

**Municipality Of Huron East
2014 Operations Report
Vanastra Wastewater Facilities
Reporting Period Jan-Dec 2014**

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. The waste water collection System is both owned and operated by the municipality of Huron East.

2. Regulatory Issues

CH2MHILL 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:

<input checked="" type="checkbox"/>	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	728	51%	1759
Feb	386	27%	1166
Mar	892	63%	1975
April	1312	93%	2846
May	897	63%	2102
June	270	19%	477
July	504	35%	1476
Aug	443	31%	1165
Sept	437	31%	841
Oct	614	43%	1319
Nov	807	57%	2941
Dec	763	54%	2366
Plant Average Day Design Capacity is 1405 m ³ /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

- Scum trough repaired in primary clarifier
- Installed new V-notch plate in influent channel
- Electrical upgrades done on compressor #1 panel.
- Install new battery in Auto Dialer
- Rebuild alum pump(new tubes)
- Repair chlorine board and injection system
- Land apply bio-solids from digester

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

- None during this period.

7. Proposed Alterations, Extensions or Replacements

- None during this period

8. Calibration Procedures

- Flow meters were calibrated in 2014

9. Health & Safety Items

- Lifting equipment, Fire extinguishers, Gas monitors Monthly/Yearly inspections. Weekly Safety meeting along with Quarterly walk through completed for 2014

10. Status of Capital Projects

- None during this period.

11. Other Items

- None

2014

MONTH: Jan

Vanastra STP
 Operating Number 110003013
 Operating Authority: CH2MHILL
 Municipality of Huron East

YEAR 2014

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-Jan	1880	2062	76	59	31.0	3.3	2.0	8.0	0.14	0.05	74	7.52	13.3
2 13-Jan	2300	2219							0.24		91	7.54	9.5
3 20-Jan	3143	3067							0.06		66	7.53	8.6
4 28-Jan	3174	3213							0.05		93	7.46	12.99
5													
6 /													
Number of tests			1	1	1	1	1	1	4	1	4	4	4
Monthly Average			76	59	31.0	3.3	2.0	8.0	0.12	0.05	80	7.51	11.10
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

2014

MONTH: Feb

Vanastra STP
 Operating Number 110003013
 Operating Authority: CH2MHILL
 Municipality of Huron East

YEAR 2014

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-Feb	3396	3323	120	110	34.0	3.8	2.0	4.0	0.08	0.05	57	7.45	11.9
2 10-Feb	3924	3966							0.05		110	7.59	9.3
3 18-Feb	3708	3685							0.05		980	7.32	12.8
4 24-Feb	3781	3620							0.13		10	6.87	10.82
5 /													
6 /													
Number of tests			1	1	1	1	1	1	4	1	4	4	4
Monthly Average			120	110	34.0	3.8	2.0	4.0	0.08	0.05	89	7.31	11.20
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

2014

MONTH: March

Vanastra STP

Operating Number 110003013

YEAR 2014

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

ANALYST Maxxam

Municipality of Huron East

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-Mar	3551	3483	88	80	26.0	3.00	2.0	4.0	0.15	0.07	33	7.86	12.1
2 10-Mar									0.09		20	7.78	10.58
3 17-Mar	4048	4181							0.28		100	7.54	10.88
4 24-Mar	3678	3677							0.02		180	7.51	11.0
5 31-Mar	3502	3544							0.07		200	7.32	11.71
6													
Number of Tests			1	1	1	1	1	1	5	1	5	5	5
Monthly Average			88	80	26.0	3.0	2.0	4.0	0.12	0.07	75	7.60	11.25
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

2014

MONTH: April

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

Year 2014

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-Apr	3224	3190	30	33	15.0	1.2	2.0	5.0	0.19	0.05	85	7.54	10.0
2 14-Apr	3457	3669							0.18		31	7.59	9.88
3 22-Apr	3888	3576							0.08		5	7.78	8.99
4 28-Apr	3968	3730							0.07		57	7.53	8.0
5													
6 /													
Number of tests			1	1	1	1	1	1	4	1	4	4	4
Monthly Average			30	33	15.0	1.2	2.0	5.0	0.13	0.05	29	7.61	9.21
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

2014

MONTH: May

Vanastra STP
 Operating Number 110003013
 Operating Authority: CH2MHILL
 Municipality of Huron East

Year 2014

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-May	3888	3716	27	34	18.0	1.4	2.0	6.0	0.08	0.07	9	7.94	7.1
2 12-May	3875	3869							0.05		17	7.82	8.93
3 20-May	4216	4025							0.16		32	8.00	7.2
4 26-May	4201	4223							0.09		12	8.04	6.3
5													
6 /													
Number of tests			1	1	1	1	1	1	4	1	4	4	4
Monthly Average			27	34	18.0	1.4	2.0	6.0	0.10	0.07	16	7.95	7.37
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

2014

MONTH: Jun

Vanastra STP
 Operating Number 110003013
 Operating Authority: CH2MHILL
 Municipality of Huron East

YEAR 2014

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-Jun	4152	3755	81	60	30.0	3.5	2.0	3.0	0.08	0.14	13	7.06	7.6
2 9-Jun	4588	4403							0.05		9	6.91	7.41
3 16-Jun	5765	5576							0.08		10	7.09	6.4
4 23-Jun	5613	5672							0.03		74	6.85	7.2
Number of tests			1	1	1	1	1	1	4	1	4	4	4
Monthly Average			81	60	30.0	3.5	2.0	3.0	0.06	0.14	17	6.98	7.16
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

2014

MONTH: Jul

Vanastra STP
 Operating Number 110003013
 Operating Authority: CH2MHILL
 Municipality of Huron East

YEAR 2014

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-Jul	5532	5393	160	120	40.0	4.7	2.0	9.0	0.17	0.05	24	7.56	6.4
2 7-Jul	2500	2940							0.09		200000	7.59	3.8
3 14-Jul	4110	3950							0.14		31	7.52	6.37
4 16-Jul											12		
5 21-Jul	3610	3369							0.09		15	8	7.82
6 28-Jul	2690	3375							0.13		63	7	7.82
7 30-Jul											8		
Number of tests			1	1	1	1	1	1	5	1	7	5	5
Monthly Average			160	120	40.0	4.7	2.0	9.0	0.12	0.05	122	7.57	6.10
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

2014

MONTH: Aug

Vanastra STP
 Operating Number 110003013
 Operating Authority: CH2MHILL
 Municipality of Huron East

Year 2014

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-Aug	2800	2929	55	72	19.0	1.8	2.0	3.0	0.12	0.05	6	7.62	6.9
2 11-Aug	1927	1936							0.17		84	7.56	5.33
3 18-Aug	1616	1658							0.12		86	7.10	5.82
4 25-Aug	2864	2777							0.10		17	7.39	7.32
5													
6 /													
Number of tests			1	1	1	1	1	1	4	1	4	4	4
Monthly Average			55	72	19.0	1.8	2.0	3.0	0.13	0.05	29	7.42	6.34
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

2014

MONTH: Sep

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

Year 2014

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-Sep	3627	3185	98	100	38.0	3.6	2.0	6.0	0.12	0.05	32	6.97	6.7
2 8-Sep	4099	3713							0.16		19	6.35	7.46
3 15-Sep	4029	4062							0.20		36	8.64	10.0
4 22-Sep	3814	3824							0.22		110	8.93	9.26
5 29-Sep	4002	3791							0.18		13	9	9.38
6 /													
Number of tests			1	1	1	1	1	1	5	1	5	5	5
Monthly Average			98	100	38.0	3.6	2.0	6.0	0.18	0.05	32	7.90	8.56
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

2014

MONTH: Oct

Vanastra STP
 Operating Number 110003013
 Operating Authority: CH2MHILL
 Municipality of Huron East

YEAR 2014

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-Oct	4289	4195	51	45	21.0	1.8	2.0	11.0	0.19	0.05	10	8.25	9.9
2 14-Oct	4118	3879							0.16		24	8.14	10.2
3 20-Oct	3493	3501							0.23		12	7.92	11.01
4 27-Oct	1346	1238							0.16		20	8.13	11.81
5													
6													
Number of tests			1	1	1	1	1	1	4	1	4	4	4
Monthly Average			51	45	21.0	1.8	2.0	11.0	0.19	0.05	15	8.11	10.73
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

2014

MONTH: Nov

Vanastra STP
 Operating Number 110003013
 Operating Authority: CH2MHILL
 Municipality of Huron East

Year 2014

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-Nov	3114	3044	94	55	29.0	3.0	2.0	7.0	0.23	0.07	36	7.76	11.4
2 10-Nov	2333	2622							0.17		36	7.15	11.2
3 17-Nov	2633	2539							0.24		220	9.12	9.28
4 24-Nov	2388	2314							0.27		68	7.66	7.48
5													
6													
Number of Tests			1	1	1	1	1	1	4	1	4	4	4
Monthly Average			94	55	29.0	3.0	2.0	7.0	0.23	0.07	66	7.92	9.85
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

2014

MONTH: Dec

Vanastra STP
 Operating Number 110003013
 Operating Authority: CH2MHILL
 Municipality of Huron East

Year 2014

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-Dec	3466	3248	20	27	16.0	1.4	2.0	17.0	0.28	0.05	36	7.88	9.4
2 8-Dec	2642	2739							0.17		76	8.07	10.7
3 15-Dec	3386	3292							0.17		24	8.25	10.21
4 22-Dec	2108	1941							0.20		92	7.26	9.9
5 29-Dec	4031	3886							0.21		76	7.86	9.18
6													
Number of tests			1	1	1	1	1	1	5	1	5	5	5
Monthly Average			20	27	16.0	1.4	2.0	17.0	0.21	0.05	54	7.86	9.88
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

2014

BYPASS EVENTS

Bypass Events

Vanastra S.T.P.

Operating Number 110003013

Operating Authority: CH2MHILL

Municipality of Huron East

YEAR 2014

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																
3																
4																
5																
6																
7																
8																

Comments:

CH2MHILL CI2 Total Residuals Vanastra STP 2014

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1				0.44	0.28		0.10	0.17		0.28		0.35
2	0.34			0.36	0.46	0.21	0.13		0.28	0.35		0.38
3	0.37	0.28	0.33	0.38		0.30	0.19		0.19	0.15	0.33	0.34
4		0.18	0.17	0.44		0.12	0.19	0.19	0.18		0.30	0.36
5		0.30	0.3		0.43	0.33		0.39	0.25		0.27	0.28
6	0.44	0.19	0.25		0.40	0.34		0.38		0.35	0.33	
7		0.44	0.49	0.38	0.26		0.21	0.29		0.34	0.32	
8	0.12			0.39	0.31		0.28	0.24	0.27	0.29		0.31
9	0.12			0.41	0.22	0.27	0.32		0.16	0.32		0.31
10	0.39	0.32	0.47	0.42		0.28	0.30		0.27	0.34	0.37	0.31
11		0.23	0.3	0.34		0.30	0.19	0.21	0.31			0.24
12		0.19	0.31		0.22	0.18		0.25	0.27		0.38	0.32
13	0.5	0.17	0.28	0.20	0.23	0.15		0.21			0.30	
14	0.49	0.37	0.46	0.45	0.23		0.25	0.30		0.14	0.30	
15	0.47			0.40	0.25		0.20	0.15	0.31	0.13		0.24
16	0.48			0.29	0.39	0.21	0.32		0.20	0.31		0.28
17	0.37		0.22	0.45		0.24	0.25		0.31	0.30	0.23	0.38
18		0.14	0.45		0.32	0.23	0.30	0.27	0.33		0.31	0.38
19		0.30	0.45	0.51		0.25		0.29	0.36		0.31	0.35
20	0.41	0.35	0.42		0.29	0.25		0.30		0.34	0.25	
21	0.26	0.30	0.44		0.34		0.36	0.19		0.32	0.21	
22	0.54		0.48	0.34	0.32		0.26	0.16	0.34	0.36		0.25
23	0.35			0.35	0.48	0.34	0.25		0.30	0.16		0.31
24	0.37	0.66	0.25	0.40		0.23	0.26		0.35	0.30	0.27	0.26
25		0.37	0.36	0.28		0.16	0.18	0.37	0.32		0.35	
26		0.45	0.44		0.28	0.30		0.29	0.31		0.32	
27	0.24		0.3		0.2	0.20		0.32		0.35	0.19	0.31
28	0.39	0.20	0.42	0.40	0.22		0.28	0.24		0.24	0.29	
29	0.38			0.26	0.29		0.32	0.31	0.31	0.22		0.31
30	0.44			0.32	0.27	0.31	0.31		0.20	0.16		0.31
31	0.31		0.45				0.29			0.32		0.28
Total	7.78	5.44	8.04	8.21	6.69	5.2	5.74	5.52	5.82	6.07	5.63	6.86
Min.	0.12	0.14	0.17	0.2	0.2	0.12	0.1	0.15	0.16	0.13	0.19	0.24
Max	0.54	0.66	0.49	0.51	0.48	0.34	0.36	0.39	0.36	0.36	0.38	0.38
Avg.	0.37	0.30	0.37	0.37	0.30	0.25	0.25	0.26	0.28	0.28	0.30	0.31

CH2MHILL Influent Flows Vanastra STP 2014

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	97	180	204	1883	728	255	245	306	183	209	436	452
2	90	172	188	1513	604	240	169	469	174	196	378	434
3	84	144	165	1084	611	224	156	552	154	304	321	402
4	99	140	166	1351	588	208	139	395	138	888	314	356
5	87	148	158	1278	501	191	138	324	198	788	292	339
6	74	138	155	1084	444	186	139	619	376	512	299	320
7	88	126	174	1026	396	180	911	817	216	402	316	303
8	35	145	181	1225	364	178	448	223	187	327	368	294
9	74	159	165	986	342	156	363	205	167	275	468	270
10	80	136	229	965	311	345	263	203	440	255	462	255
11	602	130	372	764	295	162	226	222	401	247	418	252
12	547	126	404	704	278	150	201	379	267	234	342	228
13	338	136	320	2244	654	144	420	238	283	248	323	235
14	378	136	414	1139	591	142	442	229	251	236	298	237
15	496	132	581	828	2478	151	410	197	235	484	289	234
16	614	127	478	714	1858	136	535	207	238	351	288	301
17	676	126	399	759	775	129	415	205	218	341	280	454
18	599	138	389	900	595	126	294	193	197	608	272	455
19	373	147	691	899	549	118	257	178	181	472	262	438
20	307	171	1837	834	1324	116	243	233	200	448	249	414
21	269	590	2137	452	1088	115	212	217	480	397	235	390
22	260	372	1661	467	1327	120	201	208	409	345	304	382
23	249	314	615	433	843	121	197	181	293	313	1103	408
24	228	267	541	394	900	256	173	180	248	288	2321	1245
25	241	245	559	372	900	191	169	158	272	285	954	1726
26	230	221	463	358	466	162	164	154	211	269	679	840
27	196	211	486	340	355	150	576	149	200	234	571	668
28	168	189	1319	301	309	122	2569	151	212	348	747	563
29	170		1085	673	298	159	2847	163	174	337	737	482
30	183		1037	917	267	145	2734	155	259	295	541	429
31	172		1376		242		1586	158		421		395
Total	8104.8	5266	18949	26887	21281	5078	17842	8268	7462	11357	14867	14201
Min.	35.01	126	155	301	242	115	138	149	138	196	235	228
Max	675.57	590	2137	2244	2478	345	2847	817	480	888	2321	1726
Avg.	261	188	611	896	686	169	576	267	249	366	496	458

CH2HILL Effluent Flows Vanastra STP 2014

Date	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	532	393	452	2462	1137	362	379	462	725	382	735	784
2	508	355	345	2135	986	358	282	711	338	381	627	741
3	475	182	288	1652	1011	351	318	774	240	533	569	698
4	610	265	346	1824	934	358	241	573	226	1319	589	600
5	518	326	283	1937	805	337	230	501	328	1264	524	596
6	414	279	309	1562	662	287	215	875	751	822	560	574
7	334	279	344	1570	639	245	1324	1165	354	703	580	539
8	367	264	394	1798	561	290	749	335	381	576	668	548
9	380	291	342	1436	524	262	557	301	300	487	813	516
10	496	229	462	1482	492	245	415	294	723	441	786	501
11	1751	215	698	1134	441	289	342	463	841	404	705	475
12	1759	194	906	1101	461	251	299	622	457	385	597	433
13	1426	258	695	2846	1039	289	633	400	520	468	562	447
14	1514	310	830	1765	941	256	700	397	442	421	528	447
15	1235	273	1182	1345	2102	254	670	326	427	777	511	465
16	1224	249	904	1079	1576	221	814	396	294	612	528	542
17	1311	266	754	1364	1086	209	621	348	351	605	493	799
18	1134	314	776	1141	854	256	448	307	327	1000	470	796
19	775	315	1328	1297	768	194	457	321	318	771	475	741
20	620	381	1975	1217	1544	194	391	429	329	784	432	678
21	454	1166	1129	656	1328	185	309	357	794	715	416	666
22	514	744	1450	782	1542	180	253	327	711	568	547	667
23	478	633	1239	719	1197	234	332	310	456	500	1665	715
24	513	554	950	608	1155	477	287	327	393	467	2941	1779
25	601	504	875	642	1109	327	266	266	405	490	1522	2366
26	525	464	686	643	665	269	269	266	310	489	1079	1329
27	467	458	820	534	530	244	761	270	320	433	940	1076
28	373	640	1892	508	486	181	1476	262	319	612	1205	938
29	373		1660	673	475	282	592	298	270	603	1217	820
30	488		1501	1442	418	226	477	264	458	539	915	711
31	395		1832		346		509	771		470		653
Total	22564	10801	27647	39354	27814	8113	15616	13718	13108	19021	24199	23640
Min.	334	182	283	508	346	180	215	262	226	381	416	433
Max	1759	1166	1975	2846	2102	477	1476	1165	841	1319	2941	2366
Avg.	728	386	892	1312	897	270	504	443	437	614	807	763

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	BOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia mg/L	E-Coli Per 100ml	pH	DO	Total	Min	Max	Avg
Jan	76	59	31.0	3.3	2.0	8.0	0.12	0.05	80	7.51	11.1	22564	334	1759	728
Feb	120	110	34.0	3.8	2.0	4.0	0.08	0.05	89	7.31	11.2	10801	182	1166	386
Mar	88	80	26.0	3.0	2.0	4.0	0.12	0.07	75	7.60	11.3	27647	283	1975	892
Apr	30	33	15.0	1.2	2.0	5.0	0.13	0.05	29	7.61	9.2	39354	508	2846	1312
May	27	34	18.0	1.4	2.0	6.0	0.10	0.07	16	7.95	7.4	27814	346	2102	897
Jun	81	60	30.0	3.5	2.0	3.0	0.06	0.14	17	6.98	7.2	8113	180	477	270
Jul	160	120	40.0	4.7	2.0	9.0	0.12	0.05	122	7.57	6.1	15616	215	1476	504
Aug	55	72	19.0	1.8	2.0	3.0	0.13	0.05	29	7.42	6.3	13718	262	1165	443
Sep	98	100	38.0	3.6	2.0	6.0	0.18	0.05	32	7.90	8.6	13108	226	841	437
Oct	51	45	21.0	1.8	2.0	11.0	0.19	0.05	15	8.11	10.7	19021	381	1319	614
Nov	94	55	29.0	3.0	2.0	7.0	0.23	0.07	66	7.92	9.9	24199	416	2941	807
Dec	20	27	16.0	1.4	2.0	17.0	0.21	0.05	54	7.86	9.9	23640	433	2366	763
Yearly															
Total												245595			
Average	75	66	26.4	2.7	2.0	6.9	0.14	0.06	42	7.64	9.1	20466	314	1703	671
Minimum	20	27	15.0	1.2	2.0	3.0	0.06	0.05	15	6.98	6.1	8113	180	477	270
Maximum	160	120	40.0	4.7	2.0	17.0	0.23	0.14	122	8.11	11.3	39354	508	2941	1312