

**Municipality Of Huron East
 2011 Operations Report
 Vanastra Wastewater Facilities
 Reporting Period Jan-Dec 2011**

1. Introduction

The inlet works consists of a manually raked bar screen, channel grinder, bypass piping, including overflow weir installed in the inlet structure, consisting of 375 mm diameter overflow pipe to the Flow Equalization Storage Tanks; and a bypass flow monitoring station. From the bar screen, the flow is directed to the primary clarifier, from which it is pumped by raw sewage pumps to the four aeration tank cells. Following aeration, settling takes place in the two final clarifiers. Effluent from the settling tanks is disinfected using sodium hypochlorite prior to discharge into Grant Creek. Sludge from the clarifiers is either returned to the aeration tanks or to the primary clarifier. All primary sludge is periodically wasted to the sludge holding tank. Scum from the primary clarifier is discharged to a scum pit; contents of the sludge pit are pumped to digester. Flows exceeding approximately 1600m³/day are diverted to the flow equalization storage tank downstream of the mechanical bar screens, The storm equalization tank is rectangular, with wash troughs for flushing of settled materials, which are gravity fed via Rotork control valve and are discharged with collected storm water into the main process flow. During high flow events, excess flow is diverted to a equalization storage tank. If the EQ tank is full, flow is then bypassed to Grant Creek. During short duration storm events, flow is stored and then drained back to the head of the plant during low flow periods. Alum is continuously injected into flow split chamber for the aeration tanks.

The sewage works, are owned by the Corporation of the Municipality of Huron East and operated by CH2MHill OMI. The waste water collection System is both owned and operated by the municipality of Huron East.

2. Regulatory Issues

Operation Management International Canada Inc (OMI) has made every effort during the reporting period to operate this wastewater system in accordance with applicable laws, certificates and regulations. To the best of our knowledge, the following report truthfully and accurately reflects any and all matters of non-compliance regarding the ownership and operation of the wastewater treatment plant during the reporting period.

During this period, the plant was operated in full compliance with applicable laws, regulations and the WWTP'S Certificate of Approval, save and except the following:

x	None during this period
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Or

Requirement	Duration of Failure	Measures to Correct the Failure

3. Compliance with Quality/Quantity Criteria

Vanastra WWTP

Month	Average Volume/Day m ³ /d	Plant Utilization (based on Avg. Day)	Max Volume/Day m ³ /d
Jan	820	58.3%	2183
Feb	831	59.1%	1944
Mar	1555	110.7%	2928
April	1189	84.6%	1783
May	815	58.0%	1510
June	585	41.6%	1425
July	286	20.3%	525
Aug	479	34.1%	3909
Sept	504	35.9%	1009
Oct	767	54.6%	1809
Nov	589	41.9%	1873
Dec	1179	83.9%	1794

Plant Average Day Design Capacity is 1405 m³/d

4. Quality Assurance/Quality Control

- Maxxam Analytics Inc. conducts the required physical, chemical and biological testing of influent and effluent from each WWTP.

5. Maintenance Summary

Vanastra WPCP

- Had # 2 Blower rebuilt
- Install Float in manhole at intersection
- Birnam Excavating working on headwork's
- Replace alum pump
- Millwrights into weld blower base
- Ontario Greenway hauled 469 M3 Sludge (land Applied) 2011

General

- Maintained aeration blowers, return pumps and sewage pumps
- Yearly Inspected and ran all diesel generators monthly
- Maintained all chemical pumps and injection systems.

6. Environmental/Operating Problems

- There were no unusual environmental/operating problems during 2011

7. Proposed Alterations, Extensions or Replacements

- None during this period

8. Calibration Procedures

- Flow meters were calibrated in 2011

9. Health & Safety Items

- Lifting equipment, Fire extinguishers, Gas monitors Monthly/Yearly inspections. Weekly Safety meeting along with Quarterly walk through completed for 2011

10. Status of Capital Projects

- None during this period

11. Other Items

- None

2011

MONTH: Jan

Vanastra STP
 Operating Number 110003013
 Operating Authority: O.M.I. Canada Inc.
 Municipality of Huron East

YEAR 2011

ANALYST Maxxam

Test # Date	MLSS		RAW INFLUENT				FINAL EFFLUENT						
	North Aeration S.S.	South Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH	D.O.
1 4-Jan	3667	3580	42	35	11.0	0.8	2.0	9.0	0.30	0.05	3	7.16	9.9
2 10-Jan	4042	3960							0.28		30	7.25	10.8
3 17-Jan	3909	3876							0.37		48	7.24	11.8
4 24-Jan	3980	3944							0.41		90	7.11	11.8
5 31-Jan	3907	3799							0.43		91	8	11.9
6 /													
Number of tests			1	1	1	1	1	1	5	1	5	5	5
Monthly Average			42	35	11.0	0.8	2.0	9.0	0.36	0.05	32	7.25	11.24
Monthly Objectives							15.0	15.0	1.0		0		
Monthly/Yearly Limits							25.0	25.0	1.0		200		

Comments: pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times

2011

MONTH: Feb

Vanastra STP
 Operating Number 110003013
 Operating Authority: O.M.I. Canada Inc.
 Municipality of Huron East

YEAR 2011

ANALYST Maxxam

Test # Date	MLSS		RAW INFLUENT				FINAL EFFLUENT						
	North Aeration S.S.	South Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH	D.O.
1 7-Feb	4080	4085	130	140	34.0	3.3	0.1	22.0	0.60	0.05	77	7.49	11.3
2 14-Feb	3592	3537							0.38		44	7.30	11.1
3 22-Feb	3671	3775							0.23		7	7.09	11.0
4 28-Feb	3760	3747							0.32		110	6.94	10.5
5 /													
6 /													
Number of tests			1	1	1	1	1	1	4	1	4	4	4
Monthly Average			130	140	34.0	3.3	0.1	22.0	0.38	0.05	40	7.21	10.98
Monthly Objectives							15.0	15.0	1.0		0		
Monthly/Yearly Limits							25.0	25.0	1.0		200		

Comments: pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times

2011

MONTH: March

Vanastra STP
 Operating Number 110003013
 Operating Authority: O.M.I. Canada Inc.
 Municipality of Huron East

YEAR 2011

ANALYST Maxxam

Test # Date	MLSS		RAW INFLUENT				FINAL EFFLUENT						
	North Aeration S.S.	South Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH	D.O.
1 7-Mar	2914	3927	16	27	7.0	0.49	2.0	8.0	0.25	0.05	5	7.17	10.7
2 14-Mar	4345	4343							0.23		14	7.06	10.5
3 21-Mar	3860	3890							0.18		17	6.96	9.4
4 28-Mar	4559	4491							0.17		6	7.04	10.7
5													
6													
Number of Tests			1	1	1	1	1	1	4	1	4	4	4
Monthly Average			16	27	7.0	0.5	2.0	8.0	0.21	0.05	9	7.06	10.33
Monthly Objectives							15.0	15.0	1.0		0		
Monthly/Yearly Limits							25.0	25.0	1.0		200		

Comments: pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times

2011

MONTH: April

Vanastra STP
 Operating Number 110003013
 Operating Authority: O.M.I. Canada Inc.
 Municipality of Huron East

Year 2011

ANALYST Maxxam

Test # Date	MLSS		RAW INFLUENT				FINAL EFFLUENT						
	North Aeration S.S.	South Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH	D.O.
1 4-Apr	4018	3997	110	33	5.2	0.5	2.0	9.0	0.20	0.05	9	7.01	9.7
2 13-Apr	4683	4513							0.14		13	6.89	9.8
3 20-Apr	3992	4095							0.22		30	7.09	9.1
4 26-Apr	3954	3992							0.14		29	6.96	8.9
5													
6 /													
Number of tests			1	1	1	1	1	1	2	1	4	4	4
Monthly Average			110	33	5.2	0.5	2.0	9.0	0.18	0.05	18	6.99	9.37
Monthly Objectives							15.0	15.0	1.0		0		
Monthly/Yearly Limits							25.0	25.0	1.0		200		

Comments: pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times

2011

MONTH: May

Vanastra STP
 Operating Number 110003013
 Operating Authority: O.M.I. Canada Inc.
 Municipality of Huron East

Year 2011

ANALYST Maxxam

Test # Date	MLSS		RAW INFLUENT				FINAL EFFLUENT						
	North Aeration S.S.	South Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH	D.O.
1 2-May	4655	4687	27	27	10.0	0.8	2.0	3.0	0.13	0.15	3800	7.72	10.1
2 9-May	4794	4626							0.19		5	7.02	7.9
3 16-May	4311	4218							0.17		19	6.96	9.2
4 24-May	5389	5319							0.18		27	6.94	8.2
5 30-May													
6 /													
Number of tests													
Monthly Average			27	27	10.0	0.8	2.0	3.0	0.17	0.15	56	7.16	8.86
Monthly Objectives							15.0	15.0	1.0		0		
Monthly/Yearly Limits							25.0	25.0	1.0		200		

Comments: pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times

2011

MONTH: Jun

Vanastra STP
 Operating Number 110003013
 Operating Authority: O.M.I. Canada Inc.
 Municipality of Huron East

YEAR 2011

ANALYST Maxxam

Test # Date	MLSS		RAW INFLUENT				FINAL EFFLUENT						
	North Aeration S.S.	South Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH	D.O.
1 6-Jun	5190	5265	61	76	19.0	2.1	2.0	5.0	0.17	0.20	6	6.96	8.3
2 13-Jun	5053	4935							0.20		7	6.88	8.96
3 20-Jun	4450	4580							0.16		6		8.56
4 27-Jun	4430	4390							0.17		14	7.02	8.8
5 /													
6 /													
Number of tests			1	1	1	1	1	1	4	1	4	3	4
Monthly Average			61	76	19.0	2.1	2.0	5.0	0.18	0.20	8	6.95	8.65
Monthly Objectives							15.0	15.0	1.0		0		
Monthly/Yearly Limits							25.0	25.0	1.0		200		

Comments: pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times

2011

MONTH: Jul

Vanastra STP
 Operating Number 110003013
 Operating Authority: O.M.I. Canada Inc.
 Municipality of Huron East

YEAR 2011

ANALYST Maxxam

Test # Date	MLSS		RAW INFLUENT				FINAL EFFLUENT						
	North Aeration S.S.	South Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH	D.O.
1 4-Jul	4191	4422	86	150	29.0	3.3	2.0	7.0	0.17	0.22	3	7.06	8.3
2 11-Jul	4312	4023							0.16		340	6.95	7.85
3 18-Jul	4108	3769							0.17		20	6.88	8.1
4 25-Jul	4205	4171							0.13		59	6.74	7.7
5 /													
6 /													
Number of tests			1	1	1	1	1	1	4	1	4	4	4
Monthly Average			86	150	29.0	3.3	2.0	7.0	0.16	0.22	33	6.91	7.99
Monthly Objectives							15.0	15.0	1.0		0		
Monthly/Yearly Limits							25.0	25.0	1.0		200		

Comments: pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times

2011

MONTH: Aug

Vanastra STP
 Operating Number 110003013
 Operating Authority: O.M.I. Canada Inc.
 Municipality of Huron East

Year 2011

ANALYST Maxxam

Test # Date	MLSS		RAW INFLUENT				FINAL EFFLUENT						
	North Aeration S.S.	South Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH	D.O.
1 2-Aug	4574	4601	180	140	37.0	4.3	2.0	8.0	0.17	0.05	10	6.98	7.6
2 9-Aug	4065	3955							0.17		13	6.86	6.8
3 15-Aug	3960	3900							0.19		11	6.80	8.1
4 22-Aug	3652	3661							0.40		9	7.11	7.5
5 29-Aug	3537	3506							0.26		18	6.9	7.44
6 /													
Number of tests			1	1	1	1	1	1	5	1	5	5	5
Monthly Average			180	140	37.0	4.3	2.0	8.0	0.24	0.05	12	6.94	7.49
Monthly Objectives							15.0	15.0	1.0		0		
Monthly/Yearly Limits							25.0	25.0	1.0		200		

Comments: pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times

2011

MONTH: Sep

Vanastra STP
 Operating Number 110003013
 Operating Authority: O.M.I. Canada Inc.
 Municipality of Huron East

Year 2011

ANALYST Maxxam

Test # Date	MLSS		RAW INFLUENT				FINAL EFFLUENT						
	North Aeration S.S.	South Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH	D.O.
1 6-Sep	3700	3640	130	120	32.0	3.5	2.0	1.0	0.02	0.05	9	6.81	8.2
2 12-Sep	3526	3441							0.18		1100	7.02	7.66
3 19-Sep	3250	3180							0.35		3	6.76	7.3
4 26-Sep	3050	3100							0.17		3	7.07	7.6
5													
6 /													
Number of tests			1	1	1	1	1	1	4	1	4	4	4
Monthly Average			130	120	32.0	3.5	2.0	1.0	0.18	0.05	17	6.92	7.70
Monthly Objectives							15.0	15.0	1.0		0		
Monthly/Yearly Limits							25.0	25.0	1.0		200		

Comments: pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times

2011

MONTH: Oct

Vanastra STP

Operating Number 110003013

Operating Authority: O.M.I. Canada Inc.

Municipality of Huron East

YEAR 2011

ANALYST Maxxam

Test # Date	MLSS		RAW INFLUENT				FINAL EFFLUENT						
	North Aeration S.S.	South Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH	D.O.
1 3-Oct	2860	2919	290	280	36.0	4.7	2.0	32.0	0.52	0.05	71	7.18	9.1
2 11-Oct	3002	2847							0.18		13	7.09	8.2
3 17-Oct	3291	3251							0.25		9	6.97	8.5
4 24-Oct	3508	3338							0.50		10	7.21	7.6
5 31-Oct	4042	3825							0.29		15	7.28	8.5
6 /													
Number of tests			1	1	1	1	1	1	5	1	5	5	5
Monthly Average			290	280	36.0	4.7	2.0	32.0	0.35	0.05	17	7.15	8.38
Monthly Objectives							15.0	15.0	1.0		0		
Monthly/Yearly Limits							25.0	25.0	1.0		200		

Comments: pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times

2011

MONTH: Nov

Vanastra STP
 Operating Number 110003013
 Operating Authority: O.M.I. Canada Inc.
 Municipality of Huron East

Year 2011

ANALYST Maxxam

Test # Date	MLSS		RAW INFLUENT				FINAL EFFLUENT						
	North Aeration S.S.	South Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH	D.O.
1 7-Nov	3837	3855	130	88	28.0	4.0	2.0	13.0	0.26	0.05	15	7.24	8.3
2 14-Nov	3760	3680							0.32		10	7.10	8.1
3 21-Nov	3813	3775							0.42		9	7.17	8.6
4 28-Nov	3640	3600							0.30		8	7.17	8.7
5 29-Nov													
6 /													
Number of tests													
Monthly Average			130	88	28.0	4.0	2.0	13.0	0.33	0.05	10	7.17	8.43
Monthly Objectives							15.0	15.0	1.0		0		
Monthly/Yearly Limits							25.0	25.0	1.0		200		

Comments: pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times

2011

MONTH: Dec

Vanastra STP
 Operating Number 110003013
 Operating Authority: O.M.I. Canada Inc.
 Municipality of Huron East

Year 2011

ANALYST Maxxam

Test # Date	MLSS		RAW INFLUENT				FINAL EFFLUENT						
	North Aeration S.S.	South Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH	D.O.
1 5-Dec	3389	3400	20	21	4.9	0.7	2.0	13.0	0.27	0.05	13	7.39	8.7
2 12-Dec	3940	3950							0.35		15	7.53	10.6
3 19-Dec	4090	3930							0.34		15	7.13	8.8
4 27-Dec	4086	4236							0.38		14	7.12	9.1
5 /													
6 /													
Number of tests													
Monthly Average			20	21	4.9	0.7	2.0	13.0	0.34	0.05	14	7.29	9.30
Monthly Objectives							15.0	15.0	1.0		0		
Monthly/Yearly Limits							25.0	25.0	1.0		200		

Comments: pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times

2011

BYPASS EVENTS Bypass Events

Vanastra S.T.P.
 Operating Number 110003013
 Operating Authority: O.M.I. Canada Inc.
 Municipality of Huron East

YEAR 2011

ANALYST Maxxam

Date		Time/Volume of Event			Notification		Sampled		Results of Analyst						
Day Month	Start	Finish	Duration Hrs	Volume M3	Yes	No	Yes	No	BOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH
1 2-Jan	8:40	?	?	16	x		x		2.0	26.0	0.51	235	0.14	850	7.97
2 5-Jan	12:30	12:45	0.25	8	x			x							
3 Mar	10-Mar 2:15	11-Mar 10:30	34.25	552	x		x		4.0	17.0	0.39	220	0.23	4400	7.90
4 16-Mar	18:20	?	?	56	x		x		2.0	10.0	0.25	244	0.06	110	7.97
5 17-Mar	17-Mar 14:00	19-Mar 12:00	46.0	2331	x		x		2.0	20.0	0.44	241	0.15	2000	7.91
6 24-Mar	11:28	11:30	0.03	13	x			x							
7															
8															

Comments:

O.M.I. Canada CI2 Total Residuals Vanastra STP 2011

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.48	0.68	0.41	0.50	0.49	0.48	0.46	0.48	0.31		0.58	0.51
2	0.69	0.24	0.51	0.48	0.17	0.69	0.46	0.52	0.29		0.50	0.36
3	0.58	0.23	0.30	0.56	0.53	0.52	0.49	0.26		0.29	0.50	
4	0.72	0.25	0.38	0.54	0.44	0.47	0.32	0.48		0.41	0.47	
5	0.53	0.43	0.41	0.48	0.37	0.56	0.32	0.29	0.43	0.24		0.62
6	0.50	0.63	0.28	0.42	0.20	0.15	0.30	0.68	0.28	0.49		0.6
7	0.54	0.58	0.32	0.47	0.36	0.27	0.28	0.52	0.44	0.54	0.35	0.61
8	0.48	0.31	0.46	0.43	0.19	0.50	0.51	0.59	0.38		0.37	0.61
9	0.54	0.45	0.38	0.34	0.18	0.48	0.39	0.39	0.41		0.24	0.58
10	0.46	0.42	0.63	0.29	0.31	0.42	0.32	0.47			0.44	
11	0.59	0.34	0.48	0.45	0.13	0.32	0.15	0.24		0.30		
12	0.52	0.38	0.41	0.53	0.21	0.49	0.24	0.28	0.06	0.38		0.5
13	0.57	0.32	0.56	0.43	0.12	0.58	0.40	0.25	0.39	0.41		0.52
14	0.14	0.52	0.49	0.48	0.18	0.92	0.50	0.50	0.37	0.30	0.42	0.49
15	0.59	0.20	0.50	0.44	0.57	0.27	0.65	0.44	0.30		0.60	0.49
16	0.45	0.38	0.55	0.42	0.38	0.45	0.52	0.25	0.49		0.49	0.5
17	0.33	0.52	0.26	0.44	0.39	0.29	0.38	0.38		0.42	0.55	
18	0.48	0.59	0.41	0.38	0.52	0.24	0.22	0.39	0.41	0.54	0.55	
19	0.37	0.70	0.46	0.35	0.46	0.20	0.26	0.64	0.29	0.44		0.53
20	0.24	0.68	0.41	0.42	0.37	0.20	0.26	0.64	0.43	0.52		0.46
21	0.30	0.43	0.54	0.45	0.21	0.19	0.16	0.59	0.38	0.48	0.35	0.51
22	0.27	0.50	0.51	0.38	0.10	0.34	0.45	0.43	0.27		0.48	0.49
23	0.18	0.55	0.47	0.48	0.25	0.42	0.50	0.48	0.42	0.44	0.51	
24	0.33	0.45	0.47	0.40	0.46	0.54	0.32	0.38		0.49	0.45	0.5
25	0.56	0.60	0.55	0.34	0.46	0.48	0.28	0.41		0.51	0.43	
26	0.40	0.51	0.39	0.16	0.36	0.32	0.20	0.49	0.46	0.60		0.49
27	0.55	0.49	0.44	0.48	0.46	0.29	0.35		0.52	0.65		0.61
28	0.48	0.31	0.31	0.44	0.22	0.31	0.24		0.50	0.55	0.49	0.57
29	0.33		0.55	0.48	0.14	0.30	0.34	0.21	0.42		0.54	0.48
30	0.21		0.50	0.44	0.47	0.46	0.44	0.38	0.55		0.48	0.49
31	0.23		0.44		0.41		0.48	0.35		0.45		
Total	13.64	12.69	13.78	12.9	10.11	12.15	11.19	12.41	8.8	9.45	9.79	11.52
Min.	0.14	0.20	0.26	0.16	0.1	0.15	0.15	0.21	0.06	0.24	0.24	0.36
Max	0.72	0.70	0.63	0.56	0.57	0.92	0.65	0.68	0.55	0.65	0.6	0.62
Avg.	0.44	0.45	0.44	0.43	0.33	0.41	0.36	0.43	0.38	0.45	0.47	0.52

O.M.I. Canada Influent Flows Vanastra STP 2011

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1848	590	871	1413	972	855	557	206	628	631	621	1414
2	1941	604	790	1401	640	763	572	504	1043	591	612	1191
3	1477	580	752	1400	984	720	580	515	525	766	589	1245
4	1137	581	793	1631	1027	692	565	510	609	690	571	1509
5	1200	593	1842	1518	931	671	550	503	571	625	575	1544
6	1400	591	1589	1401	862	638	530	505	542	596	608	1307
7	1400	585	1425	1400	716	1389	524	551	489	560	562	1241
8	798	564	1203	1400	704	1073	521	522	354	550	555	1314
9	743	562	1378	1400	659	1095	503	553	536	537	562	1313
10	1040	562	2171	1406	652	1160	508	511	518	535	555	1312
11	1400	569	2086	1400	626	720	525	510	509	524	601	1309
12	1338	600	1574	1109	606	685	497	509	521	600	587	900
13	661	617	1359	818	728	649	499	495	518	630	583	695
14	647	645	1273	765	753	641	495	516	507	1232	602	891
15	664	597	1332	732	800	598	489	524	523	1155	589	1505
16	648	637	1668	798	720	586	503	512	577	950	567	1145
17	635	1146	2133	850	676	591	508	510	532	749	567	1008
18	660	1775	2231	752	680	568	513	512	520	816	555	922
19	652	1586	1935	719	1134	572	485	509	538	811	563	1099
20	641	1409	1449	1471	858	577	486	578	653	1557	560	1176
21	621	1160	1767	1248	762	559	510	579	607	1374	537	1086
22	618	975	1595	1057	722	676	473	536	559	1074	546	1121
23	618	1106	1313	1276	906	805	475	516	542	878	579	978
24	604	1400	1130	1057	1012	810	489	6173	801	875	554	887
25	610	1400	1186	1184	988	722	519	632	654	817	546	821
26	610	1400	1033	1004	1372	676	501	581	599	1029	549	758
27	599	1312	911	999	1295	637	499	578	773	1173	1157	769
28	596	1022	964	1414	1115	609	528	543	871	916	1224	748
29	599		1231	124	1097	577	649	541	649	709	1616	725
30	604		1400	1092	1420	557	529	541	597	672	1599	892
31	588		1400		1157		509	506	653	646		1443
Total	27597	25168	43784	34239	27574	21871	16091	21781	18518	25268	20491	34268
Min.	588	562	752	124	606	557	473	206	354	524	537	695
Max	1941	1775	2231	1631	1420	1389	649	6173	1043	1557	1616	1544
Avg.	890	899	1412	1141	889	729	519	703	597	815	683	1105

O.M.I. Canada Effluent Flows Vanastra STP 2011

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2088	377	850	1466	968	747	305	275	956	527	525	1574
2	2183	421	743	1485	514	681	355	287	1009	499	493	1276
3	1571	331	678	1539	983	576	377	342	550	741	477	1244
4	1197	414	781	1783	1027	552	354	275	478	572	419	1710
5	1254	441	2130	1595	858	490	300	289	510	445	441	1794
6	1468	441	1713	1479	814	397	305	310	359	395	466	1419
7	1471	434	1413	1417	609	1425	294	417	300	319	402	1328
8	676	351	1198	1426	552	1015	265	519	243	303	393	1384
9	702	368	1566	1377	491	1077	223	738	362	277	393	1394
10	980	342	2823	1413	506	1229	238	281	300	277	399	1401
11	1462	387	2641	1393	425	635	293	252	242	290	502	1439
12	1504	472	1806	1061	362	583	261	247	283	449	471	929
13	541	517	1544	737	549	533	269	255	335	521	451	643
14	466	561	1279	652	675	431	253	317	292	1381	496	911
15	587	435	1407	635	787	470	224	309	332	1270	476	1730
16	492	516	1845	739	691	418	232	271	473	1003	438	1236
17	461	1196	2654	828	593	406	243	248	334	704	416	1031
18	575	1944	2928	668	558	338	304	256	284	760	415	977
19	532	1769	2264	647	1131	333	243	257	354	809	437	1186
20	497	1493	1631	1647	755	346	225	404	782	1809	438	1301
21	503	1108	2033	1297	600	341	276	562	865	1556	346	1158
22	457	824	1812	1050	567	502	251	576	460	1134	386	1199
23	360	1056	1404	1308	836	461	246	508	333	892	455	1035
24	459	1533	1095	1022	1004	775	251	3909	760	877	401	955
25	496	1505	1103	1207	988	641	309	544	505	820	402	842
26	477	1488	938	990	1510	532	273	414	519	1101	400	758
27	432	1445	787	975	1391	479	275	399	675	1233	1233	761
28	448	1085	887	1563	1101	420	335	335	805	954	1342	705
29	388		1251	1181	1004	370	525	368	520	661	1873	704
30	388		1514	1092	1366	334	303	403	517	592	1872	885
31	300		1488		1056		270	275	891	598		1642
Total	25415	23254	48206	35672	25271	17537	8877	14842	15628	23769	17658	36551
Min.	300	331	678	635	362	333	223	247	242	277	346	643
Max	2183	1944	2928	1783	1510	1425	525	3909	1009	1809	1873	1794
Avg.	820	831	1555	1189	815	585	286	479	504	767	589	1179

Municipality of Huron East Vanastra STP Monthly/Yearly Average Lab Results

RAW SEWAGE					FINAL EFFLUENT								MONTHLY FLOWS			
Test Date	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Ammonia E-Coli								Total	Min	Max	Avg
					BOD5 mg/L	S. S. mg/L	Total P mg/L	NH3 mg/L	Per 100ml	pH	DO					
Jan	42	35	11.0	0.8	2.0	9.0	0.36	0.05	32	7.25	11.2	25415	300	2183	820	
Feb	130	140	34.0	3.3	0.1	22.0	0.38	0.05	40	7.21	11.0	23254	331	1944	831	
Mar	16	27	7.0	0.5	2.0	8.0	0.21	0.05	9	7.06	10.3	48206	678	2928	1555	
Apr	110	33	5.2	0.5	2.0	9.0	0.18	0.05	18	6.99	9.4	35672	635	1783	1189	
May	27	27	10.0	0.8	2.0	3.0	0.17	0.15	56	7.16	8.9	25271	362	1510	815	
Jun	61	76	19.0	2.1	2.0	5.0	0.18	0.20	8	6.95	8.6	17537	333	1425	585	
Jul	86	150	29.0	3.3	2.0	7.0	0.16	0.22	33	6.91	8.0	8877	223	525	286	
Aug	180	140	37.0	4.3	2.0	8.0	0.24	0.05	12	6.94	7.5	14842	247	3909	479	
Sep	130	120	32.0	3.5	2.0	1.0	0.18	0.05	17	6.92	7.7	15628	242	1009	504	
Oct	290	280	36.0	4.7	2.0	32.0	0.35	0.05	17	7.15	8.4	23769	277	1809	767	
Nov	130	88	28.0	4.0	2.0	13.0	0.33	0.05	10	7.17	8.4	17658	346	1873	589	
Dec	20	21	4.9	0.7	2.0	13.0	0.34	0.05	14	7.29	9.3	36551	643	1794	1179	
Yearly																
Total													200494			
Average	102	95	21.1	2.4	1.8	10.8	0.25	0.09	18	7.08	9.1	16708	385	1891	800	
Minimum	16	21	4.9	0.5	0.1	1.0	0.16	0.05	8	6.91	7.5	8708	223	525	286	
Maximum	290	280	37.0	4.7	2.0	32.0	0.38	0.22	56	7.29	11.2	25887	678	3909	1555	