

Wastewater Treatment and Collection System

# Washago 2022 Annual Report

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## **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 2022. 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 40,094 m<sup>3</sup> - approximately 49% of the facility's operating capacity of 81,900 m3/year.

No bypass occurred during the 2022 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 northwest 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

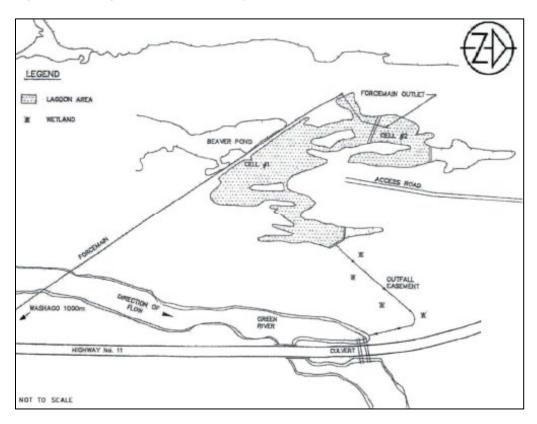
runs through the adjacent wetland. According to the C of A, the seasonal operating capacity of the facility is 40,950 m³ based on an average day flow of 227.5 m³/day over 180 days. A breakdown of the lagoon capacity is shown in Table 1.

**Table 1: Lagoon Capacity** 

Operating Cell	Dead Storage (m³)	Active Storage below 0.6 m Freeboard (m³)	Active Storage including Freeboard (m³)	Total Storage (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 <sub>5</sub>	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 monthly and analyzed for TSS,  $BOD_5$ ,  $P_t$  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 (mg/L)	BOD5 (mg/L)	Pt	TKN (mg/L)
January 5, 2022	139	193	5.35	52.6
February 8, 2022	325	377	6.90	58.7
March 9, 2022	208	180	5.68	52.3
April 5, 2022	238	138	4.52	44.3
May 3, 2022	159	129	2.69	25.9
June 7, 2022	125	143	1.82	17.1
July 6, 2022	210	213	7.26	73.4
August 3, 2022	246	371	6.66	60.0
September 7, 2022	71	371	4.76	41.1
October 4, 2022	142	156	3.14	33.9
November 9, 2022	212	128	2.15	23.7
December 7, 2022	120	191	4.15	39.6

## Sewage Flow Monitoring

The volume of sewage pumped from Washago Sewage Pumping Station #1 to the lagoon is estimated monthly 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, 2021, to April 3, 2022, winter operating season was 12,148 m³. The total estimated volume of sewage transferred to the lagoon during the April 4, 2022, to November 9, 2022, summer operating season was 16,102 m³. The total volume of sewage transferred to the lagoon during the winter and summer operating seasons was 28,250 m³. Sewage flows are summarized in Table 4.

**Table 4: Sewage Flow to Lagoon** 

Winter Operating Sea	son	Summer Operating Season			
Date	Volume (m³)	Date	Volume (m³)		
October 14-31, 2021	1,040	April 4-30, 2022	2,751		
November 2021	2,194	May 2022	2,674		
December 2021	2,713	June 2022	3,400		
January 2022	1,448	July 2022	2,047		
February 2022	1,441	August 2022	2,476		
March 2022	2,995	September 2022	1,920		
April 1-3, 2022	317	October 2022	1,930		
		November 1-9, 2022	834		
Sub-Total	16,102				
Total Volume - Summe	r and Winter Ope	erating Season (m³)	28,250		

## 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 stagestorage 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 BOD<sub>5</sub>, P<sub>t</sub>, 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<sub>t</sub>, TSS and BOD<sub>5</sub> 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 <sub>5</sub>	Pt	TA
		(mg/L)	(mg/L)	(mg/L)	(mg/L)
Sample 1	April 19, 2022	19	18	0.23	9.0
Sample 2	April 25, 2022	14	13	0.18	6.6
Sample 3	May 2, 2022	17	19	0.09	3.9
C of A Objective		20	15	1	N/A
C of A Compliance		25	25	1	N/A

The spring discharge commenced on May 16, 2022. The total volume of effluent discharged was 23,619 m<sup>3</sup> at a mean discharge rate of 2147 m<sup>3</sup>/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 <sub>5</sub>	Pt	TA
		(mg/L)	(mg/L)	(mg/L)	(mg/L)
Start Discharge	May 16, 2022	5	16	0.04	0.8
Mid Discharge	May 18, 2022	7	14	0.15	1.6
End Discharge	May 25, 2022	6	7	0.36	3.9
End Discharge	May 26, 2022	6	6	0.49	4.6
Mean Concentration		6	10.75	0.26	2.7
C of A Objective		20	15	1	N/A
C of A Compliance		25	25	1	N/A
Effluent Waste Loading		141	254	6.14	63.8

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 <sub>5</sub>	Pt	TA
		(mg/L)	(mg/L)	(mg/L)	(mg/L)
Start Discharge	May 16, 2022				
Upstream		<2	<4	<0.03	<0.1
Downstream		2	<4	<0.03	<0.1
Mid Discharge	May 18, 2022				
Upstream		4	<4	<0.03	<0.1
Downstream		<2	<4	<0.03	<0.1
End Discharge	May 26, 2022				
Upstream		2	<4	0.03	<0.1
Downstream		4	<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 <sub>5</sub> (mg/L)	P <sub>t</sub> (mg/L)	TA (mg/L)
Sample 1	Oct 31, 2022	3	5	0.23	5.3
Sample 2	Nov 7, 2022	5	<4	0.23	5.2
Sample 3	Nov 14, 2022	3	5	0.24	5.8
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 7, 2022. The total volume of effluent discharged was 16,475 m³ at a mean discharge rate of 2,353 m³/day.

During the discharge, the mean concentrations of TSS, BOD<sub>5</sub> and P<sub>t</sub> 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 <sub>5</sub>	Pt	TA
		(mg/L)	(mg/L)	(mg/L)	(mg/L)
Start Discharge	Dec 7, 2022	4	7	0.23	5.8
Mid Discharge	Dec 12, 2022	2	5	0.23	6.1
End Discharge	Dec 13, 2022	7	5	0.25	6.4
Mean Concentration		9	10	0.07	1.6
C of A Objective		20	15	1	N/A
C of A Compliance		25	25	1	N/A
Effluent Waste loading		148	165	1.15	26.4

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 <sub>5</sub>	Pt	TA
		(mg/L)	(mg/L)	(mg/L)	(mg/L)
Start Discharge	Dec 7, 2022				
Upstream		4	7	<0.03	<0.01
Downstream		4	<4	<0.03	<0.01
Mid Discharge	Dec 12, 2022				
Upstream		2	<4	<0.03	<0.01
Downstream		3	<4	<0.03	<0.01
End Discharge	Dec 13, 2022				

Upstream	<2	<4	<0.03	<0.01
Downstream	14	<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.

One effluent objective exceeded in 2022.

• Spring pre-discharge BOD objective of 15 mg/l was exceeded. BOD average for spring pre-discharge was 16.6 mg/l.

## 2022 Operating Year Summary

The volumes of influent received, and effluent discharged from the lagoon during the 2022 operating year are summarized in Table 11. The total volume of sewage received plus the net precipitation during the 2022 operating year was 40,094 m<sup>3</sup>. A total effluent volume of 40,094 m<sup>3</sup> was discharged from the lagoon.

**Table 11: Influent and Discharge Volume Summary** 

Total Influent Volume Sewage	28,250 m³
Total Effluent Discharged	40,094 m³
Approx. Precipitation Volume	11,844 m³

The waste loadings during the 2022 operating year are summarized in Table 12.

**Table 12: Waste Loading Summary** 

	Spring 2022 (kg)	Fall 2022 (kg)	Total Loading (kg)
TSS	141	148	289
BOD5	254	165	419
Pt	6.15	1.15	7.30
TA	63.8	26.4	90.20

## Conclusions and Recommendations

The performance of the Washago Sewage Treatment Works during the 2022 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



## Certificate of Approval (Sewage)

Whereas	 TOWNSHIP	0F	ORILLIA	
xext				

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 m3; 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:

suspended Solids	Effluent Concentration	Effluent <u>Waste Loading</u>
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.

day of

DATED AT TORONTO this 18th ttn:-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

-Mr C W Rrink Value Fnaineering

November 1983

# Certificate of Approval (Sewage)

- 2 -

#### Whereas

of

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	Effluent	Effluent
Parameter	Concentration	Waste Loading
B005	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 m<sup>3</sup>/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.

.../3

**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

of

- 3 -

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

- B005
- 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

#### APPENDIX "A"

#### SAMPLE COLLECTION

(a) All equipment coming in contact with the sample shall be clean.

#### SAMPLE PRESERVATION

- (a) If an automatic sampler is used, it should be located in a shaded area, rather than in direct sunlight.
- (b) The sample itself should be refrigerated at 4°C, if at all possible, throughout the collection period and during the time taken to transport the sample. If plant personnel deliver the samples, a styrofoam cooler can be used for this purpose. Small refreezable ice packs can be placed within the cooler. If, however, the samples must be shipped by courier or express service, it is recommended that a one-day delivery period should be requested.

#### SAMPLE SIZE

(a) At least one litre of sample from each sampling location should be submitted for the minimum analysis requirements (BOD<sub>5</sub>, SS, Ammonia plus Ammonia Nitrogen and Total Phosphorus). If the effluent sample has less than 1 mm of solid matter when settled, or is almost clear when shaken, provide an extra litre of sample.

#### SUBMISSION OF ANALYSIS

(a) Samples should be submitted for analysis as soon as possible following collection. Sample delivery should ideally be made to the laboratory within 24 hours. Allowances should be made to schedule sampling and delivery to coincide with the days on which the analyses are normally performed.

#### SAMPLE ANALYSIS AND DATA REPORTING

- (a) If the operating authority wishes to use its own analytical equipment or submit samples to commercial laboratories the operating authority shall still submit samples to the Ministry of the Environment Laboratory for purposes of quality control auditing. Until the capability and accuracy of the plant or other laboratory are known, samples shall be submitted as normally required to the Ministry of the Environment Laboratory. As the capability and accuracy of the plant or commercial laboratory become known, the frequency of sample submission to the Ministry Laboratory may be reduced or possibly eliminated entirely. The frequency of such submissions for quality control auditing shall be as determined in writing by the District Officer, Municipal and Private Abatement, Barrie District Office. To allow comparison of analytical results, samples submitted for quality auditing purposes shall be duplicates of the samples analyzed by the plant or commercial laboratory.
- (b) To satisfy all, or a part of, the analytical requirments, operating authorities using their own facilities or commercial laboratories shall submit copies of the analytical results at least once per month to the District Officer, Municipal and Private Abatement, Barrie District Office.

### Appendix "A" Cont'd.

(c) The operating authority shall maintain records of the analysis results for a minimum of five (5) years.

# Environment

### NOTICE

TO:

Mr. J.B. Mather, Clerk Township of Orillia P.O. Box 159, R.R. #4 West Street North Orillia, Ontario L3V 6J3

You are hereby notified that Final Certificate of has been issued to you subject to the Approval No. 3-1081-83-006 conditions outlined therein.

The reasons for the imposition of these conditions are as follows:

#### Condition 1

Notification of the homeowners is necessary to ensure they are aware of the impending discharge.

#### Condition 2

The effluent criteria relating BOD5, Suspended Solids and Ammonia plus Ammonia Nitrogen are being imposed to prevent discharges of inadequately treated sewage. The concentration parameters are compatible with the proposed treatment system under normal operating and loading conditions.

The effluent criteria relating to Total Phosphorus concentration comply with the policy of the Ministry of the Environment to reduce nutrients loading to the Great Lakes Basin so as to minimize the nuisance growth of aquatic plant and algae.

#### Condition 3

The condition relating to the routine sampling program and analysis is being imposed to ensure that all pertinent data are available for the evaluation of the performance of the system and the water pollution control plant is operated and maintained at the level consistent with the design.
You may by written notice served upon me and the

Environmental Appeal Board within 15 days after receipt of this Notice, require a hearing by the Board.

This Notice should be served upon:

The Secretary, Environmental Appeal Board, 1 St. Clair Ave. West, AND 5th Floor, Toronto, Ontario. M4V 1K7

The Director, Section 24, O.W.R. Act, Ministry of the Environment, 135 St. Clair Ave. West, Toronto, Ontario. M4V 1P5

DATED at Toronto

this 18thday of November , 1983.

Director

Section 24, O.W.R. Act,

Ministry of the Environment.



Ministère Environment l'Environnement AMENDMENT TO CERTIFICATE OF APPROVAL MUNICIPAL SEWAGE NNSHIAYUMBER 3-1081-83-006 Page 1 of 2

#### NOTICE OF AMENDMENT

To the Applicant:

The Corporation of the Township of Orillia R. R. # 4, Box 159 Orillia, Ontario L3V 6J3

The Applicant is hereby notified that the approval issued under Certificate of Approval No. 3-1081-83-006 dated November 18, 1983 for the construction of a two celled seasonal discharge waste stabilization pond for the Hamlet of Washago on part of Lots 10 and 11, Concession XV, Township of Orillia, is hereby amended as follows:

The Statement, "the magnetic flow meter" of Special Terms and Conditions (2) (e) is hereby revoked;

In substitution for the above revocation, the following is inserted:

"three (3) elapsed time meters with a data logging system and verification of pump rates for the two sewage pumps on a semi-annual basis".

This Notice shall constitute part of the approval issued under Certificate of Approval No. 3-1081-83-006 dated November 18, 1983.

The Applicant may by written notice served upon me and the Environmental Appeal Board within 15 days after receipt of this Notice, require a hearing by the Board. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, provides that the Notice requiring the hearing shall state:

- The portions of the approval or each term or condition in the approval in respect of which the hearing is 1. required, and;
- The grounds on which the Applicant intends to rely at the hearing in relation to each portion appealed. 2.

The Notice should also include:

- 3. The name of the appellant;
- The address of the appellant; 4.
- The Certificate of Approval number; 5.
- The date of the Certificate of Approval; 6.
- The name of the Director; 7.
- The municipality within which the sewage works are located;

And the Notice should be signed and dated by the appellant.



Ministry of the and Energy

Ministère Environment l'Environnement et de l'Énergie

AMENDMENT TO CERTIFICATE OF APPROVAL MUNICIPAL SEWAGE NUMBER 3-1081-83-006 Page 2 of 2

This Notice must be served upon:

The Secretary, Environmental Appeal Board, 112 St. Clair Avenue West, Suite 502. Toronto, Ontario. M4V 1N3

AND

The Director, Section 53, Ontario Water Resources Act. Ministry of Environment and Energy, 250 Davisville Avenue, 3rd Floor, Toronto, Ontario. M4S 1H2

The above noted sewage works are approved under Section 53 of the Ontario Water Resources Act.

DATED AT TORONTO this

30th

day of

June,

1993.

W. Gregson, Eng.

Director

Section 53

Ontario Water Resources Act

GL/nk

Att: Mr. J. B. Mather, Clerk, Twp. of Orillia

Mr. G. Carpentier, Supervisor, Approvals & Pesticides Management

Mr. D.G. Carr, P. Eng., Ainley and Associates Ltd.

Ministère

#### Certificate of Approval (Sewage) Certificat d'autorisation (eaux usées)

3-0051-86-006 Number / Numéro

Whereas / Attendu que

TOWNSHIP OF ORILLIA

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of: a fait, conformément à l'article 24 de la loi sur les ressources en eau de l'Ontario, une demande d'autorisation:

a new 250 mm diameter polyethylene effluent outfall from the existing two celled seasonal discharge waste stabilization pond located approximately 1700 m north and northwest of Hamilton Street, Washago (Part of Lots 10 and 11, Concession XV, Township of Orillia) consisting of approximately 225 m of Series 45 butt-fused outfall following the existing ground profile together with a gate valve box shut-off terminations at Highway No. 11 immediately north of the Severn River,

all in accordance with the detailed drawing and supporting information prepared by Reid and Associates Limited, Consulting Engineers, at a total estimated cost, including engineering and contingencies, of SEVENTEEN THOUSAND DOLLARS (\$17,000.00).

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.

Le présent document certifie qu'après vérification en bonne et due forme la construction dudit projet d'ouvrages a été approuvée aux termes de l'article 24 de la loi sur les ressources en eau de l'Ontario.

24th DATED AT TORONTO this

April

1986

day of

Attn: Mr. J.B. Mather, Clerk, Township of Orillia cc: Mr. J.C. Ferguson, Twp. Engineer

Mr. G. Mierzynski, MOE C, Reg. Dir.

Reid & Associates Ltd.

Director / Directeur

0731.06/84



# Certificate of Approval

Whereas ...... TOWNSHIP OF ORILLIA ..... DEC 15 1982

XX

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

the construction of sanitary sewerage works facilities to service the Community of Washago as follows:

SANITARY	SEWERS
----------	--------

STREET FROM TO

Quetton Street Approx. 218 m South Approx. 29 m North of Leith Street of Leith Street

Quetton Street Orillia Street Hamilton Street (Highway No. 69)

Muskoka Street Approx. 235 m South Approx. 303 m North

of Rama Street of Ramsay Street

Mill Lane Hamilton Street Albany Street

Easement Mill Lane Approx. 129 m North of Edgar Street

Ramsay Street Muskoka Street Approx. 80 m West of Muskoka Street

Edgar Street Muskoka Street Approx. 75 m West

of Muskoka Street

Edgar Street Approx. 60 m East Approx. 100 m East of Mill Lane of Mill Lane

(Easement) (Easement)

Albany Street Muskoka Street Approx. 75 m West of Muskoka Street

Albany Street Mill Lane Approx. 34 m East of Mill Lane

of Mill Lane (Easement)

December

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 8th day of

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

-Reid & Assoc. Ltd.

-Mr. W.A.S. Marshall, Project Engrg.

-Mr. N. Embree, MOE Barrie Office -Mr. J. Toth, Design & Equipment

-Mr. W. Brink, Design & Equipment

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19 82

Directo



#### Certificate of Approval (Sewage)

#### Whereas

- 2 -

of

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

SANITARY SEWERS (Cont'd)

STREET

FROM

TO

Orillia Street

Approx. 72 m North of Quetton Street

Muskoka Street

Rama Street

Muskoka Street

Approx. 51 m East of Muskoka Street

Easement

Muskoka Street

Quetton Street

**FORCEMAINS** 

Muskoka Street

Approx. 303 m North

Ramsay Street

of Ramsay Street (Proposed Sewage Pumping Station No.3)

Albany Street

Approx. 103 m East of Muskoka Street

Muskoka Street

(Proposed Sewage Pumping Station No.2)

Muskoka Street

Approx. 235 m South

Orillia Street

of Orillia Street (Proposed Sewage Pumping Station No.1)

Orillia Street

Muskoka Street

Quetton Street

Quetton Street

Orillia Street

Hamilton Street (Easement)

Easement

Hamilton Street

Approx. 1700 m North

and N.W. of Hamilton Street (Proposed Waste Stabilization

Pond)

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

8th

day of

December

19 82



# Certificate of Approval (Sewage)

#### Whereas

- 3 -

of

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

including building sewers from the main sewer to the street line, as shown on the drawing or as may be approved by the operating authority in the future together with three (3) sewage pumping stations as follows:

SEWAGE PUMPING STATION NO.1: to be located on the east side of Muskoka Street approximately 235 m south of Orillia Street and consisting of the construction of a submersible type raw sewage pumping station c/w the installation of two (2) 14.4 L/s @ 15.6 m T.D.H. submersible raw sewage pumps; an emergency forcemain by-pass; an emergency overflow to the Severn River and all necessary appurtenances and controls;

SEWAGE PUMPING STATION NO.2: to be located on the south side of Albany Street approximately 103 m east of Muskoka Street and consisting of a submersible type raw sewage pumping station c/w the installation of two (2) 6.28 L/s @ 8.3 m T.D.H. submersible raw sewage pumps; an emergency forcemain by-pass; an emergency overflow to the Severn River and all necessary appurtenances and controls;

SEWAGE PUMPING STATION NO.3: to be located on the west side of Muskoka Street approximately 303 m north of Ramsay Street and consisting of a submersible type raw sewage pumping station c/w the installation of two (2) 6.76 L/s @ 9.0 m T.D.H. submersible raw sewage pumps; an emergency forcemain by-pass; an emergency overflow sewer to an adjacent watercourse and all necessary appurtenances and controls,

all in accordance with the final plans and specifications prepared by Reid and Associates Limited, Consulting Engineers, at a total estimated cost, including land charges, engineering and contingencies, of NINE HUNDRED FORTY FOUR THOUSAND DOLLARS (\$944,000.00).

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

8th

day of

December

19 82

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Certificate of Approv

(Sewage)

Whereas ..... TOWNSHIP OF ORILLIA ...

XX

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

the construction of sanitary sewage works facilities as follows:

SANITARY SEWER

STREET

FROM

T0

C.N.R. Right-of-Way

Hamilton Street

Quetton Street

ificate No 3-0385-83

FORCEMAIN

C.N.R. Right-of-Way

Orillia Street

Hamilton Street

including service connections from the main sewer to the street line, as shown on the drawings or as may be approved by the operating authority in the future, all in accordance with the final plans and specifications prepared by Reid and Associates Limited, Consulting Engineers, at a total estimated cost, including engineering and contingencies, of THIRTY THREE THOUSAND EIGHT HUNDRED DOLLARS (\$33,800.00).

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

29th

day of April

19 83

Attn:-Mr. J.B. Mather, Clerk, Twp. of Orillia cc:-Mr. J. Ferguson, Road Supt.

-Mr. G. Mierzynski, MOE C. Reg. Dir.

-Reid & Assoc. Ltd.

-Mr. W.A.S. Marshall, Proj. Engrg.

-Mr. A.J. Forsyth, Proj. Engrg. -Mr. J. Toth, Design & Equipment -Mr. W. Brink, Design & Equipment

MOE 0731 9/61

/ec



#### Certificate of Approval (Sewage) Certificat d'autorisation (eaux usées)

Number / Numéro 3-1459-87-006

Whereas / Attendu que Hope-Smith Lands Limited

of / d

Washago, Ontario

has applied in accordance with Section 24 of the Ontario Water Resources Act for approval of: a fait, conformément à l'article 24 de la loi sur les ressources en eau de l'Ontario, une demande d'autorisation: Private sanitary pumping station and forcemain to service a commercial development located on Part of Lot 14 and all of Lots 15, 16, 17 & 18 in the Township of Orillia equipped with 2 submersible grinder pumps each rated at 1.9 1/s at a total dynamic head of 6.8m with float switch controls, associated valves, electrical equipment, interconnecting piping, a natural vent, a forcemain and appurtenances.

Street

From

To

Forcemain

Hamilton St.

Approx. 45m E of Cumberland St.

Quetton St

all in accordance with the revised plans received on August 26, 1987 plans and specifications prepared by Marshall Macklin Monaghan Limited, Consulting Engineers, at a total estimated cost, including engineering and contingencies, of FORTY TWO THOUSAND TWO HUNDRED DOLLARS (\$42,200.00).

> THIS IS A TRUE COPY OF The ORIGINAL CERTIFICATE MAILED

(Signed)

FROM T THE TOWNS

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.

Le présent document certifie qu'après vérification en bonne et due forme la construction dudit projet d'ouvrages a été approuvée aux termes de l'article 24 de la loi sur les ressources en eau de l'Ontario.

DATED AT TORONTO this DATÉ À TORONTO ce

11 ...

day of iour d

cc: Mr. J.B. Mather, Clerk, Township of Orillia

Mr. A.F. Pelletier, Clerk, County of Simcoe Mr. N. Embree, Chief Approvals and Planning Uni

Marshall Macklin Monaghan Limited

# Appendix B

Municipality Monitoring Program Mechanical Plants Forms



# Municipal Utility Monitoring Program S1 Lagoons

Fields marked with	an asterisk (*) are	mandatory.			<u> </u>						
Washago Lagoor	1										
Facility Address Unit Number	Street Number	Street Name Hurlwood La	ane						PO Box	(	
Municipality/City/To		Transvoca Ec	Provi	nce					Postal	Postal Code	
Orillia	SWII		100	N - Ontario L3V 6J3							
Operating Authority The Corporation	of the Township of	of Severn							1		
Mailing Address					V-34				1		
Unit Number	Street Number 1021	Street Name Hurlwood La								PO Box 159	
Municipality/City/To Orillia	own		Provi	nce Ontario					L3V 6		
File No.	Works Num	her *			ata P	eriod *		Days	Discharge	Update	
File No.	VVOIRS IVUII		-   -	Month		Year			Туре	Code	
4 6 1	2 0 0 0		3	0 1	2	0 2	19	3 1	2 22	R 80	
1 2 3				10				20 21			
C.P.		ř		- 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	$\neg$				_		
3 5 Flows		Į.	10000000	neter Co	de	Dec.	Mo	nthly Results			
12 13 Total Flo	w	(10 <sup>3</sup> m <sup>3</sup> )	5	50010		3		1.448			
Average	Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	5	50015		3		0.05	1		
Maximun	n Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)		50020		3					
		5	30		34	35	38		46 # of O	ccurrences	
3 5 Bypass		(4.033)		50270		3			7 #010	contences	
Flailt Dy	pass Volume	(10 <sup>3</sup> m <sup>3</sup> )	-	31680	-	1					
Duration		(hours)	30	0 1000	34	35	38		J		
3 6 Raw Sev	wage								# of	Samples	
12 13 BOD <sub>5</sub>	ago	(mg/L)	(	00001		0		19	3	1	
Suspend	led Solids	(mg/L)	(	00006		0		13	9	1	
TKN		(mg/L)	(	00020		2	N 13575345	52.6	0	1	
Total Ph	osphorus	(mg/L)	(	00033		1		5.		1	
		i i	30		34	35	38		48	51	
3 9 Final Ef				-0000		3			¬ i		
	1. Volume To Water			50280	_				_		
Flow Du		(hours)		81680		1	-		- i		
Cell Dep	oth	(m)		50290 00002	-	1			1		
CBOD <sub>5</sub>		(mg/L) (mg/L)		00002	-	1	-		-		
BOD <sub>5</sub>	ded Solids	(mg/L)		00006		1					
	ia + Ammonium	(mg/L)		00000		2	-				
TKN	a + Amilionium	(mg/L)		00019		2		N-02-773 III 0.1116-7073			
	osphorus	(mg/L)		00033	-	2	-				
Totalii	iospriorus	(g/2)	30	00000	34	35	38		48	5	
0 9 Disinfed	ction								_		
12 13 Chlorine		(kg as Cl <sub>2</sub> )		50320		1					
Chlorine	Dosage	(mg/L as Cl <sub>2</sub> )		80410		1					
Chlorine	Residual	(mg/L as Cl <sub>2</sub> )		80420	لِـــا	1				5	
			30	lp-	34	35 compl	38	rm to:	48	5	
Operator Telepho 705-345-1841	one Number				Env	ironmen	ital Mon	itoring and Re	eporting Bran	ch, MECP, at	
Operator Email A				2.	You	ır Enviro	nmenta	ing@ontario.c I Officer at you		ct/Area	
Comments					nistry		t Email	Address *			



# Municipal Utility Monitoring Program S2 Lagoons

	ress			20				1000000000		
nit Number	Street Number 1021	Street Name Hurlwood L						PO Box 159		
unicipality/C rillia	ity/Town		Province ON - On	.500 EVENT 1500 C	Postal Code L3V 6J3					
perating Aut	thority Ition of the Township o	f Severn								
ailing Add	Iress							8		
nit Number	Street Number 1021	Street Name Hurlwood L						PO Box 159		
unicipality/C rillia	City/Town		Province ON - On		Postal Code L3V 6J3					
ile No.	Works Num	ber*	Mo	Data	Period * Yea	erro A	Days	Discharge Type	Update	
4 6	1 2 0 0 0	2 2 7	3 0 1 2 0 2 2 3 1				3 1	2 22	R 80	
1 2	3		11 16			19	20 21	22		
C.P.		<u></u>								
	v Sewage		Parameter (	Code	Dec	Month	ly Average Result	ts # 0	f Samples	
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					Н					
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								_		
		30	,	34	35	38				
		30	,	34	33	30				
3 9 Fina	al Effluent	Γ	Parameter	Code	Dec	Month	ly Average Resul	lts # c	of Sample	
	alinity, Total	(mg/L)	00051		4					
-	nductivity 25°C	(µS/cm)	91004	1	4					
E. C		(CT/100ml)	91000		4					
1000000	ate, Unfiltered reactive	(mg/L)	00022	2	4					
Nitr			The second second second							
0.00000	ite, Unfiltered reactive	(mg/L)	00021	1	4	31		_		
0.00000	ite, Unfiltered reactive	(mg/L)	80770		4					
Nitr pH	ite, Unfiltered reactive	(mg/L)		)						
Nitr pH Ten	ite, Unfiltered reactive		80770	)	4					
Nitr pH Ten Un-	nte, Unfiltered reactive	(°C)	80770 80250	0	4					
Nitr pH Ten Un- Dis	mperature, Water	(°C) (mg/L)	80770 80250 91012	2 3	4 4					
Nitr pH Ten Un- Dis	mperature, Water ionized Ammonia solved Oxygen	(°C) (mg/L) (mg/L)	80770 80250 91012 00003	2 3	4 4 4					
Nitr pH Ten Un- Dis	mperature, Water ionized Ammonia solved Oxygen	(°C) (mg/L) (mg/L)	80770 80250 91012 00003	2 3	4 4 4					
Nitr pH Ten Un- Dis	mperature, Water ionized Ammonia solved Oxygen	(°C) (mg/L) (mg/L)	80770 80250 91012 00003	2 3	4 4 4					
Nitr pH Ten Un- Dis	mperature, Water ionized Ammonia solved Oxygen	(°C) (mg/L) (mg/L)	80770 80250 91012 00003	2 3	4 4 4					
Nitr pH Ten Un- Dis	mperature, Water ionized Ammonia solved Oxygen	(°C) (mg/L) (mg/L) (mg/L)	80770 80250 91012 00003 83008	) ) ) 22 33 38	4 4 4 4					
Nitr pH Ten Un- Dis	mperature, Water ionized Ammonia solved Oxygen	(°C) (mg/L) (mg/L) (mg/L)	80770 80250 91012 00003	34	4 4 4 4 4 35	38				
Nitr pH Ter Un- Dis Hyc	mperature, Water ionized Ammonia solved Oxygen drogen Sulphide	(°C) (mg/L) (mg/L) (mg/L)	80770 80250 91012 00003 83008	) ) 2 3 3 8	4 4 4 4 4 4 35	oleted f		rting Branci	h. MFCP	
Nitr pH Ten UnDis Hyd	mperature, Water ionized Ammonia solved Oxygen drogen Sulphide	(°C) (mg/L) (mg/L) (mg/L)	80770 80250 91012 00003 83008	34   Retur	4 4 4 4 4 4 5 35 n compositionme	pleted for	orm to: nitoring and Reporting@ontario.ca A		h, MECP,	



#### Municipal Utility Monitoring Program S1 Lagoons

Fields m	arked with	an asterisk (*) are	mandatory.										
Project N Washag	Name go Lagoor	1											
Facility Unit Nun	Address nber	Street Number	Street Name									PO Box	
		1021	Hurlwood L							Avenilla de la contra		Postal Code	
Municipa Orillia	ality/City/To	own		ON -	onta	rio					5.5	L3V 6J	
	g Authority	of the Township	of Severn										
Mailing	Address		ř.									T.	
Unit Nun	mber	Street Number 1021	Street Name Hurlwood L									PO Box 159	
Municipa Orillia	ality/City/To	own		Provi	ince - Onta	rio						Postal C L3V 6J	
File No.	211-11-1	Works Nur	mber *	i l	Manti		a P	eriod *		Days	Di	ischarge Type	Update Code
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1 2	1 1	2 0 0 0	100 to 10	3 [	0 3	4	2	0 2	19	20 21		22	80
	<del>-</del>												
C.P.	ļ.,			Parar	neter C	Code	П	Dec.	Mo	nthly Results			
3 5	Flows Total Flov	w	(10 <sup>3</sup> m <sup>3</sup> )		50010	-	+	3		1.44	_		
		w Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)		50015		+	3		0.06			
	13/24/23 Est	n Daily Flow	(10° m³/d)	Santago A	50020	-	$\exists$	3	-				
	Waxiiiiuii	1 Daily 1 low	1600 AC 135 H	30	0020	3	34	35	38		46		
3 5	Bypass					0111-2					_	# of Oc	currences
12 13	Plant By	oass Volume	(10 <sup>3</sup> m <sup>3</sup> )		50270			3					
	Duration		(hours)	Contract of the Contract of th	81680			35	00				
2 6	Jp c	775 F-12		30		•	34	35	38			# of S	Samples
3 6	<b>_Raw Sev</b> BOD <sub>5</sub>	vage	(mg/L)		00001		٦	0		37	7		1
	- 10 N	ed Solids	(mg/L)		00006		1	0		32	25		1
	TKN		(mg/L)	(	00020			2		58.7	0		1
	Total Pho	osphorus	(mg/L)	(	00033			1		6	9		1
	_			30			34	35	38		_	48	51
	Final Eff				50000		7				_		
12 13		. Volume To Wate			50280		4	3					
	Flow Dur		(hours)		81680		4	1	-		-		
	Cell Dep	tn	(m) (mg/L)	_	50290 00002		4	1			$\dashv$		
	CBOD <sub>5</sub> BOD <sub>5</sub>		(mg/L)		00002		$\dashv$	1	<u> </u>		$\dashv$		
	200	led Solids	(mg/L)		00006		$\dashv$	1			$\dashv$		
	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	a + Ammonium	(mg/L)		00019		$\exists$	2			$\exists$		
	TKN		(mg/L)		00020	)		2					
	Total Ph	osphorus	(mg/L)		00033			2					
	_			30			34	35	38			48	51
0 9			# O V		5000		$\neg$				$\neg$		
12 13	Cindinic		(kg as Cl <sub>2</sub> )		50320		4	1			$\dashv$		
	Chlorine	Residual	(mg/L as Cl <sub>2</sub> ) (mg/L as Cl <sub>2</sub> )		80410 80420		-	1			-		
	Chiorine	rvesiddal	(mg/L as Cl <sub>2</sub> )	30	00420		34	35	38			48	51
	or Telepho	ne Number						compl		rm to:	eport	ing Branch	n. MECP_at
Operato	or Email Ad					V	Vas	teWater	Reporti	ng@ontario.d Officer at yo	a Ar	nd	
Comme	@severn	.ca						P Office		omoci at yo	J. 10	-a. 5.60100	
Samme										Address * intario.ca			



## Municipal Utility Monitoring Program S2 Lagoons

Washago Lagoo	n									
acility Address	1	Ē.				PO Box				
Jnit Number	Street Number 1021	Street Name Hurlwood L		159						
Municipality/City/T	own		Province	-4-	Postal Code L3V 6J3	Postal Code				
Orillia			ON - Ont	ON - Ontario L3V 6J3						
Operating Authority The Corporation	of the Township o	of Severn			e e					
Mailing Addres	s	•				r				
Jnit Number	Street Number	Street Name Hurlwood I		PO Box 159						
Municipality/City/T			Province	Postal Code						
Orillia			ON - Ont			L3V 6J3				
File No.	Works Num	ber *	Mor	Data Period	ar Days		Jpdate Code			
4 6 1	1 2 0 0 0 2 2 7			2 2 0	2 2 2 8		R			
1 2 3	2 0 0 0		3 0		19 20 2	1 22	80			
C.P.										
3 6 Raw Se	wage		Parameter C	ode	Monthly Average	e Results # of Sa	mples			
12 13										
-										
1										
		3	0	34 35	38					
3 9 Final Ef	fluent	Γ	Parameter 0	Code Dec	Monthly Averag	e Results # of Sa	mples			
3 9 Final Ef		(mg/L)	00051	4						
	tivity 25°C	(µS/cm)	91004	4						
E. Coli		(CT/100ml)	91000	4						
	Unfiltered reactive	(mg/L)	00022	4						
Nitrite,	Unfiltered reactive	(mg/L)	00021	4						
рН		Attornational Res	80770	4						
Temper	ature, Water	(°C)	80250	4						
	zed Ammonia	(mg/L)	91012	4						
Un-ioni	LCG / WITHINGTHIC		00003	4						
\$500 HELL BOTTON	ed Oxygen	(mg/L)	00003							
Dissolv		(mg/L) (mg/L)	83008	4						
Dissolv	ed Oxygen			4						
Dissolv	ed Oxygen			4						
Dissolv	ed Oxygen			4						
Dissolv	ed Oxygen			4						
Dissolv	ed Oxygen	(mg/L)	83008							
Dissolv Hydrog	ed Oxygen en Sulphide	(mg/L)		34 35	38					
Dissolv Hydrog	ed Oxygen en Sulphide	(mg/L)	83008	34 35 Return cor	npleted form to:	d Reporting Branch. M	ECP.			
Dissolv Hydrog Operator Teleph 705-345-1841	ed Oxygen en Sulphide one Number	(mg/L)	83008	34 35 Return cor	npleted form to:	d Reporting Branch, M	ECP,			
Dissolv Hydrog	ed Oxygen en Sulphide one Number	(mg/L)	83008	34 35 Return cor 1. Environr WasteW 2. Your En	npleted form to: nental Monitoring an laterReporting@ontal vironmental Officer a		a			



## Municipal Utility Monitoring Program S1 Lagoons

	rked with an asterisk (*) a	re mandatory.								
Project N	ame o Lagoon									
Facility	Marine 1980 (2000)									
Unit Num	16200 F. SCHOOL ST.	Street Name Hurlwood La	ane					PO Box 159	PO Box 159	
Municina	lity/City/Town		Province	i.		-3-00		Postal (	Postal Code	
Orillia	myronyrronn		ON - Or	ntario				L3V 6J	3	
Operating The Cor	Authority poration of the Township	o of Severn								
Mailing	Address	1000						DO D-		
Unit Num	Street Number 1021	Street Name Hurlwood La	ane					PO Box 159		
Municipa Orillia	lity/City/Town		ON - Or					Postal 6		
File No.	Works N	umber *		Data P	eriod * Year		Days	Discharge Type	Update Code	
			_		0 2	2	3 1	2	R	
4 6	1 2 0 0 0	N - 1000 1 1000 100 100 100 100 100 100 1	0 16	3 2	0 2	19	20 21	22	80	
	1									
C.P.		Г	D	Cada	Dec.	Ma	nthly Results	1		
3 5	Flows		Paramete			IVIO	2.995	1		
12 13	Total Flow	(10 <sup>3</sup> m <sup>3</sup> )	500		3			-		
	Average Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	500	1000	3		0.096	4		
	Maximum Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	500	34	3 35	38	4	5		
2 5	] <sub>D</sub>		50	34	33	50	30		currences	
3 5	Bypass Plant Bypass Volume	(10 <sup>3</sup> m <sup>3</sup> )	502	70	3			1		
	Duration	(hours)	816	2455	1					
	Duration		30	34	35	38				
3 6	Raw Sewage							# of	Samples	
12 13	BOD <sub>5</sub>	(mg/L)	000	001	0		180		1	
	Suspended Solids	(mg/L)	000	2000	0		208	-	1	
	TKN	(mg/L)	000		2		52.30	4	1	
	Total Phosphorus	(mg/L)	000	34	35	38	5.6	48	1 51	
	1	3	30	34	35	38		40	51	
	Final Effluent Total Effl. Volume To Wa	tercourse (103 m3)	502	280	3			1		
	Flow Duration	(hours)	816		1			1		
	Cell Depth	(m)	502		1			1		
	CBOD <sub>5</sub>	(mg/L)	000		1					
	BOD <sub>5</sub>	(mg/L)	000		1					
	Suspended Solids	(mg/L)	000	006	1					
	Ammonia + Ammonium	(mg/L)	000	019	2					
	TKN	(mg/L)	000	020	2					
	Total Phosphorus	(mg/L)	000	033	2					
	3		30	34	35	38		48	51	
0 9	Disinfection	// OI \		200				7		
12 13	Omornio Good	(kg as Cl <sub>2</sub> )		320	1	-		-		
	Chlorine Dosage	(mg/L as Cl <sub>2</sub> )		410	1			-		
	Chlorine Residual	(mg/L as Cl <sub>2</sub> )	30	420	35	38		48	51	
Operato	r Telephone Number		7.7	Return			orm to:			
705-34				1. Env	ironmen	tal Mon	itoring and Rep	oorting Brand	h, MECP, at	
	or Email Address *			2. You	r Enviro	nmenta	ing@ontario.ca I Officer at you		t/Area	
Comme					CP Offic		A-11414-1-11			
				Ministry Peter.V	Contact reuade	t Email /	Address * ontario.ca			



### Municipal Utility Monitoring Program S2 Lagoons

	ss								
it Number	Street Number 1021	ane	ane				PO Box 159		
unicipality/City/Town rillia			Province ON - Ontario				500 000 000 000 000 000	Postal Code L3V 6J3	
erating Author	rity n of the Township o	of Severn							
ailing Addre									
nit Number Street Number Street Name Hurlwood La							PO Box 159		
unicipality/City/Town rillia			Province ON - Ontario				Postal Code L3V 6J3		
le No. Works Number *			Data Period * Days  Month Year				Discharge Type	Upda Code	
			3 0 3 2 0 2 2 3 1 11 16 19 20 21				2 22	R 80	
C.P.									
6 Raw S	ewage	Ī	Parameter C	ode Dec	Month	y Average Res	sults #	of Sample	
2 13					77				
-									
							- 1 F	The same of	
-					-				
-									
					l —				
		3	0	34 35	38				
				500 0000					
9 Final E	Effluent	Γ	Parameter (	Code Dec	Month	ly Average Re	sults #	of Sample	
11 15 15 15		(mg/L)	Parameter 0	Dec 4	Month	ly Average Re	sults #	of Sample	
<sup>2</sup> 13 Alkalin	ity, Total	(mg/L) (µS/cm)	3,0713,973,513,033,031,0	4	Month	ly Average Re	sults #	of Sample	
2 13 Alkalin Condu	ity, Total octivity 25°C	(µS/cm)	00051	4	Month	ly Average Re	sults #	of Sample	
2 13 Alkalin Condu E. Coli	ity, Total activity 25°C	(μS/cm) (CT/100ml)	91004 91000	4 4	Month	ly Average Re	sults #	of Sample	
2 13 Alkalin Condu E. Coll Nitrate	ity, Total ctivity 25°C	(μS/cm) (CT/100ml) (mg/L)	91004 91000 00022	4 4 4 4	Month	ly Average Re	sults #	of Sample	
2 13 Alkalin Condu E. Coli Nitrate Nitrite,	ity, Total activity 25°C	(μS/cm) (CT/100ml)	91004 91000	4 4 4 4 4	Month	ly Average Re	sults #	of Sample	
2 13 Alkalin Condu E. Col Nitrate Nitrite, pH	ity, Total activity 25°C is, Unfiltered reactive Unfiltered reactive	(μS/cm) (CT/100ml) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770	4 4 4 4 4	Month	ly Average Re	sults #	of Sample	
2 13 Alkalin Condu E. Col Nitrate Nitrite, pH Tempe	ity, Total ctivity 25°C  it de, Unfiltered reactive Unfiltered reactive erature, Water	(µS/cm) (CT/100ml) (mg/L) (mg/L) (°C)	91004 91000 00022 00021	4 4 4 4 4 4	Month	ly Average Re	sults #	of Sample	
Alkalin Condu E. Col Nitrate Nitrite, pH Tempe Un-ior	ity, Total ctivity 25°C it c, Unfiltered reactive Unfiltered reactive erature, Water sized Ammonia	(μS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012	4 4 4 4 4 4	Month	ly Average Re	sults #	of Sample	
Alkalin Condu E. Col Nitrate Nitrite, pH Tempe Un-ior Dissol	ity, Total ctivity 25°C it y, Unfiltered reactive Unfiltered reactive erature, Water bized Ammonia eved Oxygen	(μS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012	4 4 4 4 4 4 4 4	Month	ly Average Re	sults #	of Sample	
Alkalin Condu E. Col Nitrate Nitrite, pH Tempe Un-ior Dissol	ity, Total ctivity 25°C it c, Unfiltered reactive Unfiltered reactive erature, Water sized Ammonia	(μS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012	4 4 4 4 4 4 4 4	Month	ly Average Re	sults #	of Sample	
Alkalin Condu E. Col Nitrate Nitrite, pH Tempe Un-ior Dissol	ity, Total ctivity 25°C it y, Unfiltered reactive Unfiltered reactive erature, Water bized Ammonia eved Oxygen	(μS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012	4 4 4 4 4 4 4 4	Month	ly Average Re	sults #	of Sample	
Alkalin Condu E. Col Nitrate Nitrite, pH Tempe Un-ior Dissol	ity, Total ctivity 25°C it y, Unfiltered reactive Unfiltered reactive erature, Water bized Ammonia eved Oxygen	(μS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012	4 4 4 4 4 4 4 4	Month	ly Average Re	sults #	of Sample	
Alkalin Condu E. Col Nitrate Nitrite, pH Tempe Un-ior Dissol	ity, Total ctivity 25°C it y, Unfiltered reactive Unfiltered reactive erature, Water bized Ammonia eved Oxygen	(μS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012	4 4 4 4 4 4 4 4	Month	ly Average Re	sults #	of Sample	
Alkalin Condu E. Col Nitrate Nitrite, pH Tempe Un-ior Dissol	ity, Total ctivity 25°C it y, Unfiltered reactive Unfiltered reactive erature, Water bized Ammonia eved Oxygen	(µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012 00003 83008	4 4 4 4 4 4 4 4	Month	ly Average Re	sults #	of Sample	
Alkalin Condu E. Coli Nitrate Nitrite, pH Tempe Un-ior Dissol Hydro	ity, Total ctivity 25°C it c, Unfiltered reactive Unfiltered reactive erature, Water hized Ammonia ved Oxygen gen Sulphide	(µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012	4 4 4 4 4 4 4 4 4 4 4 4 4 4 8 8 8 8 8 8	38 mpleted fo	orm to:			
Alkalin Condu E. Coli Nitrate Nitrite, pH Tempe Un-ior Dissol	ity, Total ctivity 25°C ity, Unfiltered reactive Unfiltered reactive erature, Water sized Ammonia eved Oxygen gen Sulphide	(µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012 00003 83008	34 35  Return col 1. Environa	38 mpleted formental Mon		porting Brane		



Fields ma	rked with an asterisk (*) are	mandatory.									
Project Na											
Washage											
Facility /	Address	7							1		
Unit Num	ber Street Number 1021	Street Name Hurlwood La	ine						PC 15	Box 9	
Municipal Orillia	ity/City/Town	•	Provinci ON - O				2000 0000		A 175120	stal C	
and a constitution	Authority				14. 14	====					
	poration of the Township	of Severn			200	F-118-11				_	
Mailing / Unit Num	Address ber Street Number 1021	Street Name Hurlwood La	ane						PC 15	Box	
	lity/City/Town	Tranwood Le	Provinc							stal C	
Orillia					a Pe	eriod *		Davis	Discha		Update
File No.	Works Nun	nber *	N	onth		Year		Days	Туре	Ш	Code
4 6	1 2 0 0 0	The state of the s	3 0		2	0 2	19	3 0	2		R 80
1 2	3	1	1 16				19	20 21	22		80
C.P.		_			_						
3 5	Flows		Parame	ter Code	•	Dec.	Мо	nthly Results			
12 13	Total Flow	(10 <sup>3</sup> m <sup>3</sup> )	500	010		3		3.17	4		
	Average Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	50	015		3		0.10	0		
	Maximum Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	50	020		3					
	1	3	30		34	35	38		46		
3 5	Bypass	т.	50	070	$\neg$		-		¬   <del>"</del>	or Oc	currences
12 13	Plant Bypass Volume	(10 <sup>3</sup> m <sup>3</sup> )	18.50	270	-	3			4 L	-	
	Duration	(hours)	810	680	34	35	38				
3 6	Raw Sewage		,0	18	•					# of S	Samples
12 13	BOD <sub>5</sub>	(mg/L)	00	001		0	15-15-20/-	13	8		1
	Suspended Solids	(mg/L)	00	006		0		23	8		1
	TKN	(mg/L)	00	020		2		44.3	0		1
	Total Phosphorus	(mg/L)	00	033		1		4.	5		1
			30		34	35	38		48		51
	Final Effluent	ſ		7202723	_						
12 13	Total Effl. Volume To Wate			280	4	3			_		
	Flow Duration	(hours)		680	-	1			_		
	Cell Depth	(m)		290	-	1			$\dashv$ $\vdash$		
	CBOD <sub>5</sub>	(mg/L)	0000	0002	-	1	-	15.	5	_	2
	BOD <sub>5</sub>	(mg/L)		0001	$\dashv$	1	-	16.		-	2
	Suspended Solids	(mg/L)	12800	0006	-	2		7.8		+	2
	Ammonia + Ammonium TKN	(mg/L) (mg/L)		0020	-	2		8.9		-	2
	Total Phosphorus	(mg/L)		0033	-	2		0.2	_	-	2
	rotal r nosphorus		30	.500	34	35	38	0.2	48	+	5
0 9	Disinfection	1							2000		
12 13	Chlorine Used	(kg as Cl <sub>2</sub> )	50	320		1					
	Chlorine Dosage	(mg/L as Cl <sub>2</sub> )		)410		1			_		
	Chlorine Residual	(mg/L as Cl <sub>2</sub> )		0420		1			يا لـ		5
			30	I Date	34	35 comple	38	rm to:	48		5
Operato 705-345	r Telephone Number 5-1841			1. E	Envir	onment	tal Mon	orm to: itoring and Re		ranci	n, MECP, at
	r Email Address * @severn.ca			2.	Your	Enviror	nmenta	ng@ontario.c I Officer at you		istrict	/Area
Comme						P Office		Address *			
								Address * intario.ca			



	ess									
Jnit Number	Street Number	Street Name Hurlwood L						150	O Box 59	
Municipality/Cit	ty/Town		Province ON - Or					1172	ostal Co 3V 6J3	
Operating Auth	nority ion of the Township o	f Severn								
Mailing Addr						****		A SAN III		
Unit Number	Street Number	Street Name Hurlwood L							PO Box 159	
Municipality/Ci Orillia	ty/Town		Province ON - Or						ostal Co 3V 6J3	
File No.	Works Num	ber *	T <sub>M</sub>	Data onth	Period Yea		Days	Disch	narge pe	Update Code
	1 2 0 0 0		3 0	4 2		2 2	3 0	2		R 80
1 2 :	3		11 10							
	Sewage	Г	Parameter	Code	Dec	Monthl	y Average Re	esults	# of	Samples
3 6 Raw	- Courage									
-										
-			· / E / E							
					$\Box$					
-					$\vdash$					
1					H	-				
					H			_	-	
					H					
					$\vdash$	-			-	
		30	1	34	35	38				
The second	I Effluent	Γ	Parameter	Code		Month	y Average R	oculte	# of	Camalan
3 9 Final	Lindon				Dec	WOTH	y Average K	esuits	# 01	Samples
0 0		(mg/L)	0005	1	Dec 4	Worth		5.5000	# 01	Samples
12 13 Alka	linity, Total	(mg/L)	9100			Worth			# 01	Historia Private In
12 13 Alka Cond	linity, Total ductivity 25°C	(mg/L) (µS/cm)	NA SATI	4	4	Worth				Historia Private In
12 13 Alkal Cond E. C	linity, Total ductivity 25°C oli	(mg/L) (µS/cm) (CT/100ml)	9100	0	4	Worth			# 01	Historia Private In
12 13 Alka Cond E. C Nitra	linity, Total ductivity 25°C	(mg/L) (µS/cm) (CT/100ml) (mg/L)	9100 9100	4 0 2	4 4	Worth			# 01	Historia Private In
12 13 Alka Cond E. C Nitra	linity, Total ductivity 25°C oli ete, Unfiltered reactive	(mg/L) (µS/cm) (CT/100ml)	9100 9100 0002	4 0 2 1	4 4 4	Worth	123		# 01	
12 13 Alka Cond E. C Nitra Nitrit	linity, Total ductivity 25°C oli ite, Unfiltered reactive te, Unfiltered reactive	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)	9100 9100 0002 0002	4 0 2 1 0	4 4 4 4	Worth	123	3.5000	# 01	
12 13 Alkai Cone E. C Nitra Nitrit pH Tem	linity, Total ductivity 25°C oli ete, Unfiltered reactive	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)	9100 9100 0002 0002 8077	4 0 2 1 0 0	4 4 4 4	Worth	123	3.3200		
12 13 Alkal Cone E. C Nitra Nitrit pH Tem Un-i	linity, Total ductivity 25°C oli te, Unfiltered reactive te, Unfiltered reactive perature, Water onized Ammonia	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L)	9100- 9100 0002 0002 8077 8025	4 0 2 1 1 0 0 0	4 4 4 4 4 4	Worth	123	3.3200	# 01	
12 13 Alkal Conc E. C Nitral Nitrit pH Tem Un-ic	linity, Total ductivity 25°C oli ete, Unfiltered reactive te, Unfiltered reactive perature, Water	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)	9100- 9100 0002 0002 8077 8025 9101	4 0 0 2 1 1 0 0 0 2 2 3 3	4 4 4 4 4 4	Worth	123	3.3200	# 01	
12 13 Alkal Conc E. C Nitral Nitrit pH Tem Un-ic	linity, Total ductivity 25°C oli tte, Unfiltered reactive te, Unfiltered reactive perature, Water onized Ammonia olved Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	9100 9100 0002 0002 8077 8025 9101	4 0 0 2 1 1 0 0 0 2 2 3 3	4 4 4 4 4 4 4	World	123	3.3200	# 01	
12 13 Alkal Conc E. C Nitral Nitrit pH Tem Un-ic	linity, Total ductivity 25°C oli tte, Unfiltered reactive te, Unfiltered reactive perature, Water onized Ammonia olved Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	9100 9100 0002 0002 8077 8025 9101	4 0 0 2 1 1 0 0 0 2 2 3 3	4 4 4 4 4 4 4	World	123	3.3200	# 01	
12 13 Alkal Conc E. C Nitral Nitrit pH Tem Un-ic	linity, Total ductivity 25°C oli tte, Unfiltered reactive te, Unfiltered reactive perature, Water onized Ammonia olved Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	9100 9100 0002 0002 8077 8025 9101	4 0 0 2 1 1 0 0 0 2 2 3 3	4 4 4 4 4 4 4	World	123	3.3200	# 01	
12 13 Alkal Conc E. C Nitral Nitrit pH Tem Un-ic	linity, Total ductivity 25°C oli tte, Unfiltered reactive te, Unfiltered reactive perature, Water onized Ammonia olved Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	9100 9100 0002 0002 8077 8025 9101	4 0 0 2 1 1 0 0 0 2 2 3 3	4 4 4 4 4 4 4	World	123	3.3200	# 01	
12 13 Alkal Conc E. C Nitral Nitrit pH Tem Un-ic	linity, Total ductivity 25°C oli tte, Unfiltered reactive te, Unfiltered reactive perature, Water onized Ammonia olved Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	9100 9100 0002 0002 8077 8025 9101	4 0 0 2 1 1 0 0 0 2 2 3 3	4 4 4 4 4 4 4	World	123	3.3200	****	
12 13 Alkal Conc E. C Nitral Nitrit pH Tem Un-ic	linity, Total ductivity 25°C oli tte, Unfiltered reactive te, Unfiltered reactive perature, Water onized Ammonia olved Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L) (mg/L)	9100 9100 0002 0002 8077 8025 9101	4 0 0 2 1 1 0 0 0 0 2 2 3 3 8 8 3 4	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	38	123	3.3200	***	
12 13 Alkal Conc E. C Nitra Nitrit pH Tem Un-i Diss Hydi	linity, Total ductivity 25°C oli te, Unfiltered reactive te, Unfiltered reactive perature, Water onized Ammonia olved Oxygen rogen Sulphide	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L) (mg/L)	9100 9100 0002 0002 8077 8025 9101 0000 8300	4 0 0 2 1 1 0 0 0 0 2 3 8 8 Retuil 1. Et	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	38 pleted for	123	3.3200 7.5000		
12 13 Alkal Cone E. C Nitra Nitrit pH Tem Un-i Diss Hydi	linity, Total ductivity 25°C oli te, Unfiltered reactive te, Unfiltered reactive perature, Water onized Ammonia olved Oxygen rogen Sulphide	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L) (mg/L)	9100 9100 0002 0002 8077 8025 9101 0000 8300	4 0 0 2 1 1 0 0 0 2 3 3 8 8 8 Retuil 1. Et W	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	38 pleted for ental MonterReporti	123	8.3200 7.5000 eporting	g Branch	, MECP, a



Fields marke	ed with an asterisk (*) are	mandatory.									
Project Nam Washago L											
Facility Ad Unit Number	1	Street Name Hurlwood La	ne							PO Box	
Municipality/		Trunwood La	Provir	nce						Postal C	
Orillia	Oky/10mii			Ontario	)					L3V 6J	3
Operating A	uthority ration of the Township of	of Severn									
Mailing Ad Unit Numbe		Street Name Hurlwood La	ane							PO Box	ì
Municipality Orillia	/City/Town		Provi	nce Ontario	)					Postal C L3V 6J	
File No.	Works Num	ber *	٦r	Month	ata P	eriod * Year		Days	Table Control	charge Type	Update Code
	1 2 2 2 2	2 2 7 3	,    -	0 5	2	0 2	2	3 1	Н	2	R
1 2	1 2 0 0 0		1	16	2	0 2	19	20 21	L	22	80
C.P.			20	1830)							
	ows	Γ	Param	neter Co	de	Dec.	Moi	nthly Results			
40 40	otal Flow	(10 <sup>3</sup> m <sup>3</sup> )	5	0010		3		2.67	74		
	verage Daily Flow	(103 m <sup>3</sup> /d)		0015		3		0.08	36		
	aximum Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	5	0020		3					
	aximum bany r ion		30		34	35	38		46		
	ypass	-			_				_	# of Oc	currences
12 13 PI	ant Bypass Volume	(10 <sup>3</sup> m <sup>3</sup> )		0270		3			_   1		
Di	uration	(hours)	30	31680	34	35	38				
3 6 R	aw Sewage	, 3	50		34	33	50		1	# of 5	Samples
	DD <sub>5</sub>	(mg/L)	0	00001		0		1:	29		1
	uspended Solids	(mg/L)	(	00006		0		1:	59		1
TH	KN	(mg/L)	(	00020		2		25.9	90		1
To	otal Phosphorus	(mg/L)	(	00033		1		2	2.6		1
		3	30		34	35	38			48	51
	i <b>nal Effluent</b> otal Effl. Volume To Water	course (103 m3)		50280		3		23.6	19		
	low Duration	(hours)		31680	$\dashv$	1		243			
	ell Depth	(m)		50290	$\neg$	1					
	BOD <sub>5</sub>	(mg/L)		00002	$\neg$	1					
	OD <sub>5</sub>	(mg/L)	(	00001		1		12	2.5		5
	uspended Solids	(mg/L)	(	00006	=====	1		8	3.2		5
Α	mmonia + Ammonium	(mg/L)	(	00019		2		2.	96		5
Т	KN	(mg/L)		00020		2			86		5
T	otal Phosphorus	(mg/L)		00033		35	38	0.	23	48	5
		•	30		34	35	30			40	3
	isinfection hlorine Used	(kg as Cl <sub>2</sub> )		50320		1					
	hlorine Dosage	(mg/L as Cl <sub>2</sub> )		80410		1					
	hlorine Residual	(mg/L as Cl <sub>2</sub> )	-	80420		1					
			30	20	34	35	38	1950		48	5
Operator T 705-345-1	elephone Number 1841			Re	Env	compl rironmen	tal Mon	itoring and R	Reporti	ng Branc	h, MECP, at
Operator E	mail Address * severn.ca			2.	You	ır Enviro	nmenta	ng@ontario. I Officer at yo			t/Area
Comments					nistry		t Email	Address *			



Project Name Washago Lagoo	on ·									
Facility Addres	s							ř.		
Unit Number	Street Number 1021	Street Name Hurlwood I							PO Box 159	
Municipality/City/\ Orillia	Γown		Province ON - Ont	ario					Postal Co L3V 6J3	
Operating Authori The Corporation	ity of the Township o	of Severn								
Mailing Addres	s									
Unit Number	Street Number 1021	Street Nam Hurlwood							PO Box 159	
Municipality/City/ Orillia	Town		Province ON - On	tario					Postal Co	
File No.	Works Num	iber *	Mor		Period Yea		Days		harge ype	Update Code
4 6 1	2 0 0 0	2 2 7	3 0	5 2	0	2 2	3 1		2	R 80
C.P.										
3 6 Raw Se	wage		Parameter C	Code	Dec	Month	y Average F	Results	# of	Samples
12 13									1	
-										
					$\vdash$					
					H		<u> </u>			
			30	34	35	38				
		r						Desulta	] [#6	f Samples
3 9 Final E			Parameter (		Dec	Month	ly Average		# 0	
	ty, Total	(mg/L)	00051		4	-	10	00.0000		50
-	ctivity 25°C	(μS/cm)	91004		4	-			-	
E. Coli		(CT/100ml) (mg/L)	91000		4					
	Unfiltered reactive Unfiltered reactive	(mg/L)	00022		4					
pH	Cimilared readilive	(g. L)	80770		4			8.2900		5
	rature, Water	(°C)	80250		4			13.0000		5
	ized Ammonia	(mg/L)	91012		4			0.1310		4
	ved Oxygen	(mg/L)	00003	3	4					
	gen Sulphide	(mg/L)	83008	3	4					
					$\vdash$				1	
			30	34	35	38				
Operator Teleph 705-345-1841	none Number		30	Return	com	pleted fe	orm to:	Reportin	g Branch	, MECP, at
Operator Email	Address			Wa	steWa	terReport	ing@ontario	o.ca And		
tdrouin@sever	n.ca			2. Yo	ur Envi	ronmenta	Officer at	your loca	al District	Area
Comments				ww	w.onta	rio.ca/en	your local vironment-a	nd-energ	gy/ministr	y-



Fields ma	arked with	an asterisk (*) are	e mandatory.	<u> </u>								w Jedus rozzensky skriuk
Project N Washag	lame Jo Lagoor	1										
Facility Unit Num	Address nber	Street Number	Street Name Hurlwood La	ane							PO Box 159	
	ality/City/To		Trainvood Ed	Provi	1000					*****	Postal C L3V 6J	
Orillia	g Authority	v		ON-	Ontar	10					E5 V 05	
The Cor	poration	of the Township	of Severn									
Mailing Unit Nun	Address nber	Street Number	Street Name Hurlwood La	ane							PO Box 159	ĺ
Municipa	ality/City/T	own		Provi ON -	ince - Ontar	io	2-210-2-2-2				Postal 0 L3V 6J	
File No.		Works Nu	mber *	7		Data P			Days		charge	Update Code
	1				Month		Year 0 2	2	3 0	H	ype 2	R
1 2	1 1	2 0 0 0		3	0 6	2	0 2	19	20 21	L	22	80
C.P.	7											
	1		1	Paran	neter C	ode	Dec.	Moi	nthly Results			
3 5	<b>Flows</b> Total Flo	w	(10 <sup>3</sup> m <sup>3</sup> )		50010	-	3		3.40	-		
		W Daily Flow	(10° m³/d)		50015		3		0.11	0		
	- 100 - 100 <sup>(20)</sup>	n Daily Flow	(10° m²/d)		50020		3					
	Waxiiiidi	ii Daily 1 low	1207153	30	00020	34	35	38		46		
3 5	Bypass									_	# of Oc	currences
12 13	Plant By	pass Volume	(10 <sup>3</sup> m <sup>3</sup> )	Ę	50270		3			_   [		
	Duration		(hours)		81680	34	35	38				
2 6	J			30		34	35	36		ſ	# of 5	Samples
12 13	Raw Sev BOD <sub>5</sub>	wage	(mg/L)	(	00001		0		14	13		1
	1070	led Solids	(mg/L)	(	00006		0		12	25		1
	TKN		(mg/L)	(	00020		2		17.1	10		1
	Total Ph	osphorus	(mg/L)	(	00033		1		1	.8	J	1
	٦ .			30		34	35	38			48	51
	Final Ef		ercourse (103 m <sup>3</sup> )		50280		3					
12 10	Flow Du		(hours)	_	81680		1					
	Cell Dep		(m)		50290		1			-		
	CBOD <sub>5</sub>	7.011	(mg/L)		00002		1					
	BOD <sub>5</sub>		(mg/L)	-	00001		1					
		ded Solids	(mg/L)		00006		1		. =,-1;=-			
		a + Ammonium	(mg/L)		00019		2					
	TKN		(mg/L)		00020		2					
	Total Ph	osphorus	(mg/L)	30	00033	34	35	38		J	48	51
0 9	Disinfe	-41		30		34	35	30			40	3,
12 13			(kg as Cl <sub>2</sub> )		50320		1					
		Dosage	(mg/L as Cl <sub>2</sub> )		80410		1					
	Chlorine	Residual	(mg/L as Cl <sub>2</sub> )		80420		1					
				30	11265	34	35	38	12000		48	51
	or Telepho 15-1841	one Number				. Env	ironmen		itoring and R			h, MECP, at
	or Email A				2	. You	r Enviro	nmental	ng@ontario. Officer at yo			t/Area
Comme	ents						CP Offic		Address *			
									ntario.ca			



Project Nam Washago L										
Facility Ad Unit Number	1	Street Name						1000	O Box	
Municipality/		Tidiwood	Province ON - On						ostal Co 3V 6J3	
Operating A	uthority ration of the Township o	f Severn								
Mailing Ad		100000000000000000000000000000000000000								
Unit Numbe		Street Name Hurlwood						500	O Box 59	
Municipality Orillia	/City/Town		Province ON - On					1000	ostal Co 3V 6J3	
File No.	Works Numb	per *	Mo	Data inth	Period Ye		Days	Disch: Typ		Update Code
4 6	1 2 0 0 0	2 2 7	3 0	6 2	0	2 2	3 0	2		R 80
C.P.										
	aw Sewage		Parameter (	Code	Dec	Monthl	y Average R	esults	# of	Samples
12 13										
_										
-					$\vdash$				-	
-										
-										
		3	0	34	35	38				
3 9 Fi	nal Effluent		Parameter	Code	Dec	Monthl	y Average R	esults	# of	Samples
12 13 AI	kalinity, Total	(mg/L)	00051		4					
Co	onductivity 25°C	(µS/cm)	91004		4					
E.	Coli	(CT/100ml)	91000		4					
	trate, Unfiltered reactive	(mg/L)	00022		4					
-	trite, Unfiltered reactive	(mg/L)	00021		4				-	
pΗ		(0.0)	80770		4	-			-	
	emperature, Water	(°C)	91012	-	4				-	
	n-ionized Ammonia	(mg/L)	00003		4	-				
1	ssolved Oxygen ydrogen Sulphide	(mg/L)	83008	1000	4	-				
103	ydrogeri Sulphide	(IIIg/L)	03000		-			-		
	IV	3	0	34	35	38				
Operator Te 705-345-1	elephone Number 841		NOTE   100	1. Er	vironm		toring and R		Branch,	MECP, at
	mail Address			7			Officer at vo		District/A	\rea
tdrouin@s				M	ECP Of	fice. (Find	Officer at yo your local M	ECP offic	e: https	://
J.IIIIOINO				wv	ww.onta		ronment-and			



Fields ma	rked with	an asterisk (*) are	mandatory.							
Project Na	ame									
Washage										
Facility A Unit Num		Street Number	Street Name Hurlwood La	ine					PO Box	
Municipal	ity/City/To		Trainious Es	Province					Postal (	
Orillia	,,,,,,,,,	**************************************		ON - Or	ntario				L3V 6J	3
Operating The Corp		y of the Township o	of Severn							
Mailing	Address	10 (10 (10 (10 (10 (10 (10 (10 (10 (10 (	too come						PO Box	
Unit Num		Street Number 1021	Street Name Hurlwood La						159	
Municipa Orillia	lity/City/T	own		ON - Or	ntario				Postal 6	13
File No.		Works Num	ber *	Mo	Data P	eriod * Year		Days	Discharge Type	Update Code
4 6	1	2 0 0 0	2 2 7 3	3 0	7 2	0 2	10000	3 1	2	R
1 2	3		1	1 16			19	20 21	22	80
C.P.										
3 5	Flows		Γ	Paramete	er Code	Dec.	Mo	nthly Results		
12 13	Total Flo	w	(10 <sup>3</sup> m <sup>3</sup> )	500	10	3		2.047		
	Average	Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	500	15	3		0.066	5	
	000 000 <sup>77</sup>	n Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	500	20	3				
			3	30	34	35	38	4	6	
3 5	Bypass		100 E	500	70				7 # 61 00	ccurrences
12 13	201000000000000000000000000000000000000	pass Volume	(10 <sup>3</sup> m <sup>3</sup> )	502		3				
	Duration		(hours)	816	34	35	38	<u> </u>	J	
3 6	Raw Sev	wane	8		8533	474			# of	Samples
	BOD <sub>5</sub>	go	(mg/L)	000	01	0		213	3	1
	Suspend	ded Solids	(mg/L)	000	006	0		210	0	1
	TKN		(mg/L)	000	20	2		73.40	)	1
	Total Ph	osphorus	(mg/L)	000		1		7.2		1
	1		3	30	34	35	38		48	51
3 9	Final Ef	fluent fl. Volume To Wate	(103 m3)	502	280	3			7	
12 10	Flow Du		(hours)	816		1			1	
	Cell Dep		(m)	502	W. 01700	1	-		1	
	CBOD <sub>5</sub>		(mg/L)	000	-	1				
	BOD <sub>5</sub>		(mg/L)	000		1				
	10.774	ded Solids	(mg/L)	000		1				
	14.00.000	ia + Ammonium	(mg/L)	000	019	2				
	TKN		(mg/L)	000	020	2				
	Total Ph	nosphorus	(mg/L)		033	2				
	7			30	34	35	38		48	5
0 9	Disinfer Chlorine		(kg as Cl <sub>2</sub> )	501	320	1			7	
12 13		e Used e Dosage	(mg/L as Cl <sub>2</sub> )		410	1	-		-	
		e Residual	(mg/L as Cl <sub>2</sub> )		420	1	-		1	
	Canonine		,a. = 30 -12/	30	34	35	38		48	5
Operato 705-34		one Number			1. Env	rironmen	tal Mor	orm to: nitoring and Re	porting Brand	h, MECP, at
Operato	or Email A				Wa	steWate	rReport	ing@ontario.c	a And	
Comme					ME	CP Offic	e.			
								Address * ontario.ca		



	n									
Facility Address  Unit Number	Street Number	Street Nam						100	PO Box 159	
Municipality/City/T	J. 1512 AGENT	Hamilton	Province						Postal C	
)rillia			ON - Or	itano					20 00.	
perating Authorithe Corporation	of the Township of	of Severn								
Mailing Addres	s							i.		
Jnit Number	Street Number 1021	Street Nam Hurlwood			<u> </u>	1911 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -			PO Box 159	
Municipality/City/П Drillia	own		ON - O						Postal C L3V 6J	
File No.	Works Num	ber*	T M	Data onth	Period Yea		Days		narge pe	Updat Code
4 6 1	2 0 0 0	2 2 7	3 0	7 2	T T	2 2	3 1	1	2	R 80
C.P.	300000000000000000000000000000000000000									
3 6 Raw Sev	wage	Γ	Parameter	Code	Dec	Month	y Average	Results	# o	f Sample
12 13	30 A # 30									
1										
	<del></del>									
			30	34	35	38				
3 9 Final Ef	fluent		90 Parameter		35 Dec		ly Average	Results	# 0	of Sample
3 9 Final Ef				Code			ly Average	Results	# 0	of Sample
12 13 Alkalinit	y, Total	(mg/L)	Parameter	Code	Dec		ly Average	Results	# 0	of Sample
12 13 Alkalinit Conduc		(mg/L) (μS/cm)	Parameter 0005	Code 1	Dec 4		ly Average	Results	# 0	of Sample
12 13 Alkalinit Conduc E. Coli	y, Total tivity 25°C	(mg/L) (µS/cm) (CT/100ml)	Parameter 0005 9100	Code 1 4	Dec 4 4		ly Average	Results	# 0	of Sample
12 13 Alkalinit Conduc E. Coli Nitrate,	y, Total tivity 25°C Unfiltered reactive	(mg/L) (µS/cm) (CT/100ml) (mg/L)	Parameter 0005 9100 9100	Code 1 4 0	Dec 4 4 4		ly Average	Results	# 0	of Sample
12 13 Alkalinit Conduc E. Coli Nitrate,	y, Total tivity 25°C	(mg/L) (µS/cm) (CT/100ml)	9100 9100 0002	Code 1 4 0 2 1	Dec 4 4 4 4 4		ly Average	Results	# 0	of Sample
12 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U	y, Total tivity 25°C Unfiltered reactive	(mg/L) (µS/cm) (CT/100ml) (mg/L)	9100 9100 0002 0002	Code 1 4 0 2 1 0	Dec 4 4 4 4 4 4		ly Average	Results	# c	of Sample
12 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)	Parameter 0005 9100 9100 0002 0002 8077	Code 1 4 0 2 1 0 0 0	Dec 4 4 4 4 4 4		ly Average	Results	# C	of Sample
12 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive ature, Water and Ammonia	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L)	Parameter 0005 9100 9100 0002 0002 8077 8025	Code 1 4 0 2 1 1 0 0 2 2	Dec 4 4 4 4 4 4 4 4		ly Average	Results	# 0	of Sample
12 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolve	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive ature, Water	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C)	Parameter 0005 9100 9100 0002 0002 8077 8025 9101	Code 1 4 0 2 1 1 0 0 2 1 3	Dec 4 4 4 4 4 4 4 4 4		ly Average	Results	# c	of Sample
12 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolve	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive ature, Water ature, Water and Ammonia and Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L)	Parameter 0005 9100 9100 0002 0002 8077 8025 9101 0000	Code 1 4 0 2 1 1 0 0 2 1 3	Dec 4 4 4 4 4 4 4 4 4 4		ly Average	Results	# 0	of Sample
12 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolve	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive ature, Water ature, Water and Ammonia and Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L)	Parameter 0005 9100 9100 0002 0002 8077 8025 9101 0000	Code 1 4 0 2 1 1 0 0 2 1 3	Dec 4 4 4 4 4 4 4 4 4 4		ly Average	Results	# 0	of Sample
12 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolve	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive ature, Water ature, Water and Ammonia and Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L)	Parameter 0005 9100 9100 0002 0002 8077 8025 9101 0000	Code 1 4 0 2 1 1 0 0 2 1 3	Dec 4 4 4 4 4 4 4 4 4 4		ly Average	Results	# c	of Sample
12 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolve	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive ature, Water ature, Water and Ammonia and Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L)	Parameter 0005 9100 9100 0002 0002 8077 8025 9101	Code 1 4 0 2 1 1 0 0 2 1 3	Dec 4 4 4 4 4 4 4 4 4 4		ly Average	Results	# 0	of Sample
12 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolve	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive ature, Water ature, Water and Ammonia and Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L) (mg/L)	Parameter 0005 9100 9100 0002 0002 8077 8025 9101	Code 1 4 0 2 1 1 0 0 2 1 3	Dec 4 4 4 4 4 4 4 4 4 4		ly Average	Results	# c	of Sample
12 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolve	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive ature, Water red Ammonia ed Oxygen en Sulphide	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L) (mg/L)	Parameter 0005 9100 9100 0002 0002 8077 8025 9101 0000 8300	Code 1 4 0 2 1 1 0 0 2 3 8 Retur 1. En	Dec	Month  38  pleted for ental Mon	orm to:	Reporting		
12 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolve Hydroge	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive ature, Water red Ammonia ed Oxygen en Sulphide	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L) (mg/L)	Parameter 0005 9100 9100 0002 0002 8077 8025 9101 0000 8300	Code 1 4 0 2 1 0 0 2 3 8  Retur 1. En	Dec	Month  38  pleted for ental MonterReport	orm to:	Reporting o.ca And	g Branch	ı, MECP,



Fields marked with an asterisk (*) are m	nandatory.							
Project Name Washago Lagoon								
Facility Address Unit Number Street Number	Street Name						PO Box	
1021	Hurlwood La	Province					Postal C	Code
Municipality/City/Town Orillia		ON - Onta	ario				L3V 6J	
Operating Authority The Corporation of the Township of	Severn							
Mailing Address Unit Number Street Number	Street Name						PO Box	:
Municipality/City/Town	Hurlwood La	Province					Postal (	
Orillia		ON - Ont	Data Po	ariod *			L3V 6J Discharge	Update
File No. Works Numb	er*	Mor	1	Year		Days	Туре	Code
4 6 1 2 0 0 0		3 0	8 2	0 2	19	3 1	22	R 80
C.P.								
3 5 Flows		Parameter	Code	Dec.	Мо	nthly Results		
12 13 Total Flow	(10 <sup>3</sup> m <sup>3</sup> )	5001	0	3		2.476		
Average Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	5001	5	3		0.079		
Maximum Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	5002		3 35	38	46		
3 5 Bypass		30	34	35	36	40		currences
12 13 Plant Bypass Volume	(10 <sup>3</sup> m <sup>3</sup> )	5027	0	3				
Duration	(hours)	8168	250	1				
3 6 <b>8 S</b>		30	34	35	38		# of	Samples
3 6 Raw Sewage 12 13 BOD <sub>5</sub>	(mg/L)	0000	1	0		371		1
Suspended Solids	(mg/L)	0000	16	0		246		1
TKN	(mg/L)	0002	20	2		60.00	-	1
Total Phosphorus	(mg/L)	0003	34	35	38	6.6	48	1 51
3 9 Final Effluent			300	V5.52			_	
12 13 Total Effl. Volume To Watero	course (103 m <sup>3</sup> )	5028	30	3				
Flow Duration	(hours)	8168	200	1			1	
Cell Depth	(m)	5029		1			-	
CBOD <sub>5</sub>	(mg/L)	0000	1000	1	-			
BOD <sub>5</sub>	(mg/L)	0000		1	-		+	
Suspended Solids Ammonia + Ammonium	(mg/L) (mg/L)	0000		2				
TKN	(mg/L)	0002		2	-			
Total Phosphorus	(mg/L)	0003	33	2				
		30	34	35	38		48	5
0 9 Disinfection 12 13 Chlorine Used	(kg as Cl <sub>2</sub> )	5032	20	1			7	
Chlorine Dosage	(mg/L as Cl <sub>2</sub> )			1	-		1	
Chlorine Residual	(mg/L as Cl <sub>2</sub> )			1				
40 (Acceptage of Maries etc.) 50 To T 50 To F	- Constant Constant Service Se	30	34	35	38		48	5
Operator Telephone Number 705-345-1841			Return 1. Envi	ronmen	tal Mon	itoring and Rep	oorting Brand	ch, MECP, at
Operator Email Address * tdrouin@severn.ca			2. You	r Enviro	nmenta	ing@ontario.ca I Officer at you		t/Area
Comments			Ministry		t Email	Address *		



icility Address										
acility Address nit Number	Street Number	Street Name Hurlwood I						PO 159	Box 9	
unicipality/City/T	own		Province ON - Ont	tario					stal Co V 6J3	de
perating Authorit	y of the Township o	of Severn								
ailing Addres							7.4-34-1-1-3			
nit Number	Street Number	Street Name						PO 15	Box 9	
unicipality/City/T	own		Province ON - On	tario				1971/3000	stal Co V 6J3	de
le No.	Works Num	ber *	Mor	1	Period Yea		Days	Dischar		Updat
6 1	2 0 0 0	2 2 7	3 0	8 2	0	2 2	3 1	2 22	П	R 80
C.P.										
	wage	Г	Parameter C	Code	Dec	Monthl	y Average Re	sults	# of	Sample
6 Raw Sev	waye		1 didilicitor c	7000			,			
					$\vdash$					
						(00000000000			_	-
-					$\Box$					
-				-				-		
					H				-	
					1 1					
					25	20				
		3	0	34	35	38				
C Final Ef	fluent	3					lv Average Re	esults	# of	Sample
			Parameter (	Code	Dec		ly Average Re	esults	# of	Sample
2 13 Alkalinit	y, Total	(mg/L)	Parameter 0	Code	Dec 4		ly Average Re	esults	# of	Sample
2 13 Alkalinit Conduc		(mg/L) (μS/cm)	Parameter 0 00051 91004	Code	Dec 4 4		ly Average Re	esults	# of	Sample
2 13 Alkalinit	y, Total	(mg/L) (μS/cm) (CT/100ml)	91000	Code	Dec 4 4 4		ly Average Re	esults	# of	Sample
2 13 Alkalinit Conduc E. Coli Nitrate,	y, Total tivity 25°C Unfiltered reactive	(mg/L) (μS/cm)	91004 91002	Code	Dec 4 4 4 4 4		ly Average Re	esults	# of	Sample
2 13 Alkalinit Conduc E. Coli Nitrate,	y, Total tivity 25°C	(mg/L) (μS/cm) (CT/100ml)	91000	Code	Dec 4 4 4		ly Average Re	esults	# of	Sample
2 13 Alkalinit Conduc E. Coli Nitrate,	y, Total tivity 25°C Unfiltered reactive	(mg/L) (µS/cm) (CT/100ml) (mg/L)	91004 91002	Code	Dec 4 4 4 4 4		ly Average Re	esults	# of	Sample
2 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U	y, Total tivity 25°C Unfiltered reactive	(mg/L) (µS/cm) (CT/100ml) (mg/L)	Parameter 0 00051 91004 91000 00022 00021	Code	Dec 4 4 4 4 4 4		ly Average Re	esults	# of	Sample
2 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, V pH Temper	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C)	Parameter 0 00051 91004 91000 00022 00021 80770	Code	Dec 4 4 4 4 4 4		ly Average Re	esults	# of	Sample
2 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, I pH Temper Un-ioniz	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive rature, Water zed Ammonia	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L)	Parameter 0 00051 91004 91000 00022 00021 80770 80250 91012	Code	Dec 4 4 4 4 4 4 4		ly Average Re	esults	# of	Sample
2 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, t pH Temper Un-ioniz Dissolv	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive rature, Water zed Ammonia ed Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L)	Parameter 0 00051 91004 91000 00022 00021 80770 80250 91012 00003	Code	Dec 4 4 4 4 4 4 4 4 4		ly Average Re	esults	# of	Sample
2 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, t pH Temper Un-ioniz Dissolv	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive rature, Water zed Ammonia	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L)	Parameter 0 00051 91004 91000 00022 00021 80770 80250 91012	Code	Dec 4 4 4 4 4 4 4 4		ly Average Re	esults	# of	Sample
2 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolv	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive rature, Water zed Ammonia ed Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L)	Parameter 0 00051 91004 91000 00022 00021 80770 80250 91012 00003	Code	Dec 4 4 4 4 4 4 4 4 4		ly Average Re	esults	# of	Sample
Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolv	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive rature, Water zed Ammonia ed Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L)	Parameter 0 00051 91004 91000 00022 00021 80770 80250 91012 00003	Code	Dec 4 4 4 4 4 4 4 4 4		ly Average Re	esults	# of	Sample
2 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolv	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive rature, Water zed Ammonia ed Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L)	Parameter 0 00051 91004 91000 00022 00021 80770 80250 91012 00003	Code	Dec 4 4 4 4 4 4 4 4 4		ly Average Re	esults	# of	Sample
Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolv	y, Total tivity 25°C Unfiltered reactive Unfiltered reactive rature, Water zed Ammonia ed Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L) (mg/L)	Parameter ( 00051 91004 91000 00022 00021 80770 80250 91012 00003 83008	Code	Dec 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Month	ly Average Re	esults	# of	Sample
2 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, I pH Temper Un-ioniz Dissolve Hydrog	y, Total tivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water zed Ammonia ed Oxygen en Sulphide	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L) (mg/L)	Parameter 0 00051 91004 91000 00022 00021 80770 80250 91012 00003	Code	Dec 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Month		esults	# of	Sample
Alkalinit Conduc E. Coli Nitrate, Nitrite, I pH Temper Un-ioniz Dissolve Hydrog	y, Total tivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water zed Ammonia ed Oxygen en Sulphide	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L) (mg/L)	Parameter ( 00051 91004 91000 00022 00021 80770 80250 91012 00003 83008	Code	Dec 4 4 4 4 4 4 4 4 4 4 5 5 5 6 6 6 6 6 6 6	Month	orm to:			
2 13 Alkalinit Conduc E. Coli Nitrate, Nitrite, U pH Temper Un-ioniz Dissolv Hydrog	y, Total tivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water zed Ammonia ed Oxygen en Sulphide  one Number	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L) (mg/L)	Parameter ( 00051 91004 91000 00022 00021 80770 80250 91012 00003 83008	34   Retur	Dec 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Month  38  pleted for ental Mon	orm to:	eporting B		
Alkalinit Conduc E. Coli Nitrate, Nitrite, I PH Temper Un-ionia Dissolv Hydrog	y, Total  tivity 25°C  Unfiltered reactive  Unfiltered reactive  rature, Water  zed Ammonia  ed Oxygen  en Sulphide  one Number	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L) (mg/L) (mg/L)	Parameter ( 00051 91004 91000 00022 00021 80770 80250 91012 00003 83008	34   Return 1. En   Wa	Dec 4 4 4 4 4 4 4 4 4 A mathridal strength of the strength of	Month  38  pleted for ental MonterReport	orm to:	eporting B	Branch	. MECP



Fields ma	arked with	an asterisk (*) ar	re mandatory.							877-0-1 Table		
Project N		0										
	o Lagoor Address									1001-01		
Unit Num		Street Number	Street Name Hurlwood La	ine							PO Box 159	
Municipa Orillia	lity/City/T	own		Provin ON - (	ce Ontario	0					Postal C L3V 6J	
Operating	g Authorit	y of the Township	of Covern									
		of the Township	or Severii									
Unit Num	Address nber	Street Number	Street Name Hurlwood La	ane							PO Box 159	
Municipa Orillia	ality/City/T	own		Provin	nce Ontari	0					Postal C L3V 6J	
File No.		Works Nu	ımher *	7 [		Data P			Days		charge	Update
	,			-	Month		Year				ype 2	Code
4 6	1 1	2 0 0 0	20 - 200 - 10 - 10 - 10 - 10 - 10 - 10 -		0 9	2	0 2	19	3 0	L	22	80
	7											
C.P.			Г	Param	eter Co	nde	Dec.	Mo	nthly Results			
3 5	Flows		(4033)	V2 0 0 0	0010	Jue	3	10101	1.92	-		
12 10	Total Flo		(103 m <sup>3</sup> )				3		0.06	0.00		
		Daily Flow	(103 m3/d)		0015	_	3	-	0.00	77		
	Maximur	m Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	30	0020	34	35	38		46		
3 5	Bypass									[	# of Oc	currences
12 13		pass Volume	(10 <sup>3</sup> m <sup>3</sup> )	50	0270		3					
	Duration	í	(hours)	8	1680		1					
	7		3	30		34	35	38		١	# of 0	Samples
3 6	Raw Se	wage	(mad) [	0	0001				37	71	# 01 3	1
12 13	5055	4-40-54-	(mg/L)		0001		0			71		1
	- LONGO CONTRACTOR	ded Solids	(mg/L) (mg/L)		0000		2		41.			1
	TKN Total Ph	nosphorus	(mg/L)	100 100 000	0033		1	-	(12)	.7		1
	Total Fi	lospilorus	0.0350.00.050.050.0000	30		34	35	38			48	51
3 9	Final Ef	ffluent	90									
12 13	Total Ef	fl. Volume To Wa	tercourse (103 m <sup>3</sup> )	5	0280		3					
	Flow Du	ıration	(hours)	- N	1680		1		<del> </del>	_		
	Cell Dep	pth	(m)		0290		1			_		
	CBOD <sub>5</sub>		(mg/L)		00002		1			_		
	BOD <sub>5</sub>		(mg/L)		00001		1	-		_		
	200000000000000000000000000000000000000	ded Solids	(mg/L)	3.00	00006		1 2					
		ia + Ammonium	(mg/L)		00019		2	-		$\dashv$		
	TKN	hoodhor:-	(mg/L) (mg/L)		00020	-	2	-				
	i otal Pi	hosphorus		30	,0033	34	35	38			48	5
0 9	Disinfe	ction		40764			90.750	<u> </u>				
12 13	_		(kg as Cl <sub>2</sub> )	5	50320		1					
	Chlorine	e Dosage	(mg/L as Cl <sub>2</sub> )	8	30410		1					
	Chlorine	e Residual	(mg/L as Cl <sub>2</sub> )		30420		1				40	5
				30	I.D.	34	35	38 atad fo	rm to:		48	5
705-34	15-1841	one Number				Envi	ironmen	tal Mon	orm to: itoring and R ing@ontario.			h, MECP, at
	or Email A				2.	You	r Enviro	nmenta	Officer at yo			t/Area
Comme	_						CP Offic		Address *	(2)		
					P	eter.V	reugde	nhil@d	Address * ontario.ca			



acility Address nit Number Street Num 1021  Junicipality/City/Town Orillia  Operating Authority The Corporation of the Tow	mber Street Nam					
1021 Junicipality/City/Town Operating Authority						The second second
Orillia Operating Authority						PO Box 159
perating Authority he Corporation of the Tow		Province ON - Onta	ario			Postal Code L3V 6J3
ne Corporation of the Tow	nship of Severn					
Mailing Address	riship of devent					
Init Number Street Nu	mber Street Nam					PO Box 159
Municipality/City/Town		Province ON - Onto	ario			Postal Code L3V 6J3
	rks Number *	1	Data Pe		l Davs I I	Discharge Update Code
4 6 1 2 0 0		3 0 Mon	9 2	O Yea	2 2 3 0	2 R 22 80
C.P.						
3 6 Raw Sewage	1	Parameter C	ode D	ec	Monthly Average Resu	Its # of Samples
12 13						
			-	4		
				$\dashv$		
	<del></del>	30	34	35	38	
The second record					Manthly Average Post	ults # of Samples
3 9 Final Effluent		Parameter C	ode	Dec	Monthly Average Resi	# 01 Samples
Alkallility, Total	(mg/L)	91004		4		
Conductivity 25°C	(μS/cm) (CT/100ml)	91004		4	-	$\dashv \vdash \vdash \vdash$
E. Coli Nitrate, Unfiltered re	12.000000000000000000000000000000000000	00022		4		
Nitrite, Unfiltered re		00021		4		
pH	(1.3.1)	80770		4		
Temperature, Wate	r (°C)	80250		4		
Un-ionized Ammon		91012		4		
Dissolved Oxygen	(mg/L)	00003		4		
Hydrogen Sulphide	(mg/L)	83008		4		
				$\dashv$		
				-		
				$\dashv$		
				$\neg$		
		30	34	35	38	
Operator Telephone Number 705-345-1841			1. Envir	onm	pleted form to: ental Monitoring and Rep	
Operator Email Address tdrouin@severn.ca			2 Your	Fnvi	terReporting@ontario.ca ironmental Officer at your	local District/Area
Comments			MEC	P Of	fice. (Find your local MEC ario.ca/environment-and-e	P office: https://



Vashago L	e agoon									-50-2	
acility Ad		Dr. Sc. 833			ti-o-ac				lno		
Init Number	Street Number	Street Name Hurlwood La	ne						PO 159		
/unicipality/		Tranwood Ee	_	vince	047.5				Pos	tal C	ode
Drillia	City/Town		1000	- Ontario					L3V	613	
perating A	uthority ration of the Townshi	p of Severn									
Mailing Ad									98		
Jnit Number	Street Number	Street Name Hurlwood La	ane						PO 159	Box	
Municipality/ Orillia	/City/Town		10000000	vince - Ontario						tal C	
File No.	Works N	lumber *	$^{\dagger}$	1 Sept. 1 Sept. 1 Sept. 1	ta P	eriod *		Days	Discharg	je	Update
-lie No.				Month	_	Year			Туре	_	Code
4 6	1 2 0 0 0		3	1 0	2	0 2	19	3 1	2 22		80
1 2	3			-10							
C.P.		Г	724		$\neg$				7		
	ows		Para	meter Cod	е	Dec.	Mo	nthly Results			
<sup>12</sup> <sup>13</sup> To	tal Flow	(10 <sup>3</sup> m <sup>3</sup> )		50010		3		1.93			
Av	erage Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)		50015		3		0.06	2		
Ma	aximum Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)		50020		3					
		;	30		34	35	38		46	f Occ	currences
	/pass	(402 2)		50270	$\neg$	3			7   "	-	
3325 335 EU	ant Bypass Volume	(10 <sup>3</sup> m <sup>3</sup> )	_	81680	$\dashv$	1					
Di	uration	(hours)	30	01000	34	35	38				
3 6 Ra	aw Sewage		707						#	of S	amples
	DD <sub>5</sub>	(mg/L)		00001		0		15	6		
Sı	uspended Solids	(mg/L)		00006		0		14	2		
TH	KN	(mg/L)		00020		2		33.9	0		N/
Т	otal Phosphorus	(mg/L)		00033		1		3.			
			30		34	35	38		48		
	nal Effluent				$\neg$				_		
	otal Effl. Volume To Wa			50280	_	3			-		
	ow Duration	(hours)		81680	_	1	-		-		
	ell Depth	(m)	_	50290		1				-	
	BOD <sub>5</sub>	(mg/L)		00002	-	1	-		-	-	
	OD <sub>5</sub>	(mg/L)		00001		1			-		
	uspended Solids	(mg/L)	-	00006	-		-				
	mmonia + Ammonium	(mg/L)		00019	_	2	-		$\dashv \vdash$	-	
	KN	(mg/L)	-	00020	-	2	-		+		A141
Т	otal Phosphorus	(mg/L)	30	00033	34	35	38		48	+	
0 9 p	isinfection		-50%		1608	2005					
	hlorine Used	(kg as Cl <sub>2</sub> )		50320		1					
С	hlorine Dosage	(mg/L as Cl <sub>2</sub> )		80410		1					
С	hlorine Residual	(mg/L as Cl <sub>2</sub> )		80420		1					
			30	91 <b>4</b> 888 70	34	35	38		48		
Operator T 705-345-1	elephone Number 1841			1.	Env		al Mon	itoring and Re		anch	, MECP,
Operator E	mail Address * severn.ca			12	part of the last o			ing@ontario.o I Officer at yo		strict	/Area



	s							10		
it Number	Street Number 1021	Street Name Hurlwood L						1	O Box 59	
unicipality/City/T rillia	Town		Province ON - Ont	ovince Postal 0 N - Ontario L3V 6J						
erating Authori	ty of the Township o	f Severn								
ailing Addres										
nit Number	Street Number 1021	Street Name Hurlwood L							PO Box 159	
unicipality/City/ rillia	Town		Province ON - On	tario					ostal Co 3V 6J3	0.0000000000000000000000000000000000000
le No.	Works Num	ber*	Moi	Data F	Period Yea		Days	Disch Typ		Upda Cod
6 1	2 0 0 0		3 1	0 2	0	2 2	3 1	2		R 80
C.P.										
	wage	П	Parameter C	Code	Dec	Monthl	y Average R	esults	# of	Sample
6 Raw Se	wage		aramotor c				, ,			
					$\vdash$					
-										
					$\vdash$	-				
									-	
					$\vdash$	-		_		
					_			-	-	
			700AII-03-000II							
					35	38				
		30	)	34	35	30				
o Final F	ffluent	Γ	Parameter (	Code	Dec	Month	ly Average R	esults	# of	Sample
			Parameter (			Month	ly Average R	esults	# of	Sample
2 13 Alkalini	ty, Total	(mg/L)	00051		4	Month	ly Average R	esults	# of	Sampl
2 13 Alkalini Conduc		(mg/L) (μS/cm)	00051 91004		4	Month	ly Average R	esults	# of	Sampl
2 13 Alkalini Conduc E. Coli	ty, Total ctivity 25°C	(mg/L) (µS/cm) (CT/100ml)	91004 91000		4 4	Month	ly Average R	esults	# of	Sampl
2 13 Alkalini Conduc E. Coli Nitrate,	ty, Total ctivity 25°C Unfiltered reactive	(mg/L) (µS/cm) (CT/100ml) (mg/L)	91004 91000 00022		4 4 4	Month	ly Average R	esults	# of	Sampl
2 13 Alkalini Conduc E. Coli Nitrate,	ty, Total ctivity 25°C	(mg/L) (µS/cm) (CT/100ml)	91004 91000 00022 00021		4 4 4 4	Month	ly Average R	esults	# of	Sampl
2 13 Alkalini Conduc E. Coli Nitrate, Nitrite, pH	ty, Total ctivity 25°C  Unfiltered reactive Unfiltered reactive	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770		4 4 4 4 4	Month	ly Average R	esults	# of	Sampl
2 13 Alkalini Conduc E. Coli Nitrate, Nitrite, pH Tempe	ty, Total ctivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250		4 4 4 4 4 4	Month	ly Average R	esults	# of	Sampl
2 13 Alkalini Conduc E. Coli Nitrate, Nitrite, pH Tempe Un-ioni	ty, Total ctivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water ized Ammonia	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012		4 4 4 4 4 4 4	Month	ly Average R	esults	# of	Sampl
2 13 Alkalini Conduc E. Coli Nitrate, Nitrite, pH Tempe Un-ioni Dissolv	ty, Total ctivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water ized Ammonia red Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012		4 4 4 4 4 4 4	Month	ly Average R	esults	# of	Sampl
2 13 Alkalini Conduc E. Coli Nitrate, Nitrite, pH Tempe Un-ioni Dissolv	ty, Total ctivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water ized Ammonia	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L)  (°C) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012		4 4 4 4 4 4 4	Month	ly Average R	esults	# of	Sampl
2 13 Alkalini Conduc E. Coli Nitrate, Nitrite, pH Tempe Un-ioni Dissolv	ty, Total ctivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water ized Ammonia red Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012		4 4 4 4 4 4 4	Month	ly Average R	esults	# of	Sample
2 13 Alkalini Conduc E. Coli Nitrate, Nitrite, pH Tempe Un-ioni Dissolv	ty, Total ctivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water ized Ammonia red Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012		4 4 4 4 4 4 4	Month	ly Average F	esults	# of	Sample
2 13 Alkalini Conduc E. Coli Nitrate, Nitrite, pH Tempe Un-ioni Dissolv	ty, Total ctivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water ized Ammonia red Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012		4 4 4 4 4 4 4	Month	ly Average F	esults	# of	Sample
2 13 Alkalini Conduc E. Coli Nitrate, Nitrite, pH Tempe Un-ioni Dissolv	ty, Total ctivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water ized Ammonia red Oxygen	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012		4 4 4 4 4 4 4	Month:	ly Average F	esults	# of	Sample
2 13 Alkalini Conduc E. Coli Nitrate, Nitrite, pH Tempe Un-ioni Dissolv Hydrog	ty, Total ctivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water ized Ammonia red Oxygen gen Sulphide	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012 00003 83008	34   Return	4 4 4 4 4 4 4 4 4 7 7 7 8 8 8 8 8 8 8 8	38 pleted fo	orm to:			
2 13 Alkalini Conduc E. Coli Nitrate, Nitrite, pH Tempe Un-ioni Dissolv Hydrog	ty, Total ctivity 25°C  Unfiltered reactive Unfiltered reactive rature, Water ized Ammonia red Oxygen gen Sulphide	(mg/L) (µS/cm) (CT/100ml) (mg/L) (mg/L) (°C) (mg/L) (mg/L) (mg/L)	00051 91004 91000 00022 00021 80770 80250 91012 00003 83008	34   Return 1. Env	4 4 4 4 4 4 4 4 4 7 7 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	38 pleted foental Mon		Reporting		



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Project N	Name								
	go Lagoon								
	Address	lo						lno ne	
Unit Nun	nber Street Number	Street Name Hurlwood L						PO Box 159	(
Municipa	ality/City/Town		Province					Postal (	Code
Orillia			ON - Or	ntario				L3V 6J	13
	g Authority rporation of the Township	of Severn							
	Address		drawer en de						
Unit Nun	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Street Name Hurlwood L						PO Box 159	(
Municipa Orillia	ality/City/Town		Province ON - Or					Postal 6	
File No.	Works No	ımher *		1	a Period *		Days	Discharge	Update
T 110.	1			onth	Year			Туре	Code
1 2	1 2 0 0 0	20	3 1	1	2 0 2	2 2	3 0	2	R 80
	7		11 10			19	20 21	22	
C.P.								7	
3 5	Flows		Paramete	er Code	Dec.	Мо	nthly Results		
12 13	Total Flow	(10 <sup>3</sup> m <sup>3</sup> )	500	10	3		2.780	)	
	Average Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	500	15	3		0.092	2	
	Maximum Daily Flow	$(10^3 \text{ m}^3/\text{d})$	500		3				
	7		30	3	34 35	38	4	16	1
3 5	Bypass	(402 2)	502	70		Г		7 # 01 00	currences
.2 .0	Plant Bypass Volume	(10 <sup>3</sup> m <sup>3</sup> )	1444	1270	3	-		-	
	Duration	(hours)	30		34 35	38		_	
3 6	Raw Sewage			8	50 5.5	8555		# of 9	Samples
12 13		(mg/L)	000	01	0		128	3	1
	Suspended Solids	(mg/L)	000	06	0		212	2	1
	TKN	(mg/L)	000	20	2		23.70		1
	Total Phosphorus	(mg/L)	000	33	1		2.1	1	1
			30	:	34 35	38		48	51
3 9	Final Effluent					_		7	
12 13	Total Effl. Volume To Wat				3				
	Flow Duration	(hours)	816		1			4	
	Cell Depth	(m)	502		1				
	CBOD <sub>5</sub>	(mg/L)	000	18010	1	-	داو		2
	BOD <sub>5</sub>	(mg/L)	000		1 1		3.6		3
	Suspended Solids	(mg/L)	000	161505		-	5.43	-	3
	Ammonia + Ammonium TKN	(mg/L)	000		2		7.66		3
	Total Phosphorus	(mg/L) (mg/L)	000	0.200	2		0.23		3
	rotal Phosphorus	(mg/L)	30	200710	34 35	38	0.2.	48	51
0 9	Disinfection								
12 13		(kg as Cl <sub>2</sub> )	503	20	1				
	Chlorine Dosage	(mg/L as Cl <sub>2</sub> )	804	10	1				
	Chlorine Residual	(mg/L as Cl <sub>2</sub> )	804		1				
			30		34 35	38	73	48	51
Operato 705-34	r Telephone Number				rn compl			nortina Branch	MECP of
	r Email Address *						toring and Rep ng@ontario.ca		i, ivicor, at
	@severn.ca						Officer at you	r local District	/Area
Comme					IECP Office		ddeneg *		
					try Contact				

Fields n	narked with an asterisk (*) are	mandatory.									
Project Washa	Name go Lagoon										
	y Address										
Unit Nu	mber Street Number 1021	Street Name Hurlwood L								PO Box 159	
Municip Orillia	ality/City/Town		Provin ON - (	ce Ontario	0					Postal C L3V 6J	
	ng Authority proporation of the Township	of Severn									
-	Address							See Caranii — a			
Unit Nu		Street Name Hurlwood L								PO Box 159	
Municip Orillia	ality/City/Town		Provin	ce Ontario	0					Postal C L3V 6J	
File No.	Works Nur	nber *	٦ſ,	E Month	Data F	eriod * Year		Days	Di	scharge Type	Update Code
4 6	1 2 0 0 0		3	1 2	2	0 2	2 19	3 1	-	2	R
C.P.			11 1		-		19	20 21		22	80
3 5	Flows		Parame	eter Co	de	Dec.	Mor	nthly Results			
12 13	Total Flow	(10 <sup>3</sup> m <sup>3</sup> )	50	010		3		3.45	56		
	Average Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)	50	015		3		0.11	11		
	Maximum Daily Flow	(10 <sup>3</sup> m <sup>3</sup> /d)		020		3					
3 5	¬p		30		34	35	38		46	# of Oc	currences
12 13		(10 <sup>3</sup> m <sup>3</sup> )	50	270	$\neg$	3		The second second		# 01 00	Junences
	Duration	(hours)	1000	680	-	1	-		-		
			30	000	34	35	38				
3 6						-	~			# of S	amples
12 13	BOD <sub>5</sub>	(mg/L)	00	0001		0		19	91		1
	Suspended Solids	(mg/L)	200	0006		0			20		1
	TKN	(mg/L)	0.000	020		2		39.6	- 00		1
	Total Phosphorus	(mg/L)	30	033	34	35	38	4	.1	48	51
3 9	Final Effluent										
12 13	Total Effl. Volume To Water	course (103 m <sup>3</sup> )	50	280		3		16.47	75		
	Flow Duration	(hours)	81	680		1		76	.0		
	Cell Depth	(m)	50	290		1					
	CBOD <sub>5</sub>	(mg/L)	1000	0002		1					
	BOD <sub>5</sub>	(mg/L)		0001		1			.7		4
	Suspended Solids	(mg/L)	2000	0006		1			.3		4
	Ammonia + Ammonium	(mg/L)		019		2		6.1			4
	TKN	(mg/L)		020		2		7.6			4
	Total Phosphorus	(mg/L)	30	033	34	35	38	0.2	4	48	51
0 9	Disinfection		0.000		Philodes	9470970	vest.			-2000	
12 13	Chlorine Used	(kg as Cl <sub>2</sub> )	50	320		1					
	Chlorine Dosage	(mg/L as Cl <sub>2</sub> )	80	410		1					
	Chlorine Residual	(mg/L as Cl <sub>2</sub> )		420		1					
			30	10	34	35	38		91	48	51
705-34				10,000	Envir	onment		oring and Re			MECP, at
tdrouin	or Email Address * @severn.ca			2.	Your	Environ	mental (	g@ontario.c Officer at you			Area
Comme	nts			Min		P Office	Email A	ddress *			
								tario.ca			

Project Name Washago Lagoo	n		-116										
Facility Address	5												
Unit Number	Street Number 1021	Street Nan Hurlwood		е								O Box 59	
Municipality/City/T Orillia	own		10.00	Province ON - O		0					0.00	Postal Code L3V 6J3	
Operating Authorit	y of the Township	of Severn							transmiss.				
Mailing Address		or octom	e Cause e										
Unit Number	Street Number 1021	Street Nan Hurlwood										PO Box	
Municipality/City/T Orillia	own		100	Province ON - O		0						ostal C	
File No.	Works Num	ber *		Ι		Data F	Period		D	ays	Disch		Update
4 6 1	2 0 0 0	2 2 7	3	1	onth 2	2	0	2 2	3	1			Code
1 2 3			11	16	-			19	20	21	22		80
C.P.													
3 6 Raw Sew	vage	1	Par	ameter	Code		Dec	Month	ly Aver	age Re	sults	# 01	Samples
12 13					230000			1552.00	.,	-3			- Campios
L			30		112-112	34	35	38					
						_		50					
3 9 Final Efflo	uent		Para	ameter	Code	9	Dec	Month	ly Aver	age Re	sults	# of	Samples
12 13 Alkalinity	, Total	(mg/L)		0005	1		4			136.	0000		4
Conductiv	vity 25°C	(µS/cm)		91004	1		4						
E. Coli		(CT/100ml)		91000	4-1		4						
	Infiltered reactive	(mg/L)		00022			4						
	nfiltered reactive	(mg/L)	-	00021		4	4			7	0000		
pH	ture, Water	(°C)		80770		+	4			-	9000		4
1	d Ammonia	(mg/L)		91012		-	4			-	0000		4
Dissolved		(mg/L)		00003	201	+	4	-		U.	0010		4
	Sulphide	(mg/L)		83008			4					$\vdash$	
, ,		, , ,				1						-	
						7			T.				
Onesetes Televil		3	0			34	35	38	um 4				
Operator Telephon 705-345-1841	e Number							pleted fo ental Moni			ortina F	ranch	MECP, at
Operator Email Add						Was	teWat	erReporti	ng@on	tario.ca	And		
tdrouin@severn.c	ca				2.			onmental					
Comments						www	onta	rio.ca/env	ronmer	nt-and-			

# Appendix C

Sewage Pump Station Draw Down Tests

### Pump Drawdown Test Results at Pumping Station #1 in Washago

Completed: May 12 2022 Performed By Silas Smith

### 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		
Pump 1	1	0.89	0.89	0	0.82	0.63	0.19		
	2	0.87	0.89	0.02	0.75	0.57	0.18		
•	3	0.88	0.89	0.01	0.85	0.66	0.19		
Pump 2	1	0.88	0.89	0.01	0.79	0.62	0.17		
-	2	0.88	0.9	0.02	0.79	0.61	0.18		
-	3	0.87	0.89	0.02	0.87	0.7	0.17		

### **Volume Calculations:**

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  $\frac{1000\ litres}{60\ seconds}$   
= (1.914144) x result (inches)

Pump Capacity:

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

### 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	14.31	12.05	13.55	13.3
Pump 2	12.05	12.05	11.29	11.79

Therefore the pump capacity of Pump 1 is 13.3 L/s and Pump 2 is 11.79 L/s.

Prepared On: May 12 2022	
Prepared By: Jenna Beard	
Signature:	

### Pump Drawdown Test Results at Pumping Station #1 in Washago

Completed: October 27 2022 Performed By Silas Smith

### 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			
Pump 1	1	0.87	0.89	0.02	0.76	0.59	0.15			
	2	0.88	0.89	0.01	0.79	0.61	0.17			
	3	0.89	0.89	0.00	0.78	0.62	0.16			
Pump 2	1	0.87	0.89	0.02	0.8	0.62	0.16			
	2	0.88	0.89	0.01	0.78	0.61	0.16			
	3	0.87	0.89	0.02	0.76	0.58	0.16			

### **Volume Calculations:**

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

Pump Capacity:

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

### 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	11.30	12.811	12.05	12.05
Pump 2	12.05	12.05	12.05	12.05

Therefore the pump capacity of Pump 1 is 13.3 L/s and Pump 2 is 11.79 L/s.

Prepared On: Oct 31 2022	
Prepared By: Jenna Beard	
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

 $\frac{Gross\ Volume\ of\ Cell\ (m^3)\ x\ Optimum\ Alum\ Dosage\ (mg/L)}{647.5\ mg/L}$ 

# Appendix E

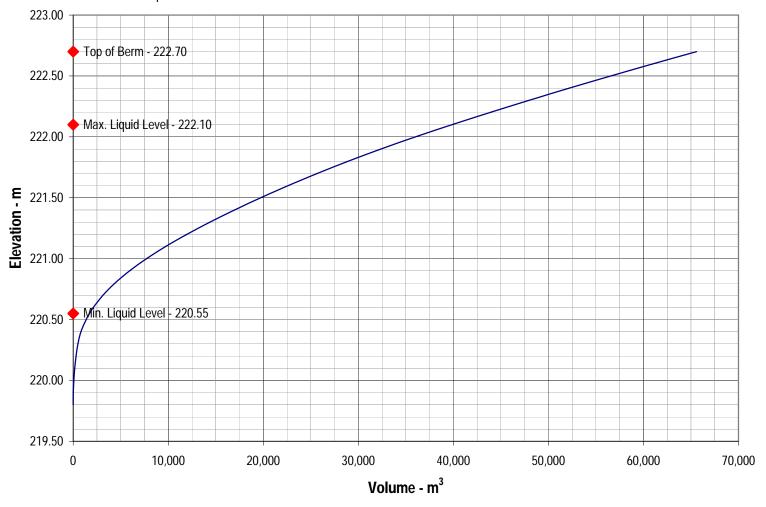
Lagoon Stage Storage Graphs

### 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





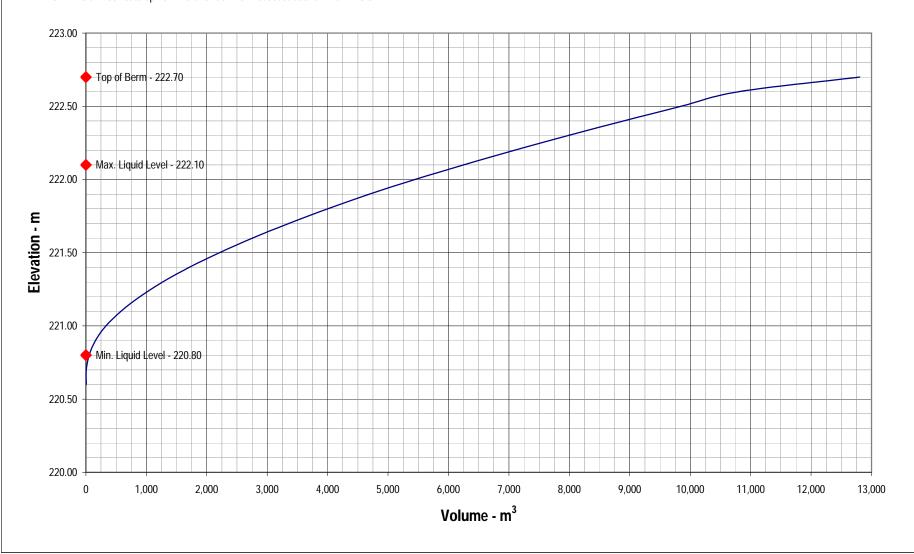
Township of Severn Village of Washago Sewage Treatment Works Stage Storage Graph - Cell No. 1 February 2012

#### 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

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

26-April-2022

Date Rec.: 19 April 2022 LR Report: CA13572-APR22

**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						19-Apr-22 09:41
Temperature Upon Receipt [°C]						7.0
Biochemical Oxygen Demand (BOD5) [mg/L]	20-Apr-22	17:39	25-Apr-22	16:08	25	18
Total Suspended Solids [mg/L]	20-Apr-22	09:57	21-Apr-22	11:22	25	19
pH [No unit]	20-Apr-22	15:11	21-Apr-22	11:52		8.08
Alkalinity [mg/L as CaCO3]	20-Apr-22	15:11	21-Apr-22	11:52		133
Phosphorus (total) [mg/L]	20-Apr-22	16:26	22-Apr-22	09:28	1	0.23
Total Kjeldahl Nitrogen [as N mg/L]	20-Apr-22	16:25	21-Apr-22	09:50		9.3
Ammonia+Ammonium (N) [as N mg/L]	20-Apr-22	21:26	21-Apr-22	09:25		9.0

Patti Stark

Project Specialist,



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

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

03-May-2022

Twp of Severn (Washago STP)

Attn: Tony Drouin

**Date Rec.**: 25 April 2022 **LR Report: CA13861-APR22** 

P.O. Box 159 Orillia, ON

**Copy:** #1

Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (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						25-Apr-22 09:00
Temperature Upon Receipt [°C]						8.0
Biochemical Oxygen Demand (BOD5) [mg/L]	26-Apr-22	16:24	02-May-22	10:43	25	13
Total Suspended Solids [mg/L]	27-Apr-22	07:38	27-Apr-22	16:06	25	14
pH [No unit]	26-Apr-22	14:55	28-Apr-22	09:33		8.57
Alkalinity [mg/L as CaCO3]	26-Apr-22	14:55	28-Apr-22	09:33		114
Phosphorus (total) [mg/L]	26-Apr-22	14:06	28-Apr-22	11:01	1	0.18
Total Kjeldahl Nitrogen [as N mg/L]	26-Apr-22	15:26	27-Apr-22	09:33		8.6
Ammonia+Ammonium (N) [as N mg/L]	26-Apr-22	17:16	27-Apr-22	10:21		6.6

Patti Stark

Project Specialist,



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

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

09-May-2022

Twp of Severn (Washago STP)

Attn: Tony Drouin

**Date Rec.**: 02 May 2022 **LR Report: CA12001-MAY22** 

P.O. Box 159

**Copy:** #1

Orillia, ON L3V 6J3, Canada

Phone: 705-345-1841 (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						02-May-22 10:57
Temperature Upon Receipt [°C]						8.0
Biochemical Oxygen Demand (BOD5) [mg/L]	03-May-22	17:14	09-May-22	12:21	25	19
Total Suspended Solids [mg/L]	04-May-22	07:42	04-May-22	14:30	25	17
pH [No unit]	03-May-22	15:30	04-May-22	15:13		9.00
Alkalinity [mg/L as CaCO3]	03-May-22	15:30	04-May-22	15:13		105
Phosphorus (total) [mg/L]	03-May-22	16:13	04-May-22	15:08	1	0.09
Total Kjeldahl Nitrogen [as N mg/L]	03-May-22	16:10	04-May-22	13:08		4.8
Ammonia+Ammonium (N) [as N mg/L]	03-May-22	17:01	04-May-22	10:14		3.9

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

25-May-2022

Date Rec. : 16 May 2022 LR Report:

CA13597-MAY22

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						16-May-22 08:50	16-May-22 09:15	16-May-22 08:36
Temperature Upon Receipt [°C]						10.0	10.0	10.0
Field pH [no unit]						9.1	8.6	8.5
Field Temperature [celcius]						22	19	21
Biochemical Oxygen Demand (BOD5) [mg/L]	17-May-22	16:01	24-May-22	13:26	25	16	< 4	< 4
Total Suspended Solids [mg/L]	18-May-22	07:43	19-May-22	09:15	25	5	< 2	2
Phosphorus (total) [mg/L]	18-May-22	16:09	19-May-22	10:52	1	0.04	< 0.03	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	19-May-22	15:11	20-May-22	14:29		2.5	< 0.5	< 0.5
Alkalinity [mg/L as CaCO3]	17-May-22	08:42	18-May-22	09:39		82	107	100
Ammonia+Ammonium (N) [as N mg/L]	19-May-22	17:31	20-May-22	11:58		0.8	< 0.1	< 0.1
Unionized Ammonia [mg/L as N]	19-May-22	17:31	20-May-22	11:58		0.285	0.009	0.006



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

LR Report : CA13597-MAY22

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

31-May-2022

**Date Rec. :** 19 May 2022 **LR Report: CA13770-MAY22** 

**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						18-May-22 08:08	18-May-22 08:14	18-May-22 08:23
Temperature Upon Receipt [°C]						15.0	15.0	15.0
Biochemical Oxygen Demand (BOD5) [mg/L]	20-May-22	18:39	25-May-22	14:48	25	14	< 4	< 4
Total Suspended Solids [mg/L]	25-May-22	10:01	26-May-22	12:40	25	7	4	< 2
pH [No unit]	20-May-22	17:08	27-May-22	14:21		8.05	8.21	8.25
Temperature @ pH [°C]	20-May-22	17:08	27-May-22	14:21		22.5	21.8	22.1
Alkalinity [mg/L as CaCO3]	20-May-22	17:08	27-May-22	14:21		99	109	113
Ammonia+Ammonium (N) [as N mg/L]	24-May-22	12:20	25-May-22	08:07		1.6	< 0.1	< 0.1
Unionized Ammonia [mg/L as N]	24-May-22	12:20	27-May-22	07:13		0.078	<0.004	< 0.004
Phosphorus (total) [mg/L]	24-May-22	10:40	30-May-22	08:24	1	0.15	< 0.03	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	24-May-22	16:59	30-May-22	11:48		3.4	< 0.5	< 0.5

Note: Unionized ammonia calculated using lab results for pH and temperature.



P.O. Box 4300 - 185 Concession St. Lakefield - Ontario - KOL 2HO Phone: 705-652-2000 FAX: 705-652-6365 LR Report :

CA13770-MAY22

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

07-June-2022

**Date Rec. :** 26 May 2022 **LR Report: CA15605-MAY22** 

**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						25-May-22 09:00	25-May-22 08:50	25-May-22 08:40
Temperature Upon Receipt [°C]						14.0	14.0	14.0
Field pH [no unit]						7.6	8.1	8.4
Field Temperature [celcius]						23	19	22
Biochemical Oxygen Demand (BOD5) [mg/L]	27-May-22	17:49	01-Jun-22	13:25	25	7	< 4	< 2
Total Suspended Solids [mg/L]	30-May-22	11:26	31-May-22	11:58	25	6	3	3
Alkalinity [mg/L as CaCO3]	27-May-22	10:48	30-May-22	08:43		105	101	98
Phosphorus (total) [mg/L]	02-Jun-22	15:32	03-Jun-22	13:38	1	0.36	< 0.03	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	02-Jun-22	12:40	03-Jun-22	11:46		7.2	< 0.5	< 0.5
Ammonia+Ammonium (N) [as N mg/L]	01-Jun-22	22:03	02-Jun-22	16:13		3.9	< 0.1	< 0.1
Unionized Ammonia [mg/L as N]	01-Jun-22	22:03	02-Jun-22	16:13		0.075	<0.003	<0.005

Note: 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 : CA15605-MAY22

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

09-June-2022

**Date Rec.**: 27 May 2022

LR Report: CA15788-MAY22

**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						26-May-22 12:00	26-May-22 12:22	26-May-22 11:43
Temperature Upon Receipt [°C]						20.0	20.0	20.0
Biochemical Oxygen Demand (BOD5) [mg/L]	27-May-22	17:49	01-Jun-22	13:34	25	6	< 4	< 4
Total Suspended Solids [mg/L]	31-May-22	08:17	01-Jun-22	10:22	25	6	2	4
pH [No unit]	30-May-22	08:23	31-May-22	15:41		7.72	8.26	8.24
Temperature @ pH [°C]	30-May-22	08:23	31-May-22	15:41		18.8	18.6	18.9
Alkalinity [mg/L as CaCO3]	30-May-22	08:23	31-May-22	15:41		109	99	97
Phosphorus (total) [mg/L]	01-Jun-22	15:16	02-Jun-22	11:00	1	0.49	< 0.03	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	02-Jun-22	12:40	06-Jun-22	11:18		6.4	< 0.5	< 0.5
Ammonia+Ammonium (N) [as N mg/L]	01-Jun-22	17:46	02-Jun-22	14:32		4.6	< 0.1	< 0.1
Unionized Ammonia [mg/L as N]	01-Jun-22	17:46	02-Jun-22	14:33		0.086	< 0.003	<0.003

Note: Provincial unionized ammonia calculated using lab results for pH and temperature.

Patti Stark

Project Specialist,



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Twp of Severn (Washago STP)

Attn: Tony Drouin

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### 09-November-2022

Date Rec.: 31 October 2022 LR Report: CA14827-OCT22

**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						31-Oct-22 11:05
Temperature Upon Receipt [°C]						9.0
Biochemical Oxygen Demand (BOD5) [mg/L]	01-Nov-22	16:11	07-Nov-22	14:21	25	5
Total Suspended Solids [mg/L]	02-Nov-22	15:53	03-Nov-22	15:48	25	3
Phosphorus (total) [mg/L]	03-Nov-22	14:56	08-Nov-22	15:08	1	0.23
Total Kjeldahl Nitrogen [as N mg/L]	03-Nov-22	15:20	04-Nov-22	12:55		6.3
pH [No unit]	01-Nov-22	14:52	02-Nov-22	11:16		7.93
Alkalinity [mg/L as CaCO3]	01-Nov-22	14:52	02-Nov-22	11:16		130
Ammonia+Ammonium (N) [as N mg/L]	02-Nov-22	20:43	03-Nov-22	15:24		5.3

Patti Stark

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### 16-November-2022

Date Rec.: 07 November 2022 LR Report: CA14101-NOV22

**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						07-Nov-22 10:45
Temperature Upon Receipt [°C]						9.0
Biochemical Oxygen Demand (BOD5) [mg/L]	08-Nov-22	15:53	14-Nov-22	11:21	25	< 4
Total Suspended Solids [mg/L]	10-Nov-22	11:53	11-Nov-22	12:37	25	5
pH [No unit]	08-Nov-22	15:38	09-Nov-22	10:37		7.76
Alkalinity [mg/L as CaCO3]	08-Nov-22	15:38	09-Nov-22	10:37		137
Phosphorus (total) [mg/L]	09-Nov-22	14:51	10-Nov-22	12:52	1	0.23
Total Kjeldahl Nitrogen [as N mg/L]	09-Nov-22	15:48	10-Nov-22	13:32		9.3
Ammonia+Ammonium (N) [as N mg/L]	09-Nov-22	18:36	10-Nov-22	09:15		5.2

Patti Stark

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### 23-November-2022

Date Rec.: 14 November 2022 LR Report: CA14194-NOV22

**Copy:** #1

# CERTIFICATE OF ANALYSIS Final Report

Analysis	1:	2:	3:	4:	5:	6:
	Analysis	Analysis Start	•	Analysis	Client	Washago Lagoon
	Start Date	Time	Completed Date	Completed Time	Limits	
Sample Date & Time						14-Nov-22 10:00
Temperature Upon Receipt [°C]						8.0
Biochemical Oxygen Demand (BOD5) [mg/L]	15-Nov-22	15:45	21-Nov-22	10:42	25	5
Total Suspended Solids [mg/L]	17-Nov-22	10:58	18-Nov-22	08:23	25	3
pH [No unit]	15-Nov-22	14:48	16-Nov-22	12:09		7.88
Alkalinity [mg/L as CaCO3]	15-Nov-22	14:48	16-Nov-22	12:09		139
Phosphorus (total) [mg/L]	15-Nov-22	15:33	16-Nov-22	10:51	1	0.24
Total Kjeldahl Nitrogen [as N mg/L]	15-Nov-22	17:06	16-Nov-22	09:55		7.4
Ammonia+Ammonium (N) [as N mg/L]	15-Nov-22	17:01	16-Nov-22	12:57		5.8

Patti Stark

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### 15-December-2022

Date Rec.: 08 December 2022 LR Report: CA13256-DEC22

**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						07-Dec-22 11:15	07-Dec-22 11:25	07-Dec-22 11:36
Temperature Upon Receipt [°C]						10.0	10.0	10.0
Field pH [no unit]						7.9	8.3	8.4
Field Temperature [celcius]						9.5	10	10
Biochemical Oxygen Demand (BOD5) [mg/L]	09-Dec-22	16:06	14-Dec-22	13:28	25	7	7	< 4
Total Suspended Solids [mg/L]	12-Dec-22	08:13	13-Dec-22	15:06	25	4	4	4
Alkalinity [mg/L as CaCO3]	09-Dec-22	07:06	12-Dec-22	13:02		130	107	100
Unionized Ammonia [mg/L as N]	09-Dec-22	19:19	12-Dec-22	12:05		0.081	0.001	< 0.001
Ammonia+Ammonium (N) [as N mg/L]	09-Dec-22	19:19	12-Dec-22	12:05		5.8	< 0.1	< 0.1
Phosphorus (total) [mg/L]	08-Dec-22	16:57	09-Dec-22	11:37	1	0.23	< 0.03	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	09-Dec-22	16:04	12-Dec-22	13:27		7.4	< 0.5	< 0.5



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LR Report :

CA13256-DEC22

Carrie Greenlaw Project Specialist,



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21-December-2022

Date Rec.: 13 December 2022 LR Report: CA13399-DEC22

**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						12-Dec-22 13:38	12-Dec-22 13:45	12-Dec-22 13:55
Temperature Upon Receipt [°C]						6.0	6.0	6.0
Field pH [no unit]						7.9	8.0	7.9
Field Temperature [celcius]						3	3	3
Biochemical Oxygen Demand (BOD5) [mg/L]	13-Dec-22	16:06	19-Dec-22	12:58	25	5	< 4	< 4
Total Suspended Solids [mg/L]	15-Dec-22	09:24	16-Dec-22	09:30	25	2	2	3
Alkalinity [mg/L as CaCO3]	13-Dec-22	15:15	14-Dec-22	10:44		135	103	105
Ammonia+Ammonium (N) [as N mg/L]	13-Dec-22	21:27	14-Dec-22	09:35		6.1	< 0.1	< 0.1
Phosphorus (total) [mg/L]	13-Dec-22	15:52	14-Dec-22	09:51	1	0.23	< 0.03	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	14-Dec-22	15:34	16-Dec-22	12:40		7.5	< 0.5	< 0.5
Unionized Ammonia [mg/L as N]	13-Dec-22	21:27	16-Dec-22	12:40		0.051	< 0.001	< 0.001

Patti Stark

Project Specialist,



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21-December-2022

Date Rec.: 14 December 2022 LR Report: CA12565-DEC22

**Copy:** #1

# CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis	2: Analysis	3: Analysis	4: Analysis	5: Client	6: Lagoon Effluent	7: Green River	8: Green River
	Start Date	Start Time	Completed	•	Limits		Upstream	Downstream
			Date	Time				
Sample Date & Time						13-Dec-22 14:20	13-Dec-22 14:35	13-Dec-22 14:10
Temperature Upon Receipt [°C]						5.0	5.0	5.0
Field pH [no unit]						7.9	8.2	8.0
Field Temperature [celcius]						2.5	2	2.5
Biochemical Oxygen Demand (BOD5) [mg/L]	15-Dec-22	17:27	20-Dec-22	11:49	25	5	< 4	< 4
Total Suspended Solids [mg/L]	16-Dec-22	12:54	19-Dec-22	13:39	25	7	< 2	14
Alkalinity [mg/L as CaCO3]	14-Dec-22	16:09	15-Dec-22	11:17		142	126	106
Ammonia+Ammonium (N) [as N mg/L]	14-Dec-22	21:46	15-Dec-22	10:05		6.4	< 0.1	0.1
Unionized Ammonia [mg/L as N]	14-Dec-22	21:46	15-Dec-22	10:05		0.051	< 0.001	0.001
Phosphorus (total) [mg/L]	15-Dec-22	15:53	19-Dec-22	09:52	1	0.25	0.03	< 0.03
Total Kjeldahl Nitrogen [as N mg/L]	15-Dec-22	15:10	16-Dec-22	12:37		8.0	< 0.5	< 0.5

Patti Stark

Project Specialist,