 16 | 19 | | 20 21 | | | 22 | | | | 80 | _ |
| C.P. | RAW SEWAGE | | | | | | | | | | | | | | |
| 3 6 | Parameter | Unit | Paran | neter Code | Dec | | Month | nly Aver | age Res | ulte | | Ni | o. of S | amnl | 98 |
| 12 13 | 1 didifficio | Onic | l alai | lictor Gode | | - | T I | lly Aver | l l | | | 140 | 7. 01 0 | ampi | 55 |
| 12 13 | | + | | | | | | | · · | | | | \vdash | | \vdash |
| | | | | | | - | | | <u> </u> | | | | \vdash | | |
| | | | | | | - | | | | | | <u> </u> | | | |
| | | | | | | | | | <u> </u> | | | | \vdash | | |
| | | | | | | | | | | | | | igwdot | | - |
| | | | | | | | | | - | | | | | | |
| | | | | | | | | | - | | | | | | |
| | | | | | | | | | | | | | igsquare | | |
| | | | | | | | | | | | | | \sqcup | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | 30 | | 34 35 | 38 | | | | | | | | | |
| 3 9 | FINAL EFFLUENT | | | | | | | | | | | | | | |
| 12 13 | Parameter | Unit | Paran | neter Code | Dec | | Month | nly Aver | age Res | ults | | No | o. of S | ample | es |
| | Unionized Ammon | mg/L | | | | | | | | | | | | | |
| | Alkalinity | mg/L | | | | | | | | | | | | | |
| | рН | | | | | | | | | | | | | | |
| | • | | | | | | | | ١. | | | | | | |
| | | | | | | | | | ١. | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | - | | | <u> </u> | | | | | | |
| | | | | | | | | | | | | | | - | \vdash |
| | | | | | $\dashv \vdash \vdash$ | - | + + + | | | | \dashv | \vdash | \vdash | - | $\vdash \vdash$ |
| | | | | | $\dashv \vdash \vdash$ | - | + + + | | • | | - | \vdash | \vdash | - | $\vdash \vdash \vdash$ |
| | | | | | | - | | | | | | | | | \vdash |
| | | | 30 | | 34 35 | 38 | 1 1 1 | | | | | | | | |
| Operator - | Telephone Number | T . | Email Addre | 200 | | | | | | | | | | | |
| 705-325- | | | | ess ownshipofs | over com | | | | | | | | | | |
| 103-323- | -41 <i>JJ</i> | | atilities(W) | омпыпрот | oc v CIII.COIII | | | | | | | | | | |

2063 (2011/03) Page 2 of 3

| Comments | | |
|----------|--|--|
| | | |
| | | |
| | | |

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

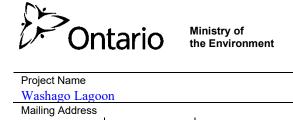
2063 (2011/03) Page 3 of 3



Ministry of the Environment

Municipal Utility Monitoring Program (MUMP) S1 Lagoons

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)



Municipal Utility Monitoring Program (MUMP) **S2** Lagoons

| Projec | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|-------|---------|-------------|----------|----------|--------|---------|-------|-------|--------|-------|----|----------|------------|--------|-------|--------|-------|------|-----|--------|--|--------|-------|
| Wash | ago | Lago | on | | | | | | | | | | | | | | | | | | | | | |
| Mailing | | dress | 1 | | | | | | | | | | | | | | | | ĺ | | _ | | | |
| Unit N | 0. | | Street No |). | Street N | | | | | | | | | | | | | | | РО | | | | |
| | | | 1024 | | Hurlwo | ood La | ne | | | | | - | | | | | | | | 159 | | | | |
| Munici | | y/City/ | Γown | | | | | | | | | | ovino | ce | | | | | | | tal Co | | | |
| Orillia | | | | | | | | | | | | O | <u>N</u> | | | | | | | L3V | V 6J3 | <u> </u> | | |
| Operat | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | n of the To | ownship | of Sev | ern | | | | | | | | | | | | | | | | | | |
| Mailing | | dress | | 1 | | | | | | | | | | | | | | | i | | _ | | | |
| Unit N | 0. | | Street No |). | Street N | | | | | | | | | | | | | | | РО | | | | |
| | | | 1024 | | Hurlwo | ood La | ne | | | | | | | | | | | | | 159 | | | | |
| Munici | | y/City/ | Town | | | | | | | | | | ovino | ce | | | | | | | tal Co | | | |
| Orillia | a | | | | | | | | | | | 0 | N | | | | | | | L3V | V 6J3 | <u> </u> | | |
| File N | | | | Works N | lumbar | | | | Da | ta Per | od | | Day | ' 0 | | | Diach | araa | Tuna | | | Llna | loto C | · ada |
| File IN | 0. | | | VVOIKSIN | 1 1 | 1 | _ | _ | Month | _ | Year | - | Day | /8 | | | Disch | | туре | | | —————————————————————————————————————— | late C | oue |
| | 6 | 1 | 2 0 | 0 0 | 2 | 2 7 | 3 | (| |) | 20 | | 3 | 0 | | | | 2 | | | | | R | |
| 1 | 2 | 3 | | | _ | | 11 | 1 | 6 | | 19 | | 20 | 21 | | | | 22 | | | | | 80 | |
| C.P. | | R | AW SEWA | AGE | | | | | | | | | | | | | | | | | | | | |
| 3 | 6 | | Paramete | er | Unit | | Para | meter | Code | | Dec | | | Mon | thly A | Avera | age Re | sults | 3 | | N | lo. of S | 3ampl | es |
| 12 | 13 | | | | | | | | | | | | | | | | ١. | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | - | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | L | | | | 1 | 30 | 1 | | | 34 | 35 | 38 | | | | | | ı | | | | - | | |
| 3 | 9 | FIN | AL EFFL | UENT | | | | | | | | | | | | | | | | | | | | |
| | 13 | | Paramete | | Unit | | Para | meter | Code | | Dec | | | Mon | thly A | vera | age Re | sults | 3 | | N | lo. of S | Sampl | es |
| | | Union | ized Ammo | on | mg/L | | | | | | | | | | | | | | | | | | | |
| | Ī | Alkali | nity | | mg/L | | | | | | | | | | | | | | | | | | | |
| | | pН | | | | | | | | | | | | | | | | | | | | T | | |
| | | | | | | | | | | | | | | | | | | | | | | T | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | ľ | | | | | | | | | | | | | | | | T. | | | | | | | |
| | ŀ | | | | | | | | | | | | | | | | 1. | | | | | 1 | | |
| | Ī | | | | | | | | | 1 | | | | | | | 1. | 1 | | | | 1 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | L | | | | • | 30 | • | | • | 34 | 35 | 38 | • | | | - 1 | | | | | | • | | |
| Opera | tor T | elepho | ne Number | r | | Ema | il Addr | ess | | | | | | | | | | | | | | | | |
| 705-3 | | | | | | | | | shipo | fseve | n.com | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

2063 (2011/03) Page 2 of 3

| Comments | | |
|----------|--|--|
| | | |
| | | |
| | | |

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

2063 (2011/03) Page 3 of 3



Ministry of the Environment

Municipal Utility Monitoring Program (MUMP) S'Lagoons

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)



Municipal Utility Monitoring Program (MUMP) S2 Lagoons

| | | | | | | | | | 9 | •••• | | | | | | | | | | | | | |
|------------------------|-----------|-------------|----------|-----------|-------|----------|--------|--------|----------|-------|-----|---------|--------|-----------------|----------|----------|--------|----------|----------|----------|----------|--|--|
| Project Na | | | | | | | | | | | | | | | | | | | | | | | |
| Washago | Lago | on | | | | | | | | | | | | | | | | | | | | | |
| Mailing Ad | ddress | • | | | | | | | | | | | | | | | | | | | | | |
| Unit No. | | Street No |). | Street Na | | | | | | | | | | | | | | | РО | | | | |
| | | 1024 | | Hurlwo | od La | ne | | | | | | | | | | | | | 159 | | | | |
| Municipali | ity/City/ | Γown | | | | | | | | | | Provin | ce | | | | | | | tal Co | | | |
| Orillia | | | | | | | | | | | (| ON | | | | | | | L3V | V 6J3 | <u> </u> | | |
| Operating | | | | | | | | | | | | | | | | | | | | | | | |
| The Cor | oratio: | n of the To | ownship | of Seve | rn | | | | | | | | | | | | | | | | | | |
| Mailing Ad Unit No. | adress | Street No | . 1 | Street Na | | | | | | | | | | | | | | 1 | РО | Day | | | |
| OTIL NO. | | 1024 |). | Hurlwo | | na | | | | | | | | | | | | | 159 | | | | |
| Municipali | ity/City/ | | | пинио | ou La | iie | | | | | | Provinc | 20 | | | | | | | tal Co | odo | | |
| Orillia | ity/City/ | IOWII | | | | | | | | | |)N | -C | | | | | | | V 6J3 | | | |
| Offilia | | | | | | | | | | | 1 . | JIN | | 1 | | | | | | v OJ. | | | |
| File No. | | | Works N | umber | | | | | ta Peri | | | Day | /S | | | Disch | arge | Type | | | Upc | late C | ode |
| | | 1 1 | | 1 1 | | 1 | | Month | | Year | | - 1 | | | | -1 | | 71 | | | <u> </u> | | |
| 4 6 | 1 | 2 0 | 0 0 | 2 2 | 7 | 3 | | 1 0 | 1 | 20 | | 3 | 1 | | | | 2 | | | | | R | |
| 1 2 | 3 | 1 1 | <u> </u> | | | 11 | _ | 16 | | 19 | J L | 20 | 21 | Į. | | | 22 | | | | - | 80 | _ |
| C.P. | R | AW SEW | AGE | 7 | | | | | | | | | | | | | | | | | | | |
| 3 6 | | Paramete | | Unit | | Para | mete | r Code | | Dec | | | Mon | thlv A | vera | ge Re | sults | ; | | N | lo. of S | Sampl | es |
| 12 13 | | | | | | | | | | | | | | ΓÍ | | Ĭ. | | | | | T | T | |
| | | | | | | | | | | | | | | | | | | | | | + | - | - |
| | | | | | | | | | | | | | | | | - - | | | | | + | | |
| | | | | | | | | | | | | | | | | - - | | | | | + | | |
| | | | | | | | | | | | | | | | | - - | | | | | + | | |
| | | | | | | | | + | | | | | | | | | | | | - | + | _ | |
| | | | | | | | | | | | | | | | | - - | | | | | + | | |
| | | | | | | | | + | | | | | | | | | | | | - | + | _ | |
| | | | | | | | | | | | | | | | | - - | | | | | + | | |
| | | | | | | | | | | | | | | | | - - | | | | | + | | |
| | | | | | | | | + | | | | | | | | <u> </u> | | | | - | + | _ | |
| | | | | | 30 | 1 | | | 34 | 35 | 38 | | | | | _ ' | | | | | | <u>. </u> | |
| 3 9 | EIN | AL EFFL | IIENT | 7 | | | | | | | | | | | | | | | | | | | |
| 12 13 | 1 113 | Paramete | | Unit | | Dara | mete | r Code | | Dec | | | Mon | thly A | lvera | ge Re | eulte | | | N | lo. of S | Sampl | |
| 12 13 | Linion | ized Ammo | | mg/L | | i aiai | IIICIC | Code | | Dec | - | | IVIOII | lilly / | WCIZ | gerk | Journa | , T T | | <u> </u> | T | Jampi | T |
| | | | OII | _ | - | - | | - | | | | - | + | \vdash | | | + | | _ | | +- | ├ ─ | - |
| | Alkali | шіу | | mg/L | - | - | | - | | | | - | + | \vdash | | <u></u> | + | | _ | | +- | ├ ─ | - |
| | pН | | | | | 1 | | | | | | | | | | <u></u> | | | _ | | + | <u> </u> | |
| | | | | | | | | | | l —— | | | | | | - - | | | | - | + | _ | |
| | | | | 1 | - | 1 | | | | | - | + | + | H | \dashv | - - | - | + | _ | - | +- | | |
| | | | | 1 | 1 | 1 | | | | | - | + | - | H | \dashv | - - | - | ++ | _ | - | +- | | |
| | | | | 1 | 1 | 1 | | | | | - | + | - | H | \dashv | - - | + | ++ | \dashv | - | +- | | |
| | | | | 1 | 1 | 1 | | | | | - | + | - | $\vdash \vdash$ | _ | | - | + | _ | <u> </u> | + | ₩ | |
| | | | | 1 | 1 | <u> </u> | | | <u> </u> | | - | | + | \vdash | _ | <u> </u> | - | 1 | _ | | ₩ | | |
| | | | | 1 | 1 | <u> </u> | | | <u> </u> | | - | | + | \vdash | _ | <u> </u> | - | 1 | _ | | ₩ | | |
| | | | | 1 | 30 | <u> </u> | | | 34 | 35 | 38 | | | | | | | | | | | <u> </u> | <u> </u> |
| | | | | | | | | | 34 | 33 | 36 | | | | | | | | | | | | |
| | | ne Number | r | | | il Addr | | 1.1 | c | | | | | | | | | | | | | | |
| 705-325 | -2135 | | | | utili | ties(a) | towi | nshipo | isever | n.com | | | | | | | | | | | | | |

2063 (2011/03) Page 2 of 3

| Comments | | |
|----------|--|--|
| | | |
| | | |
| | | |

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

2063 (2011/03) Page 3 of 3



Ministry of the Environment

Municipal Utility Monitoring Program (MUMP) \$1 Lagoons

Project Name Washago Lagoon Mailing Address Street Name PO Box Unit No. Street No. Hurlwood Lane Municipality/City/Town Province Postal Code L3V 6J3 Orillia ON **Operating Authority** The Corporation of the Township of Severn Mailing Address Unit No. Street No. Street Name PO Box Hurlwood Lane Municipality/City/Town Province Postal Code Orillia ON L3V 6J3 Data Period File No. Works Number Days Discharge Type Update Code Month Year R C.P **FLOWS** Parameter Code Dec Monthly Results (10^3m^3) **Total Flow** $(10^3 \text{m}^3/\text{d})$ Average Daily Flow Maximum Daily Flow $(10^3 \text{m}^3/\text{d})$ **BYPASS** No. of Occurrences Plant Bypass Volume (10^3m^3) Duration (hrs) **RAW SEWAGE** No. of Samples BOD₅ (mg/L) (mg/L) Suspended Solids **TKN** (mg/L) (mg/L) **Total Phosphorus FINAL EFFLUENT** Total Effl. Volume To Watercourse $(10^3 m^3)$ Flow Duration (hrs) Cell Depth (m) BOD₅ (mg/L) Suspended Solids (mg/L) Ammonia + Ammonium (mg/L) TKN (mg/L) **Total Phosphorous** (mg/L) DISINFECTION Chlorine Used (kg as Cl₂) Chlorine Dosage (mg/L as Cl₂) Chlorine Residual (mg/L as Cl₂) (Representative of Final Discharge) Operator Telephone Number **Email Address** 705-325-2315 utilities@townshipofsevern.com Comments

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)



Municipal Utility Monitoring Program (MUMP) S2 Lagoons

| Dunia at Na | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|-------------------------|-----------|---------|--------|-------|---------|---------|-------|----------|-------|---------|----------|----------|-------|------|---------|----------|----------|-------|----------|----------|----------|
| Project Na Washago | | | | | | | | | | | | | | | | | | | | | | |
| Mailing Ad | drees | | | | | | | | | | | | | | | | | | | | | |
| Unit No. | Street No. | Street Na | ame | | | | | | | | | | | | | | 1 6 | PO E | Roy | | | |
| Offic NO. | 1024 | Hurlwo | | | | | | | | | | | | | | | | 159 | | | | |
| Municipali | ty/City/Town | Hullwo | ou Lan | | | | | | Р | rovin | <u></u> | | | | | | | | al Co | | | |
| Orillia | tty/Oity/Town | | | | | | | | |)N | 00 | | | | | | | | 7 6J3 | | | |
| Operating | Authority | | | | | | | | | 711 | | | | | | | | <i>√</i> | 033 | | | |
| | poration of the Townshi | n of Seve | rn | | | | | | | | | | | | | | | | | | | |
| Mailing Ad | ddress | p or beve | 111 | | | | | | | | | | | | | | | | | | | |
| Unit No. | Street No. | Street Na | ame | | | | | | | | | | | | | | F | PO E | Зох | | | |
| | 1024 | Hurlwo | od Lane | e | | | | | | | | | | | | | | 159 | | | | |
| Municipali | ty/City/Town | | | | | | | | Р | rovin | се | | | | | | F | ost | al Co | de | | |
| Orillia | | | | | | | | | C | ΟN | | | | | | | I | _3V | 6J3 | | | |
| | | | | | | Dat | ta Peri | od | 1 F | | | 1 | | | | | | | | | | |
| File No. | Works | Number | | | l N | /lonth | | Year | | Day | ys | | | Disc | har | је Туре | ; | | | Upd | late C | ode |
| 4 6 | 1 2 0 0 | | T 7 T | 2 | | | | | 1 | 2 | ^ | 1 | | | _ | | | | L | | _ | \top |
| 4 6 | | 0 2 2 | | 3 | 1 | 1 | | 20 | J L | 3 | 0 | <u> </u> | | | 2 | | | | | L | R | |
| 1 2 | 3 | _ | | 11 | 16 | | | 19 | | 20 | 21 | | | | 2 | 2 | | | | | 80 | |
| C.P. | RAW SEWAGE | | | | | | | | _ | | | | | | | | | | | | | |
| 3 6 | Parameter | Unit | | Paran | neter | Code | • | Dec | | | Mor | thly A | Avera | age I | Res | ults | | | N | o. of S | ampl | es |
| 12 13 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | | | 30 | | | | 34 | 35 | 38 | | | | | | | | | | | | | |
| 3 9 | FINAL EFFLUENT | | | | | | | | | | | | | | | | | | | | | |
| 12 13 | Parameter | Unit | | Paran | neter | Code | | Dec | | | Mor | thly i | Avera | age I | Resi | ults | | 1 1 | N | o. of S | Sampl | es |
| | Unionized Ammon | mg/L | | | | | | | | | | Τ | | J | | | | | | | | |
| | Alkalinity | mg/L | | | | | | | | | | | | | | | | | | | | 1 |
| | рН | mg E | 1 | | | | | | | | | | | | | | | 1 | | 1 | | |
| | PII | | 1 | | | | | | | | | | | | • | | | 1 | | | | |
| | | | + + | | | | | | | | - | | | | • | | | 1 | | | | |
| | | | | | | | | | | | | | | | • | | | 1 | | | | |
| | | | + + | | | | | | | | | | | | • | | | 1 | | | | |
| | | | + + | | | | | | | | | | | | • | | | 1 | | 1 | | |
| | | | + + | | | | | | \vdash | - | + | | | | • | + | \vdash | 1 | | | \vdash | |
| | | | + + | | | | | | - | - | + | - | | | • | + | 1 | 1 | | | \vdash | |
| | | + | + | + | | | | | - | - | + | - | | - | • | + | - | 1 | | - | \vdash | - |
| | | | 30 | | | l | 34 | 35 | 38 | | 1 | <u> </u> | <u> </u> | | • | 1 | 1 | J l | | <u> </u> | Ь | <u> </u> |
| Oncrete: | Telephone Number | | Email | V 44== | .00 | | | | | | | | | | | | | | | | | |
| | | | | | | hin a f | faorra: | n.com | | | | | | | | | | | | | | |
| 705-325- | -2133 | | utlitt | eswt | uwns | mpol | sever | n.com | | | | | | | | | | | | | | |

2063 (2011/03) Page 2 of 3

| Comments | | |
|----------|--|--|
| | | |
| | | |
| | | |

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

2063 (2011/03) Page 3 of 3



Ministry of the Environment

Municipal Utility Monitoring Program (MUMP) S

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)



Ministry of the Environment

Municipal Utility Monitoring Program (MUMP) **S2** Lagoons

| Project Na | ame | | | | | | | | | | | | | | | | | | | |
|------------|-------------------------|-------------|--------------|-------------|---------|----------|-----|-------|-------|--------|------|----------------|-------|----------|----------|------------|-------|----------|----------|-----------|
| Washago | | | | | | | | | | | | | | | | | | | | |
| Mailing Ad | i | Ī | | | | | | | | | | | | | ı | | | | | |
| Unit No. | Street No. | Street Nam | | | | | | | | | | | | | | PO E | ЗОХ | | | |
| | 1024 | Hurlwood | l Lane | | | | | | | | | | | | | 59 | | | | |
| | ty/City/Town | | | | | | | ovinc | e | | | | | | | | al Co | | | |
| Orillia | | | | | | | Ol | N | | | | | | | I | _3V | 6J3 | | | |
| Operating | | | | | | | | | | | | | | | | | | | | |
| The Corp | poration of the Townshi | p of Severn | <u> </u> | | | | | | | | | | | | | | | | | |
| Mailing Ad | | 1 | | | | | | | | | | | | | 1 _ | | | | | |
| Unit No. | Street No. | Street Nam | | | | | | | | | | | | | | PO E | юх | | | |
| | 1024 | Hurlwood | 1 Lane | | | | | | | | | | | | | 59 | | | | |
| | ty/City/Town | | | | | | | ovinc | е | | | | | | | | al Co | | | |
| Orillia | | | | | | | Ol | N | | | | | | | | _3 V | 6J3 | | | |
| File No. | Works N | lumbor | | Da | ta Peri | od | | Day | _ | | | Diagha | | <u>-</u> | | | | Llnd | oto C | ada |
| FIIE NO. | VVOIKS | vumber | | Month | | Year | | Day | S | | | Discha | irge | ype | ; | | L | Opa | late C | oue |
| 4 6 | 1 2 0 0 0 |) 2 2 | 7 3 | 1 2 | , | 20 | | 3 | 1 | | | | 2 | | | | | | R | |
| 1 2 | 3 | | 11 | 16 | | 19 | J ∟ | | 21 | | | | 22 | | | | | ┕ | 80 | |
| | | 7 | | | | | | | | | | | | | | | | | | |
| C.P. | RAW SEWAGE | 1.1 | D | | | D | | | | I- I A | | | | | | 7 F | | | | |
| 3 6 | Parameter | Unit | Paran | neter Code | 1 | Dec | | | viont | nıy A | vera | ge Re | Suits | 1 | 1 | | NC | o. of S | ampi | es |
| 12 13 | | | | | | | | | | | | | | | | ↓ ↓ | | | | |
| | | | | | | | | | | | | | | | | | | <u> </u> | <u> </u> | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | ١. | | | | 1 1 | | | | |
| | | - I | 30 | | 34 | 35 | 38 | | | | | | | 1 | | . I | | | | |
| 3 9 | FINAL EFFLUENT | | | | | | | | | | | | | | | | | | | |
| 12 13 | Parameter | Unit | Param | neter Code | | Dec | | - | Mont | hlv A | vera | ge Re | culte | | | 1 [| No | o. of S | Sampl | es |
| 12 10 | Unionized Ammon | mg/L | 1 dian | lotter Gode | | Dec | | | VIOIT | | VCIE | $\frac{gc}{0}$ | 0 | 2 | 1 | | 3 | 7. 01 0 | ampi | |
| | Alkalinity | | | | | | | | | 1 | 4 | 1 | U | | 1 | | 3 | <u> </u> | | - |
| | | mg/L | | | | | | | | 1 | 4 | 1 . 7 . | | | | | 3 | <u> </u> | <u> </u> | |
| | рН | | | | | | | | | | | 7 . | 4 | | - | | 3 | | | |
| | | | | | | | | | | | | - | | | | ┦ . | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | _ | | | | | | | | | <u> </u> | | | <u> </u> | <u> </u> | |
| | | | | | | | | | | | _ | | 1 | | 1 | ↓ ↓ | | <u> </u> | <u> </u> | |
| | | | | | | | | | | | | | | | _ | | | <u> </u> | <u> </u> | Ш |
| | | | | | | | | | | | | | | | |] [| | | | |
| | | | | | ļ | | | | | | | | | | |] [| | | | |
| | | | | | | | | | | | | | | | |] [| | | | |
| | | | 30 | | 34 | 35 | 38 | | | | | | | | | | | | | |
| | Telephone Number | | Email Addre | | | | | | | | | | | | | | | | | |
| 705-325 | -2135 | 1 | utilities@te | ownshipo: | fsever | n.com | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

2063 (2011/03) Page 2 of 3

| Comments | | | |
|----------|--|--|--|
| | | | |
| | | | |
| | | | |

- 1. Environmental Monitoring and Reporting Branch, MOE, at WasteWaterReporting@Ontario.ca AND
- 2. Your Environmental Officer at your local District/Area MOE Office. (Find your local MOE office: http://www.ene.gov.on.ca/environment)

2063 (2011/03) Page 3 of 3

Appendix C

Sewage Pump Station Draw Down Tests

Pump Drawdown Test Results at Pumping Station #1 in Washago

Completed: May 20/20 Performed By: Jenna

Data:

Influent

Influent testing completed immediately before and after each trial for the pump drawdown. The increase in waste collected from an initial starting point over a 1 minute period. Results shown are in inches.

Drawdown

Drawdown testing was completed by measuring the drop of waste from an initial starting point over a 1 minute period. Results shown are in inches.

Trial Influent Drawdown No. Initial **Final** Result Initial Final Result 100 Pump 1 1 96 95.5 0.5 97 3 2 99 100 99 102.5 3.5 1 3 102.5 101.5 1 101.5 104.5 3 Pump 2 1 104.5 104 0.5 104 109.5 5.5 2 114.5 109.5 108.5 1 108.5 6

113

Volume Calculations:

3

114.5

$$V = \pi r^2 h$$
, where $r = 1.2$ m and
 $h = \frac{drawdown\ result\ (inches)\ x\ 0.0254\ m/inch}{1\ minute}$
= 4.5216 h x 1000 litres
60 seconds
= (1.914144) x result (inches)

1.5

113

119.5

6.5

Pump Capacity:

$$V_{\text{total}} = V_{\text{pump}} + V_{\text{influent}}$$

Results:

Using the calculations shown above, the results of the average pump capacity of the pumps are indicated in L/s.

| | Trial 1 | Trial 2 | Trial 3 | Average |
|--------|---------|---------|---------|---------|
| Pump 1 | 6.7 | 8.6 | 7.7 | 7.67 |
| Pump 2 | 11.5 | 13.4 | 15.3 | 13.4 |

Therefore the pump capacity of Pump 1 is 7.67 L/s and Pump 2 is 13.4 L/s.

Prepared On: May 21/20
Prepared By: Brad
Signature:

Pump Drawdown Test Results at Pumping Station #1 in Washago

Completed: Nov. 13/2020
Performed By: Silas and Aaron

Data:

Influent

Influent testing completed immediately before and after each trial for the pump drawdown. The increase in waste collected from an initial starting point over a 1 minute period. Results shown are in inches.

Drawdown

Drawdown testing was completed by measuring the drop of waste from an initial

starting point over a 1 minute period. Results shown are in inches.

| <u> </u> | Trial | | Influent | | | Drawdowr | 1 |
|----------|-------|---------|----------|--------|---------|----------|--------|
| | No. | Initial | Final | Result | Initial | Final | Result |
| Pump 1 | 1 | 0.91 | 0.92 | 0.01 | 1.05 | 0.87 | 0.18 |
| | 2 | 0.99 | 1.00 | 0.01 | 1.01 | 0.81 | 0.20 |
| | 3 | 1.00 | 1.01 | 0.01 | 1.04 | 0.87 | 0.17 |
| Pump 2 | 1 | 0.95 | 0.96 | 0.01 | 0.99 | 0.80 | 0.19 |
| | 2 | 1.00 | 1.01 | 0.01 | 1.02 | 0.85 | 0.17 |
| | 3 | 1.02 | 1.03 | 0.01 | 1.04 | 0.89 | 0.15 |

Volume Calculations:

V =
$$\pi r^2 h$$
, where r = 1.2 m and
h = $\frac{\text{drawdown result (inches)} \times 0.0254 \text{ m/inch}}{1 \text{ minute}}$
= 4.5216 h x $\frac{1000 \text{ litres}}{60 \text{ seconds}}$
= (1.914144) x result (inches)

Pump Capacity:

$$V_{\text{total}} = V_{\text{pump}} + V_{\text{influent}}$$

Results:

Using the calculations shown above, the results of the average pump capacity of the pumps are indicated in L/s.

| | Trial 1 | Trial 2 | Trial 3 | Average |
|--------|---------|---------|---------|---------|
| Pump 1 | 12.80 | 14.31 | 12.03 | 13.04 |
| Pump 2 | 13.55 | 12.03 | 10.54 | 12.04 |

Therefore the pump capacity of Pump 1 is 13.04 L/s and Pump 2 is 12.04 L/s.

Prepared On: May 21/20
Prepared By: Brad

Signature:

Appendix D

Alum Dosing Formula

Alum Dosing

Dry Alum

Mass of Alum (kg) = $\frac{\text{Gross Volume of Cell (m}^3) \times \text{Optimum Alum Dosage (mg/L)} \times 1000\text{L/m}^3}{1,000,000 \text{ mg/kg}}$

Liquid Alum

Volume of Alum (L) =

Gross Volume of Cell (m³) x 1,000L/m³ x Optimum Alum Dosage (mg/L) 1,000,000 mg/kg x Density of Alum (1.335 kg/L) x % of alum concentration (48.5%)

OR

Gross Volume of Cell (m³) x Optimum Alum Dosage (mg/L) 647.5 mg/L

Appendix E

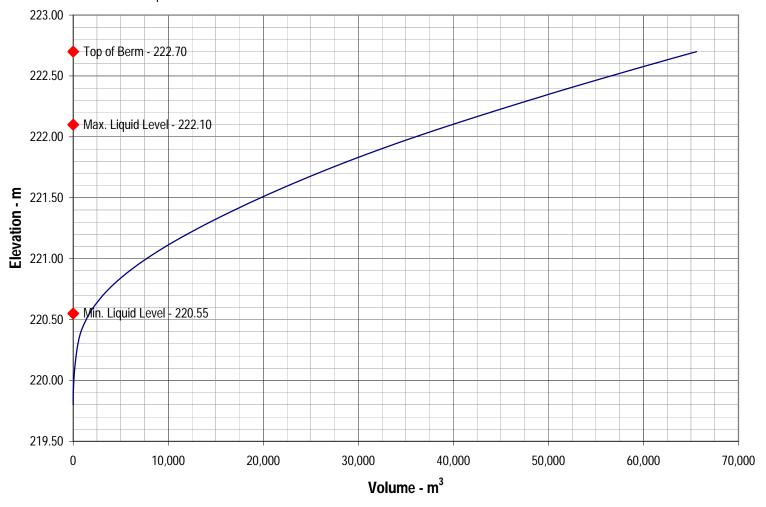
Lagoon Stage Storage Graphs

Note

Elevations are referenced to the following temporary benchmarks:

TBM No. 1 - Bolt in rock outcrop 37m north of Cell No. 1 outlet structure - Elev. 223.51

TBM No. 2 - Bolt in rock outcrop 26 m north of Cell No. 1 outlet structure - Elev. 223.51





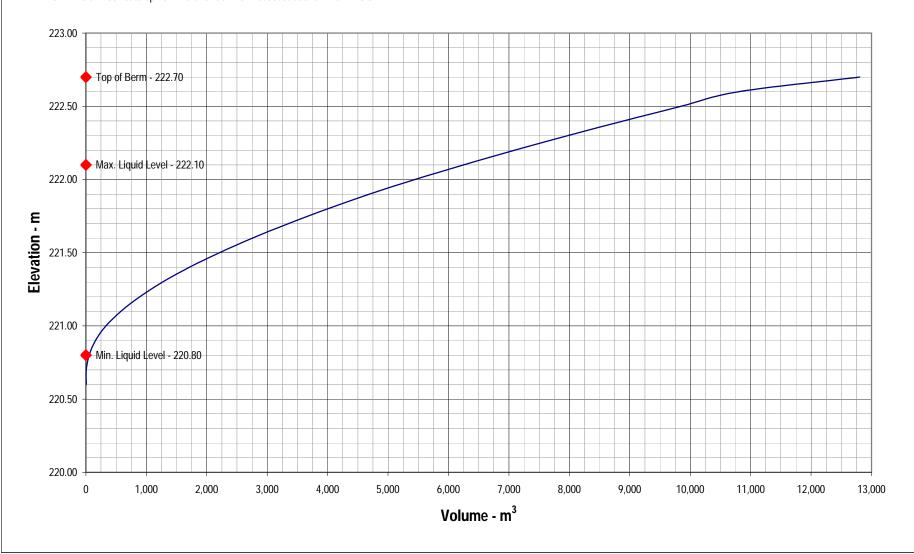
Township of Severn Village of Washago Sewage Treatment Works Stage Storage Graph - Cell No. 1 February 2012

Note

Elevations are referenced to the following temporary benchmarks:

TBM No. 1 - Bolt in rock outcrop 37m north of Cell No. 1 outlet structure - Elev. 223.51

TBM No. 2 - Bolt in rock outcrop 26 m north of Cell No. 1 outlet structure - Elev. 223.51





Township of Severn Village of Washago Sewage Treatment Works Stage Storage Graph - Cell No. 2 February 2012

Appendix F

Laboratory Analysis Reports



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

15-January-2020

Date Rec.: 09 January 2020 LR Report: CA12222-JAN20

Copy: #1

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: t Analysis Completed Date | 4: Analysis Completed Time | 6: Washago PS #1 |
|---|------------------------------|------------------------------|------------------------------------|-------------------------------------|---------------------|
| Sample Date & Time | | | | | 08-Jan-20 10:55 |
| Temperature Upon Receipt [°C] | | | | | 3.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 09-Jan-20 | 17:55 | 14-Jan-20 | 13:33 | 230 |
| Total Suspended Solids [mg/L] | 10-Jan-20 | 10:59 | 15-Jan-20 | 10:29 | 97 |
| Phosphorus (total) [mg/L] | 09-Jan-20 | 16:14 | 13-Jan-20 | 10:51 | 4.78 |
| Total Kjeldahl Nitrogen [as N mg/L] | 09-Jan-20 | 16:45 | 14-Jan-20 | 09:35 | 58.9 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

21-February-2020

Date Rec.: 13 February 2020 LR Report: CA13248-FEB20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 6: Washago PS #1 |
|---|------------------------------|------------------------------|----------------------------------|-------------------------------------|---------------------|
| Sample Date & Time | | | | | 12-Feb-20 11:02 |
| Temperature Upon Receipt [°C] | | | | | 9.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 13-Feb-20 | 17:03 | 18-Feb-20 | 13:41 | 264 |
| Total Suspended Solids [mg/L] | 14-Feb-20 | 07:34 | 19-Feb-20 | 15:42 | 132 |
| Phosphorus (total) [mg/L] | 13-Feb-20 | 07:03 | 14-Feb-20 | 14:50 | 4.30 |
| Total Kjeldahl Nitrogen [as N mg/L] | 13-Feb-20 | 18:01 | 14-Feb-20 | 13:21 | 44.7 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

11-March-2020

Date Rec.: 06 March 2020 LR Report: CA13110-MAR20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: : Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Washago PS #1 |
|---|------------------------------|------------------------------|------------------------------------|-------------------------------------|------------------------|---------------------|
| Sample Date & Time | | | | | | 05-Mar-20 10:27 |
| Temperature Upon Receipt [°C] | | | | | | 9.5 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 06-Mar-20 | 16:10 | 11-Mar-20 | 13:48 | 25 | 181 |
| Total Suspended Solids [mg/L] | 09-Mar-20 | 15:42 | 11-Mar-20 | 09:34 | 25 | 142 |
| Phosphorus (total) [mg/L] | 06-Mar-20 | 17:00 | 10-Mar-20 | 07:58 | 1 | 3.51 |
| Total Kjeldahl Nitrogen [as N mg/L] | 09-Mar-20 | 21:25 | 10-Mar-20 | 13:04 | | 35.9 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

17-April-2020

Date Rec.: 09 April 2020 LR Report: CA13177-APR20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Star Time | 3: t Analysis Completed Date | 4: Analysis Completed Time | 6: Washago PS #1 |
|---|------------------------------|-----------------------------|------------------------------------|-------------------------------------|---------------------|
| Sample Date & Time | | | | | 08-Apr-20 09:45 |
| Temperature Upon Receipt [°C] | | | | | 9.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 09-Apr-20 | 20:14 | 14-Apr-20 | 14:05 | 226 |
| Total Suspended Solids [mg/L] | 15-Apr-20 | 19:33 | 17-Apr-20 | 10:16 | 217 |
| Phosphorus (total) [mg/L] | 13-Apr-20 | 08:30 | 14-Apr-20 | 08:22 | 2.49 |
| Total Kjeldahl Nitrogen [as N mg/L] | 13-Apr-20 | 20:17 | 14-Apr-20 | 19:16 | 27.7 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON

Phone: 705-345-2338 (cell)

Fax:705-325-1247

L3V 6J3, Canada

21-April-2020

Date Rec. : 13 April 2020 LR Report: CA12532-APR20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Washago Lagoon |
|---|------------------------------|------------------------------|----------------------------------|-------------------------------------|------------------------|----------------------|
| Sample Date & Time | | | | | | 09-Apr-20 10:40 |
| Temperature Upon Receipt [°C] | | | | | | 9.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 13-Apr-20 | 20:46 | 20-Apr-20 | 12:57 | 25 | 15 |
| Total Suspended Solids [mg/L] | 15-Apr-20 | 10:01 | 17-Apr-20 | 14:41 | 25 | 12 |
| pH [no unit] | 13-Apr-20 | 13:14 | 15-Apr-20 | 11:23 | | 7.96 |
| Alkalinity [mg/L as CaCO3] | 13-Apr-20 | 13:14 | 15-Apr-20 | 11:23 | | 92 |
| Phosphorus (total) [mg/L] | 13-Apr-20 | 19:30 | 14-Apr-20 | 18:41 | 1 | 0.17 |
| Total Kjeldahl Nitrogen [as N mg/L] | 13-Apr-20 | 20:17 | 15-Apr-20 | 10:36 | | 5.4 |
| Ammonia+Ammonium (N) [as N mg/L] | 14-Apr-20 | 12:00 | 16-Apr-20 | 08:27 | | 4.6 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

24-April-2020

Date Rec.: 17 April 2020

#1

LR Report: CA12838-APR20

Copy:

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Attn: Tony Drouin

Phone: 705-345-2338 (cell)

Fax:705-325-1247

CERTIFICATE OF ANALYSIS

Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Washago Lagoon |
|---|------------------------------|------------------------------|----------------------------------|-------------------------------------|------------------------|----------------------|
| Sample Date & Time | | | | | | 16-Apr-20 10:38 |
| Temperature Upon Receipt [°C] | | | | | | 7.5 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 17-Apr-20 | 21:49 | 22-Apr-20 | 11:23 | 25 | 18 |
| Total Suspended Solids [mg/L] | 20-Apr-20 | 08:39 | 23-Apr-20 | 09:42 | 25 | 16 |
| pH [no unit] | 19-Apr-20 | 09:21 | 20-Apr-20 | 10:51 | | 8.04 |
| Alkalinity [mg/L as CaCO3] | 19-Apr-20 | 09:21 | 20-Apr-20 | 10:51 | | 97 |
| Phosphorus (total) [mg/L] | 20-Apr-20 | 16:58 | 21-Apr-20 | 19:30 | 1 | 0.09 |
| Total Kjeldahl Nitrogen [as N mg/L] | 21-Apr-20 | 17:24 | 23-Apr-20 | 17:19 | | 5.1 |
| Ammonia+Ammonium (N) [as N mg/L] | 22-Apr-20 | 16:03 | 24-Apr-20 | 00:45 | | 3.8 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

25-April-2020

Date Rec. : 22 April 2020 LR Report: CA12947-APR20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Washago Lagoon |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|------------------------|----------------------|
| Sample Date & Time | | | | | | 21-Apr-20 10:15 |
| Temperature Upon Receipt [°C] | | | | | | 8.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 22-Apr-20 | 22:03 | 27-Apr-20 | 13:25 | 25 | 17 |
| Total Suspended Solids [mg/L] | 23-Apr-20 | 06:15 | 27-Apr-20 | 09:36 | 25 | 19 |
| pH [no unit] | 23-Apr-20 | 06:55 | 27-Apr-20 | 09:29 | | 8.46 |
| Alkalinity [mg/L as CaCO3] | 23-Apr-20 | 06:55 | 27-Apr-20 | 09:29 | | 90 |
| Phosphorus (total) [mg/L] | 22-Apr-20 | 16:51 | 24-Apr-20 | 00:02 | 1 | 0.05 |
| Total Kjeldahl Nitrogen [as N mg/L] | 23-Apr-20 | 07:51 | 27-Apr-20 | 10:59 | | 4.6 |
| Ammonia+Ammonium (N) [as N mg/L] | 23-Apr-20 | 20:00 | 24-Apr-20 | 21:07 | | 2.9 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

13-May-2020

Twp of Severn (Washago STP)

Attn: Tony Drouin

Date Rec.: 07 May 2020 LR Report: CA12153-MAY20

P.O. Box 159 Orillia, ON

Copy: #1

L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 6: Washago PS #1 |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|---------------------|
| Sample Date & Time | | | | | 06-May-20 08:54 |
| Temperature Upon Receipt [°C] | | | | | 11.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 07-May-20 | 19:13 | 12-May-20 | 10:54 | 135 |
| Total Suspended Solids [mg/L] | 08-May-20 | 06:09 | 10-May-20 | 16:37 | 103 |
| Phosphorus (total) [mg/L] | 08-May-20 | 17:06 | 11-May-20 | 16:13 | 3.69 |
| Total Kjeldahl Nitrogen [as N mg/L] | 08-May-20 | 19:58 | 12-May-20 | 13:00 | 42.4 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

25-May-2020

Date Rec. : 14 May 2020 LR Report: CA12309-MAY20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Lagoon Effluent | 7: Green River Upstream | 8: Green River Downstream |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|------------------------|-----------------------|-------------------------------|---------------------------------|
| Sample Date & Time | | | | | | 13-May-20 08:40 | 13-May-20 08:53 | 13-May-20 09:05 |
| Temperature Upon Receipt [°C] | | | | | | 12.0 | 12.0 | 12.0 |
| Field pH [no unit] | | | | | | 7.7 | 8.0 | 8.0 |
| Field Temperature [celcius] | | | | | | 10.5 | 7.5 | 7.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 14-May-20 | 22:05 | 19-May-20 | 16:18 | 25 | < 4 | < 4 | < 4 |
| Total Suspended Solids [mg/L] | 15-May-20 | 08:04 | 21-May-20 | 10:19 | 25 | 3 | 2 | < 2 |
| Phosphorus (total) [mg/L] | 14-May-20 | 16:00 | 19-May-20 | 16:33 | 1 | 0.11 | < 0.03 | < 0.03 |
| Total Kjeldahl Nitrogen [as N mg/L] | 15-May-20 | 17:00 | 20-May-20 | 12:22 | | 4.4 | 0.6 | < 0.5 |
| Alkalinity [mg/L as CaCO3] | 15-May-20 | 13:46 | 19-May-20 | 19:13 | | 90 | 103 | 102 |
| Ammonia+Ammonium (N) [as N mg/L] | 15-May-20 | 18:00 | 20-May-20 | 17:06 | | 2.9 | < 0.1 | < 0.1 |
| Unionized Ammonia [mg/L as N] | 15-May-20 | 18:00 | 20-May-20 | 17:06 | | 0.028 | < 0.001 | < 0.001 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

25-May-2020

Date Rec.: 19 May 2020 LR Report: CA14700-MAY20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Lagoon Effluent | 7: Green River Upstream | 8: Green River Downstream |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|------------------------|-----------------------|-------------------------------|---------------------------------|
| Sample Date & Time | | | | | | 19-May-20 08:28 | 19-May-20 08:35 | 19-May-20 08:46 |
| Temperature Upon Receipt [°C] | | | | | | 13.0 | 13.0 | 13.0 |
| Field pH [no unit] | | | | | | 7.7 | 7.9 | 8.0 |
| Field Temperature [celcius] | | | | | | 14 | 12 | 12 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 20-May-20 | 22:12 | 25-May-20 | 14:23 | 25 | < 4 | < 4 | < 4 |
| Total Suspended Solids [mg/L] | 21-May-20 | 18:35 | 24-May-20 | 22:53 | 25 | 3 | < 2 | < 2 |
| Phosphorus (total) [mg/L] | 20-May-20 | 22:19 | 21-May-20 | 20:13 | 1 | 0.16 | < 0.03 | < 0.03 |
| Total Kjeldahl Nitrogen [as N mg/L] | 20-May-20 | 17:47 | 21-May-20 | 12:48 | | 3.8 | < 0.5 | 0.5 |
| Alkalinity [mg/L as CaCO3] | 21-May-20 | 13:49 | 25-May-20 | 10:11 | | 90 | 101 | 101 |
| Ammonia+Ammonium (N) [as N mg/L] | 20-May-20 | 17:00 | 21-May-20 | 21:24 | | 2.9 | < 0.1 | < 0.1 |
| Unionized Ammonia [mg/L as N] | 20-May-20 | 17:00 | 21-May-20 | 21:24 | | 0.036 | < 0.001 | < 0.001 |

Note: Provincial unionized ammonia calculated from field pH and temperature provided on the chain of custody form.

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

10-June-2020

Date Rec. : 03 June 2020 **LR Report: CA12102-JUN20**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Star Time | 3: t Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Lagoon Effluent | 7: Green River Upstream | 8: Green River Downstream |
|---|------------------------------|-----------------------------|------------------------------------|-------------------------------------|------------------------|-----------------------|-------------------------------|---------------------------------|
| Sample Date & Time | | | | | | 02-Jun-20 10:41 | 02-Jun-20 10:50 | 02-Jun-20 10:26 |
| Temperature Upon Receipt [°C] | | | | | | 14.0 | 14.0 | 14.0 |
| Field pH [no unit] | | | | | | 7.4 | 7.3 | 7.4 |
| Field Temperature [celcius] | | | | | | 17 | 16 | 16 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 04-Jun-20 | 17:35 | 09-Jun-20 | 13:42 | 25 | < 4 | 7 | < 4 |
| Total Suspended Solids [mg/L] | 04-Jun-20 | 09:50 | 09-Jun-20 | 17:31 | 25 | 5 | < 2 | < 2 |
| Alkalinity [mg/L as CaCO3] | 04-Jun-20 | 09:59 | 09-Jun-20 | 13:12 | | 96 | 97 | 99 |
| Phosphorus (total) [mg/L] | 03-Jun-20 | 16:08 | 08-Jun-20 | 13:49 | 1 | 0.35 | < 0.03 | < 0.03 |
| Total Kjeldahl Nitrogen [as N mg/L] | 03-Jun-20 | 18:03 | 04-Jun-20 | 15:04 | | 4.3 | < 0.5 | < 0.5 |
| Ammonia+Ammonium (N) [as N mg/L] | 03-Jun-20 | 18:26 | 04-Jun-20 | 17:41 | | 3.0 | < 0.1 | < 0.1 |
| Unionized Ammonia [mg/L as N] | 03-Jun-20 | 18:26 | 04-Jun-20 | 17:41 | | 0.024 | < 0.001 | < 0.001 |

Note: Provincial unionized ammonia calculated from field pH and temperature provided on the chain of custody form.



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA12102-JUN20

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

10-June-2020

Date Rec.: 04 June 2020 LR Report: CA12226-JUN20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: t Analysis Completed Date | 4: Analysis Completed Time | 5: Washago PS #1 |
|---|------------------------------|------------------------------|------------------------------------|-------------------------------------|---------------------|
| Sample Date & Time | | | | | 03-Jun-20 09:57 |
| Temperature Upon Receipt [°C] | | | | | 16.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 04-Jun-20 | 17:35 | 09-Jun-20 | 13:57 | 136 |
| Total Suspended Solids [mg/L] | 05-Jun-20 | 11:28 | 08-Jun-20 | 10:23 | 124 |
| Phosphorus (total) [mg/L] | 05-Jun-20 | 11:24 | 09-Jun-20 | 13:31 | 2.62 |
| Total Kjeldahl Nitrogen [as N mg/L] | 04-Jun-20 | 20:53 | 05-Jun-20 | 17:09 | 28.1 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

Date Rec.: 08 July 2020

LR Report: CA12286-JUL20

P.O. Box 159
Orillia, ON
L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Washago PS #1 |
|---|------------------------------|------------------------------|----------------------------------|-------------------------------------|------------------------|---------------------|
| Sample Date & Time | | | | | | 07-Jul-20 11:40 |
| Temperature Upon Receipt [°C] | | | | | | 19.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 09-Jul-20 | 17:26 | 14-Jul-20 | 13:00 | 25 | 210 |
| Total Suspended Solids [mg/L] | 10-Jul-20 | 06:38 | 13-Jul-20 | 17:11 | 25 | 177 |
| Phosphorus (total) [mg/L] | 08-Jul-20 | 17:23 | 09-Jul-20 | 12:47 | 1 | 4.95 |
| Total Kjeldahl Nitrogen [as N mg/L] | 08-Jul-20 | 22:28 | 10-Jul-20 | 13:12 | | 45.4 |

Patti Stark

Project Specialist,

Environment, Health & Safety

#1



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

19-August-2020

Date Rec.: 12 August 2020 LR Report: CA12307-AUG20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: t Analysis Completed Date | 4: Analysis Completed Time | 6: Washago PS#1 |
|---|------------------------------|------------------------------|------------------------------------|-------------------------------------|--------------------|
| Sample Date & Time | | | | | 11-Aug-20 11:22 |
| Temperature Upon Receipt [°C] | | | | | 19.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 12-Aug-20 | 18:03 | 17-Aug-20 | 15:25 | 181 |
| Total Suspended Solids [mg/L] | 15-Aug-20 | 11:07 | 17-Aug-20 | 11:59 | 114 |
| Phosphorus (total) [mg/L] | 12-Aug-20 | 17:53 | 13-Aug-20 | 16:23 | 4.12 |
| Total Kjeldahl Nitrogen [as N mg/L] | 12-Aug-20 | 17:35 | 13-Aug-20 | 15:23 | 43.0 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

22-September-2020

Date Rec.: 10 September 2020 LR Report: CA12411-SEP20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 6: Washago PS #1 |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|---------------------|
| Sample Date & Time | | | | | 09-Sep-20 10:58 |
| Temperature Upon Receipt [°C] | | | | | 17.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 10-Sep-20 | 17:33 | 15-Sep-20 | 14:31 | 151 |
| Total Suspended Solids [mg/L] | 14-Sep-20 | 09:54 | 15-Sep-20 | 17:55 | 66 |
| Phosphorus (total) [mg/L] | 11-Sep-20 | 10:27 | 21-Sep-20 | 08:45 | 2.85 |
| Total Kjeldahl Nitrogen [as N mg/L] | 11-Sep-20 | 17:00 | 15-Sep-20 | 15:50 | 35.6 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

16-October-2020

Date Rec.: 07 October 2020 LR Report: CA12266-OCT20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 6: Washago PS #1 |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|---------------------|
| Sample Date & Time | | | | | 05-Oct-20 10:20 |
| Temperature Upon Receipt [°C] | | | | | 13.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 08-Oct-20 | 18:46 | 13-Oct-20 | 16:57 | 130 |
| Total Suspended Solids [mg/L] | 09-Oct-20 | 15:00 | 13-Oct-20 | 17:17 | 144 |
| Phosphorus (total) [mg/L] | 13-Oct-20 | 14:56 | 14-Oct-20 | 19:12 | 5.89 |
| Total Kjeldahl Nitrogen [as N mg/L] | 13-Oct-20 | 07:11 | 16-Oct-20 | 11:53 | 54.5 |

Kimberley Didsbury

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

18-November-2020

Date Rec.: 12 November 2020 LR Report: CA12377-NOV20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 6: Washago PS #1 |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|---------------------|
| Sample Date & Time | | | | | 11-Nov-20 13:55 |
| Temperature Upon Receipt [°C] | | | | | 6.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 12-Nov-20 | 17:33 | 17-Nov-20 | 15:38 | 207 |
| Total Suspended Solids [mg/L] | 13-Nov-20 | 07:25 | 18-Nov-20 | 09:04 | 159 |
| Phosphorus (total) [mg/L] | 13-Nov-20 | 13:26 | 16-Nov-20 | 10:33 | 2.24 |
| Total Kjeldahl Nitrogen [as N mg/L] | 13-Nov-20 | 08:35 | 17-Nov-20 | 09:58 | 25.0 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

23-November-2020

Date Rec.: 16 November 2020 LR Report: CA12490-NOV20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Washago Lagoon |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|---------------------|----------------------|
| Sample Date & Time | | | | | | 16-Nov-20 11:24 |
| Temperature Upon Receipt [°C] | | | | | | 6.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 18-Nov-20 | 17:47 | 23-Nov-20 | 14:03 | 25 | 5 |
| Total Suspended Solids [mg/L] | 18-Nov-20 | 14:31 | 20-Nov-20 | 10:15 | 25 | < 2 |
| Alkalinity [mg/L as CaCO3] | 17-Nov-20 | 08:40 | 19-Nov-20 | 10:36 | | 105 |
| pH [No unit] | 17-Nov-20 | 08:40 | 19-Nov-20 | 10:36 | | 7.65 |
| Ammonia+Ammonium (N) [as N mg/L] | 17-Nov-20 | 19:05 | 18-Nov-20 | 13:20 | | 4.8 |
| Phosphorus (total) [mg/L] | 19-Nov-20 | 09:02 | 20-Nov-20 | 10:01 | 1 | 0.20 |
| Total Kjeldahl Nitrogen [as N mg/L] | 18-Nov-20 | 17:12 | 19-Nov-20 | 11:14 | | 6.8 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-2338 (cell)

Fax:705-325-1247

03-December-2020

Date Rec.: 25 November 2020 LR Report: CA12732-NOV20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Washago Lagoon |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|------------------------|----------------------|
| Sample Date & Time | | | | | | 24-Nov-20 09:16 |
| Temperature Upon Receipt [°C] | | | | | | 11.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 25-Nov-20 | 17:10 | 30-Nov-20 | 14:31 | 25 | 4 |
| Total Suspended Solids [mg/L] | 27-Nov-20 | 13:44 | 01-Dec-20 | 16:49 | 25 | 2 |
| Phosphorus (total) [mg/L] | 25-Nov-20 | 15:43 | 26-Nov-20 | 12:24 | 1 | 0.21 |
| Total Kjeldahl Nitrogen [as N mg/L] | 01-Dec-20 | 16:20 | 02-Dec-20 | 14:46 | | 5.2 |
| Ammonia+Ammonium (N) [as N mg/L] | 01-Dec-20 | 18:24 | 02-Dec-20 | 15:06 | | 5.0 |
| pH [No unit] | 25-Nov-20 | 16:57 | 26-Nov-20 | 16:10 | | 8.02 |
| Alkalinity [mg/L as CaCO3] | 25-Nov-20 | 16:57 | 26-Nov-20 | 16:10 | | 105 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (cell)

Fax:705-325-1247

07-December-2020

Date Rec.: 30 November 2020 LR Report: CA14837-NOV20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Washago Lagoon |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|------------------------|----------------------|
| Sample Date & Time | | | | | | 30-Nov-20 10:14 |
| Temperature Upon Receipt [°C] | | | | | | 9.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 01-Dec-20 | 16:42 | 07-Dec-20 | 11:25 | 25 | 4 |
| Total Suspended Solids [mg/L] | 02-Dec-20 | 06:24 | 04-Dec-20 | 08:33 | 25 | 5 |
| pH [No unit] | 01-Dec-20 | 15:03 | 02-Dec-20 | 14:35 | | 8.03 |
| Alkalinity [mg/L as CaCO3] | 01-Dec-20 | 15:03 | 02-Dec-20 | 14:35 | | 104 |
| Phosphorus (total) [mg/L] | 01-Dec-20 | 18:20 | 02-Dec-20 | 12:59 | 1 | 0.19 |
| Total Kjeldahl Nitrogen [as N mg/L] | 03-Dec-20 | 15:30 | 04-Dec-20 | 14:21 | | 5.3 |
| Ammonia+Ammonium (N) [as N mg/L] | 01-Dec-20 | 18:24 | 02-Dec-20 | 15:19 | | 4.8 |

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (cell)

Fax:705-325-1247

15-December-2020

Date Rec.: 10 December 2020 LR Report: CA13255-DEC20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 6: Washago PS #1 |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|---------------------|
| Sample Date & Time | | | | | 09-Dec-20 13:42 |
| Temperature Upon Receipt [°C] | | | | | 7.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 10-Dec-20 | 17:26 | 15-Dec-20 | 13:56 | 264 |
| Total Suspended Solids [mg/L] | 12-Dec-20 | 10:18 | 15-Dec-20 | 13:01 | 226 |
| Phosphorus (total) [mg/L] | 10-Dec-20 | 15:00 | 11-Dec-20 | 14:07 | 3.97 |
| Total Kjeldahl Nitrogen [as N mg/L] | 10-Dec-20 | 17:00 | 15-Dec-20 | 09:55 | 42.6 |

Carrie Greeniaw Project Specialist,



Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (cell)

Fax:705-325-1247

21-December-2020

Date Rec.: 14 December 2020 LR Report: CA13460-DEC20

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Lagoon Effluent | 7: Green River Upstream | 8: Green River Downstream |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|------------------------|-----------------------|-------------------------------|---------------------------------|
| Sample Date & Time | | | | | | 14-Dec-20 08:52 | 14-Dec-20 09:01 | 14-Dec-20 08:41 |
| Temperature Upon Receipt [°C] | | | | | | 8.0 | 8.0 | 8.0 |
| Field pH [no unit] | | | | | | 7.6 | 7.8 | 7.7 |
| Field Temperature [celcius] | | | | | | 4.5 | 3.0 | 3.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 15-Dec-20 | 16:57 | 21-Dec-20 | 15:25 | 25 | < 4 | < 4 | < 4 |
| Total Suspended Solids [mg/L] | 16-Dec-20 | 08:05 | 17-Dec-20 | 07:47 | 25 | < 2 | < 2 | < 2 |
| Alkalinity [mg/L as CaCO3] | 15-Dec-20 | 10:00 | 17-Dec-20 | 07:57 | | 95 | 100 | 97 |
| Phosphorus (total) [mg/L] | 15-Dec-20 | 16:13 | 16-Dec-20 | 14:44 | 1 | 0.17 | < 0.03 | < 0.03 |
| Total Kjeldahl Nitrogen [as N mg/L] | 16-Dec-20 | 15:16 | 18-Dec-20 | 14:28 | | 6.0 | < 0.5 | < 0.5 |
| Ammonia+Ammonium (N) [as N mg/L] | 15-Dec-20 | 19:00 | 16-Dec-20 | 13:13 | | 4.5 | < 0.1 | < 0.1 |
| Unionized Ammonia [mg/L as N] | 15-Dec-20 | 19:00 | 16-Dec-20 | 13:13 | | 0.022 | < 0.001 | < 0.001 |

Note: Provincial unionized ammonia calculated from field pH and temperature provided on the chain of custody form.



Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA13460-DEC20

Patti Stark

Project Specialist,



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (cell)

Fax:705-325-1247

24-December-2020

Date Rec.: 18 December 2020 LR Report: CA12814-DEC20

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Lagoon Effluent | 7: Green River Upstream | 8: Green River Downstream |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|------------------------|-----------------------|-------------------------------|---------------------------------|
| Sample Date & Time | | | | | | 17-Dec-20 08:33 | 17-Dec-20 08:41 | 17-Dec-20 08:17 |
| Temperature Upon Receipt [°C] | | | | | | 6.0 | 6.0 | 6.0 |
| Field pH [no unit] | | | | | | 7.3 | 7.6 | 7.6 |
| Field Temperature [celcius] | | | | | | 4.0 | 2.0 | 2.5 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 18-Dec-20 | 15:59 | 23-Dec-20 | 13:30 | 25 | 4 | < 4 | < 4 |
| Total Suspended Solids [mg/L] | 21-Dec-20 | 07:40 | 23-Dec-20 | 09:59 | 25 | 3 | < 2 | 10 |
| Alkalinity [mg/L as CaCO3] | 21-Dec-20 | 08:38 | 23-Dec-20 | 17:50 | | 118 | 110 | 104 |
| Phosphorus (total) [mg/L] | 18-Dec-20 | 14:54 | 21-Dec-20 | 10:24 | 1 | 0.21 | < 0.03 | < 0.03 |
| Total Kjeldahl Nitrogen [as N mg/L] | 21-Dec-20 | 14:56 | 23-Dec-20 | 09:58 | | 7.3 | < 0.5 | 0.6 |
| Ammonia+Ammonium (N) [as N mg/L] | 23-Dec-20 | 14:58 | 24-Dec-20 | 11:23 | | 6.2 | < 0.1 | < 0.1 |
| Unionized Ammonia [mg/L as N] | 23-Dec-20 | 14:58 | 24-Dec-20 | 11:23 | | 0.014 | < 0.001 | < 0.001 |

Note: Provincial unionized ammonia calculated from field pH and temperature provided on the chain of custody form.

Patti Stark

Project Specialist,



Phone: 705-652-2000 FAX: 705-652-6365

Twp of Severn (Washago STP)

Attn: Tony Drouin

P.O. Box 159 Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (cell)

Fax:705-325-1247

29-December-2020

Date Rec.: 22 December 2020 LR Report: CA12834-DEC20

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: Client Limits | 6: Lagoon Effluent | 7: Green River Upstream | 8: Green River Downstream |
|---|------------------------------|------------------------------|-------------------------------------|-------------------------------------|------------------------|-----------------------|-------------------------------|---------------------------------|
| Sample Date & Time | | | | | | 21-Dec-20 08:56 | 21-Dec-20 09:22 | 21-Dec-20 08:45 |
| Temperature Upon Receipt [°C] | | | | | | 10.0 | 10.0 | 10.0 |
| Field pH [no unit] | | | | | | 7.3 | 7.8 | 7.9 |
| Field Temperature [celcius] | | | | | | 2 | 5 | 3 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 22-Dec-20 | 15:27 | 29-Dec-20 | 10:23 | 25 | 10 | < 4 | < 4 |
| Total Suspended Solids [mg/L] | 23-Dec-20 | 10:33 | 24-Dec-20 | 12:53 | 25 | 10 | 2 | < 2 |
| Phosphorus (total) [mg/L] | 22-Dec-20 | 18:00 | 23-Dec-20 | 14:10 | 1 | 0.35 | < 0.03 | < 0.03 |
| Total Kjeldahl Nitrogen [as N mg/L] | 23-Dec-20 | 13:30 | 24-Dec-20 | 09:17 | | 14.3 | < 0.5 | < 0.5 |
| Alkalinity [mg/L as CaCO3] | 22-Dec-20 | 17:22 | 24-Dec-20 | 12:35 | | 210 | 110 | 113 |
| Ammonia+Ammonium (N) [as N mg/L] | 22-Dec-20 | 15:51 | 24-Dec-20 | 11:24 | | 13.6 | < 0.1 | < 0.1 |
| Unionized Ammonia [mg/L as N] | 22-Dec-20 | 15:51 | 24-Dec-20 | 11:24 | | 0.026 | < 0.001 | < 0.001 |

Note: Provincial unionized ammonia calculated from field pH and temperature provided on the chain of custody form.



Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA12834-DEC20

Patti Stark

Project Specialist,