

Town of Petrolia Water Pollution Control Plant

Managed, Operated, and Maintained by



2015 Annual Report of Operations

March 2016

March 2016

Michele Vandenhouvel, Provincial Officer – Sarnia Office

Ontario Ministry of the Environment and Climate Change
1094 London Road,
Sarnia, Ontario.

Dear Michele Vandenhouvel

On behalf of the Corporation of the Town of Petrolia, in Lambton County, CH2M is pleased to submit to you the annual operating report for the Town of Petrolia Water Pollution Control Plant. Please feel free to contact the undersigned if you have any questions regarding this report.

Respectfully submitted,

Cathy Culnan

Operator in Charge

CH2M

cc: Mike Thompson, Manager of Operations, Town of Petrolia

Randy Clendenning, Project Manager, CH2M

Introduction

The Town of Petrolia Water Pollution Control Plant (WPCP) was constructed in 1975 to replace the existing Lagoon treatment system. Upgrades to the treatment plant have included UV disinfection in 1995, VFD on the pumps at the main lift station in 1996 and again in 2013. Replacement of the manual bar screen with an automatic step screen occurred in 1999. Filter sand media was replaced in May of 2010 and then more was added in July 2014. A new MCC panel was installed on the filter in July 2014. Also repairs were done to the rails, drive, wheels on the traveling bridge of the filter in 2014. The plant has a design capacity of 3800 m³/day and is currently treating on average 1583 m³/day. An amendment to the C of A was applied for in 2002 and approved by the MOE Approvals Branch to have the plant re-rated from 3180m³/day to 3800m³/day based on the installation of two 30hp Jet Aspirators in the aeration tanks. Another amendment to the C of A was applied for in 2008 and approved by the MOE to clarify lagoon discharge criteria. The WPCP is a tertiary extended aeration plant with two large lagoons, one used to store digested sludge, and the other to use as a backup system in the event the plant requires maintenance. The plant consists of grit removal, mechanical aeration, jet aeration, clarification, sand filtration, and ultraviolet disinfection. Disinfection is now operated year round, as requested by the Ministry, although the Certificate of Approval only requires seasonal disinfection. A new pump station was added to the system in 2013. The collection system now consists of 12 pumping stations.

Monitory and Compliance Reports

Reports submitted to the regional environmental officer are the R1 and R2 Municipal Utility Monitoring Program reports for mechanical plants. These reports are submitted quarterly to the Ontario Ministry of the Environment and Climate Change (MOECC) as can be seen from the analytical data, the plant was in compliance for the year 2015.

The plant is capable of removing 99.2% of CBOD₅, 99.6% TSS, 89.6% TP

Monitoring Data Interpretation

The following summarizes the operation and effectiveness of the treatment process.

The average monthly Influent flows ranged from 856 m³ in February to 2028 m³ in June. We anticipate flow values to increase due to population growth and an increase in production at a local factory (TGI added a third shift)

During 2015 the Effluent TSS highest monthly average was 5.5mg/L during the month of March. The CBOD₅ highest monthly average 4.8 mg/L during the month of February. The highest monthly average for TP was 0.80 mg/L occurred in October. The Ammonia Nitrogen highest monthly average was 5.00 mg/L during the month of February.

Effluent Limit parameters:

CBOD₅ – 10 mg/L (38.0kg/d)

TSS-10 mg/L (38.0kg/d)

Total P –1 mg/L (3.8kg/d)

Ammonia Nitrogen – 3.0 mg/L (11.4kg/d) (May1-Nov 30) and 7.0mg/L (26.6kg/d) (Dec 1 to April 30)

E-coli – 200 organisms/100mL

pH – 6.0 – 9.5 inclusive, at all times

Effluent Objective Parameters:

CBOD₅ – 5 mg/L (19.0kg/d)

TSS – 5 mg/L (19.0kg/d)

Total P – 0.5mg/L (1.9kg/d)

Ammonia Nitrogen – 2.0 mg/L (7.2kg/d) (May1-Nov 30) and 5.0mg/L (19.0kg/d) (Dec 1 to April 30)

E-coli – 150 organisms/100mL

pH – to operate within the range of 6.5 – 8.5 inclusive at all times

In order to monitor our process and operate the plant within our objectives; grab & composite samples are collected and in-house analyses are performed. All results are documented on daily check sheets

Meetings are held each morning to discuss any issues and actions required.

Complaints

There were no complaints for the year 2015.

Maintenance

Preventive maintenance activities are carried out on a regularly scheduled basis to ensure optimal performance and readiness of all critical plant equipment. The annual electrical inspection was performed by the ESA (Electrical Safety Authority) at the plant and all pumping stations. HSE performed the annual Fire Extinguisher inspection. JT General Maintenance did the annual inspection of the hoists. The annual inspection of Barrett's Lane generator was performed by Albert's Generator.

Jan 2 – Installed new battery in Sensaphone (alarm dialer)

March 10 – Installed repaired pump #1 @ Greenfield pump station

March 19 – Installed new “Main Breaker Switch” at Barrett's lane pump station

April 2 – Installed new face plate, coupling on filter

April 29th – Installed repaired N.E mixer

May 7th – Duff Welding repaired a stress fracture on “South” clarifier arm

May 21 – Installed a new sump pump in Ella pump station dry well

June 18th – Installed repaired RAS VFD

June 24th – CT Environmental cleaned Barrett's Lane pump station

July 2nd – Shepen's remounted gear drive on South clarifier under warranty

July 9th – Installed a new Low Level float in First Ave pump station

July 28th – CT Environmental cleaned Main pump station

Aug 17th – Installed repaired pump at Greenfield pump station

No more major repairs to report

Operational / Process Problems

Despite the age of the facility, the effluent quality remains good. Overflows from treatment plant are recorded and routed to the West lagoon; they are included in this report under Section “Lagoon flow”

Sludge Handling

Waste activated sludge (WAS) is stored in aerobic digesters and digested for up to 7 days before being transferred to the sludge storage lagoon, which is the “East” lagoon. No sludge has ever been removed from the lagoons. The plant produces on average 44.16 m³/day of sludge at 0.4 % solids. It is estimated that 10,843 m³ of sludge was sent to the lagoons in 2015, at 0.4 % solids. For the year 2016, it is anticipated that the volume of sludge produced will increase slightly, due to ongoing construction of residential homes in various new subdivisions and a pumping station which was added in 2013. A copy of the sludge volume that was sent to the “East” lagoon is included with this report under section “Sludge data”

Monitoring Equipment

All monitoring equipment is calibrated yearly according to the manufacturer’s specification which ensures proper operation and reliability. An OCM 3 ultrasonic flow meter is positioned in front of a Parshall Flume on the raw influent to record level through the parshall flume which converts it to flow in the control room. A Doppler flow meter is installed on the return activated sludge (RAS) line, to monitor the flow of RAS to the aeration. No flow meter is installed on the WAS, so wasting is achieved through measurement of sludge level in the digesters. A Pulsar Ultra 3 ultrasonic level controller is installed in the line going to the lagoons and records any flow to the lagoons. Copies of the calibration reports are included in this report.

Modifications

As requested by the Ministry of Environment and Climate Change, we operate the ultraviolet disinfection system throughout the year.

Pumping Stations

Pump Stations are checked on a weekly basis, and have alarm monitoring 24 hours per day. Pump run time hours are documented during the weekly checks. Barrett’s Lane pump station has a backup generator on standby. All other pump stations are equipped with a terminal plug and transfer switch in the event they require a portable generator. The Main Lift station can be bypassed directly to the plant’s on site lagoons.

Lagoons

The “West” lagoon was discharged from April 1st to April 15th with approximately 66,766 m³ being released into Bear Creek. We are unable to discharge the East lagoon through its broken discharge pipe. A natural syphon was started to transfer “East” lagoon into “West” lagoon throughout the summer.

By-Passes

There were no by-passes to the lagoons during 2015.

Municipality: Corporation of the Town of Petrolia	Operating Authority: CH2M HILL
Project Name: Petrolia WPCP	Mailing Address: 546 Maude St Box 329 Petrolia ON N0N 1R0
Mailing Address: 411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	

File No.	Works Number	Data Period	Days	Discharge Type	Update Code
4 6 <small>1 2</small>	1 1 0 0 0 0 5 7 9 <small>3 11</small>	0 1 1 5 <small>16 19</small>	3 1 <small>20 21</small>	2 <small>22</small>	R <small>80</small>

C.P.	0 1 <small>12 13</small>	FLOWS	Parameter Code	Dec.	Monthly Results
		Total Flow	(10 ³ m ³) 5 0 0 1 0 <small>30 34</small>	3 <small>35</small>	3 1 . 5 3 1 <small>38</small>
		Average Daily Flow	(10 ³ m ³ /d) 5 0 0 1 5 <small>30 34</small>	3 <small>35</small>	1 . 0 1 7 <small>38</small>
		Maximum Daily Flow	(10 ³ m ³ /d) 5 0 0 2 0 <small>30 34</small>	3 <small>35</small>	1 . 8 7 2 <small>38</small>

2 6 <small>12 13</small>	BYPASS	Parameter Code	Dec.	Monthly Results	# of Occurrences
	Plant Bypass Volume	(10 ³ m ³) 5 0 0 2 6 <small>30 34</small>	3 <small>35</small>	. . . . . <small>38</small>	0 <small>80</small>
	Duration	(hours) 8 0 5 6 3 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	0 <small>80</small>
	Secondary Bypass Volume	(10 ³ m ³) 5 0 0 4 0 <small>30 34</small>	3 <small>35</small>	. . . . . <small>38</small>	0 <small>80</small>
	Duration	(hours) 8 0 5 6 5 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	0 <small>80</small>

0 3 <small>12 13</small>	RAW SEWAGE	Parameter Code	Dec.	Monthly Results	# of Samples
	BOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	0 <small>35</small>	1 5 8 . <small>38</small>	0 4 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	0 <small>35</small>	1 1 8 . <small>38</small>	0 4 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	3 1 . 6 0 <small>38</small>	0 4 <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	1 <small>35</small>	4 . 7 <small>38</small>	0 4 <small>80</small>

0 4 <small>12 13</small>	FINAL EFFLUENT	Parameter Code	Dec.	Monthly Results	# of Samples
	CBOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	1 <small>35</small>	2 . 8 <small>38</small>	0 4 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	1 <small>35</small>	4 7 <small>38</small>	0 4 <small>80</small>
	Ammonia + Ammonium	(mg/L) 0 0 0 1 9 <small>30 34</small>	2 <small>35</small>	0 . 4 3 <small>38</small>	0 4 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	. . . . . <small>38</small>	0 4 <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	2 <small>35</small>	0 . 4 7 <small>38</small>	0 4 <small>80</small>

0 7 <small>12 13</small>	DISINFECTION	Parameter Code	Dec.	Monthly Results	# of Samples
	Chlorine Used - (kg as Cl ₂)	5 0 1 0 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	0 4 <small>80</small>
	Chlorine Dosage - (mg/L as Cl ₂)	8 0 4 1 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	0 4 <small>80</small>
	Chlorine Residual - (mg/L as Cl ₂)	8 0 4 2 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	0 4 <small>80</small>

Randy Clendenning 519-490-5592 Randy.Clendenning@ch2m.com

Return completed blue form to:

Municipality: Corporation of the Town of Petrolia	Operating Authority: CH2M HILL
Project Name: Petrolia WPCP	Mailing Address: 546 Maude St Box 329 Petrolia ON N0N 1R0
Mailing Address: 411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	

File No.	Works Number	Data Period	Days	Discharge Type	Update Code
4 6 <small>1 2</small>	1 1 0 0 0 0 5 7 9 <small>3 11</small>	0 2 1 5 <small>16 19</small>	2 8 <small>20 21</small>	2 <small>22</small>	R <small>80</small>

C.P.	0 1 <small>12 13</small>	FLOWS	Parameter Code	Dec.	Monthly Results
		Total Flow	(10 ³ m ³) 5 0 0 1 0 <small>30 34</small>	3 <small>35</small>	2 3 . 9 8 0 <small>38</small>
		Average Daily Flow	(10 ³ m ³ /d) 5 0 0 1 5 <small>30 34</small>	3 <small>35</small>	. 8 5 6 <small>38</small>
		Maximum Daily Flow	(10 ³ m ³ /d) 5 0 0 2 0 <small>30 34</small>	3 <small>35</small>	1 . 2 6 8 <small>38</small>

2 6 <small>12 13</small>	BYPASS	Parameter Code	Dec.	Monthly Results	# of Occurrences
	Plant Bypass Volume	(10 ³ m ³) 5 0 0 2 6 <small>30 34</small>	3 <small>35</small>	. . . . . <small>38</small>	0
	Duration	(hours) 8 0 5 6 3 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	0
	Secondary Bypass Volume	(10 ³ m ³) 5 0 0 4 0 <small>30 34</small>	3 <small>35</small>	. . . . . <small>38</small>	0
	Duration	(hours) 8 0 5 6 5 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	0

0 3 <small>12 13</small>	RAW SEWAGE	Parameter Code	Dec.	Monthly Results	# of Samples
	BOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	0 <small>35</small>	1 3 0 . <small>38</small>	4
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	0 <small>35</small>	8 9 . <small>38</small>	4
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	3 1 . 3 0 <small>38</small>	4
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	1 <small>35</small>	4 . 6 <small>38</small>	4

0 4 <small>12 13</small>	FINAL EFFLUENT	Parameter Code	Dec.	Monthly Results	# of Samples
	CBOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	1 <small>35</small>	4 . 8 <small>38</small>	4
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	1 <small>35</small>	5 . 0 <small>38</small>	4
	Ammonia + Ammonium	(mg/L) 0 0 0 1 9 <small>30 34</small>	2 <small>35</small>	5 . 0 0 <small>38</small>	4
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	. . . . . <small>38</small>	4
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	2 <small>35</small>	. 6 3 <small>38</small>	4

0 7 <small>12 13</small>	DISINFECTION	Parameter Code	Dec.	Monthly Results	# of Samples
	Chlorine Used - (kg as Cl ₂)	5 0 1 0 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	4
	Chlorine Dosage - (mg/L as Cl ₂)	8 0 4 1 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	4
	Chlorine Residual - (mg/L as Cl ₂)	8 0 4 2 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	4

Randy Clendenning 519-490-5592 Randy.Clendenning@ch2m.com

Return completed blue form to:

Municipality: Corporation of the Town of Petrolia	Operating Authority: CH2M HILL
Project Name: Petrolia WPCP	Mailing Address: 546 Maude St Box 329 Petrolia ON N0N 1R0
Mailing Address: 411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	

File No.	Works Number	Data Period	Days	Discharge Type	Update Code
4 6 <small>1 2</small>	1 1 0 0 0 0 5 7 9 <small>3 11</small>	0 3 1 5 <small>16 19</small>	3 1 <small>20 21</small>	2 <small>22</small>	R <small>80</small>

C.P.	0 1 <small>12 13</small>	FLOWS	Parameter Code	Dec.	Monthly Results
		Total Flow	(10 ³ m ³) 5 0 0 1 0 <small>30 34</small>	3 <small>35</small>	4 6 . 9 3 1 <small>38</small>
		Average Daily Flow	(10 ³ m ³ /d) 5 0 0 1 5 <small>30 34</small>	3 <small>35</small>	1 . 5 6 4 <small>38</small>
		Maximum Daily Flow	(10 ³ m ³ /d) 5 0 0 2 0 <small>30 34</small>	3 <small>35</small>	3 . 6 5 0 <small>38</small>

2 6 <small>12 13</small>	BYPASS	Parameter Code	Dec.	Monthly Results	# of Occurrences
	Plant Bypass Volume	(10 ³ m ³) 5 0 0 2 6 <small>30 34</small>	3 <small>35</small>	. . . . . <small>38</small>	. . . . . <small>80</small>
	Duration	(hours) 8 0 5 6 3 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . . <small>80</small>
	Secondary Bypass Volume	(10 ³ m ³) 5 0 0 4 0 <small>30 34</small>	3 <small>35</small>	. . . . . <small>38</small>	. . . . . <small>80</small>
	Duration	(hours) 8 0 5 6 5 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . . <small>80</small>

0 3 <small>12 13</small>	RAW SEWAGE	Parameter Code	Dec.	Monthly Results	# of Samples
	BOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	0 <small>35</small>	1 2 6 . <small>38</small>	. 0 4 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	0 <small>35</small>	8 7 . <small>38</small>	. 0 4 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	2 5 . 2 0 <small>38</small>	. 0 4 <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	1 <small>35</small>	3 . 6 <small>38</small>	. 0 4 <small>80</small>

0 4 <small>12 13</small>	FINAL EFFLUENT	Parameter Code	Dec.	Monthly Results	# of Samples
	CBOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	1 <small>35</small>	4 . 4 <small>38</small>	. 0 4 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	1 <small>35</small>	5 . 5 <small>38</small>	. 0 4 <small>80</small>
	Ammonia + Ammonium	(mg/L) 0 0 0 1 9 <small>30 34</small>	2 <small>35</small>	3 . 1 3 <small>38</small>	. 0 4 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	. . . . . <small>38</small>	. . . . . <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	2 <small>35</small>	. 6 6 <small>38</small>	. 0 4 <small>80</small>

0 7 <small>12 13</small>	DISINFECTION	Parameter Code	Dec.	Monthly Results	# of Occurrences
	Chlorine Used - (kg as Cl ₂)	5 0 1 0 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . . <small>80</small>
	Chlorine Dosage - (mg/L as Cl ₂)	8 0 4 1 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . . <small>80</small>
	Chlorine Residual - (mg/L as Cl ₂)	8 0 4 2 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . . <small>80</small>

Randy Clendenning 519-490-5592 Randy.Clendenning@ch2m.com

Return completed blue form to:

Municipality: Corporation of the Town of Petrolia	Operating Authority: CH2M HILL
Project Name: Petrolia WPCP	Mailing Address: 546 Maude St Box 329 Petrolia ON N0N 1R0
Mailing Address: 411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	

File No.	Works Number	Data Period	Days	Discharge Type	Update Code
4 6 <small>1 2</small>	1 1 0 0 0 0 5 7 9 <small>3 11</small>	0 4 1 5 <small>16 19</small>	3 0 <small>20 21</small>	2 <small>22</small>	R <small>80</small>

C.P.	0 1 <small>12 13</small>	FLOWS	Parameter Code	Dec.	Monthly Results
		Total Flow	(10 ³ m ³) 5 0 0 1 0 <small>30 34</small>	3 <small>35</small>	5 0 . 6 1 1 <small>38</small>
		Average Daily Flow	(10 ³ m ³ /d) 5 0 0 1 5 <small>30 34</small>	3 <small>35</small>	1 . 6 8 7 <small>38</small>
		Maximum Daily Flow	(10 ³ m ³ /d) 5 0 0 2 0 <small>30 34</small>	3 <small>35</small>	3 . 6 5 0 <small>38</small>

2 6 <small>12 13</small>	BYPASS	Parameter Code	Dec.	Monthly Results	# of Occurrences
	Plant Bypass Volume	(10 ³ m ³) 5 0 0 2 6 <small>30 34</small>	3 <small>35</small>	 <small>38</small>	 <small>80</small>
	Duration	(hours) 8 0 5 6 3 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>
	Secondary Bypass Volume	(10 ³ m ³) 5 0 0 4 0 <small>30 34</small>	3 <small>35</small>	 <small>38</small>	 <small>80</small>
	Duration	(hours) 8 0 5 6 5 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>

0 3 <small>12 13</small>	RAW SEWAGE	Parameter Code	Dec.	Monthly Results	# of Samples
	BOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	0 <small>35</small>	1 4 8 . <small>38</small>	0 5 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	0 <small>35</small>	1 3 8 . <small>38</small>	0 5 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	2 9 . 4 <small>38</small>	0 5 <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	1 <small>35</small>	4 . 7 <small>38</small>	0 5 <small>80</small>

0 4 <small>12 13</small>	FINAL EFFLUENT	Parameter Code	Dec.	Monthly Results	# of Samples
	CBOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	1 <small>35</small>	2 . 4 <small>38</small>	0 5 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	1 <small>35</small>	5 . 5 <small>38</small>	0 5 <small>80</small>
	Ammonia + Ammonium	(mg/L) 0 0 0 1 9 <small>30 34</small>	2 <small>35</small>	. 5 2 <small>38</small>	0 5 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	. <small>38</small>	 <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	2 <small>35</small>	. 5 8 <small>38</small>	0 5 <small>80</small>

0 7 <small>12 13</small>	DISINFECTION	Parameter Code	Dec.	Monthly Results	# of Occurrences
	Chlorine Used - (kg as Cl ₂)	5 0 1 0 0 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>
	Chlorine Dosage - (mg/L as Cl ₂)	8 0 4 1 0 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>
	Chlorine Residual - (mg/L as Cl ₂)	8 0 4 2 0 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>

Randy Clendenning 519-490-5592 Randy.Clendenning@ch2m.com

Return completed blue form to:

Municipality: Corporation of the Town of Petrolia	Operating Authority: CH2M HILL
Project Name: Petrolia WPCP	Mailing Address: 546 Maude St Box 329 Petrolia ON N0N 1R0
Mailing Address: 411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	

File No.	Works Number	Data Period Month Year	Days	Discharge Type	Update Code																			
<table border="1" style="display:inline-table;"><tr><td>4</td><td>6</td></tr></table>	4	6	<table border="1" style="display:inline-table;"><tr><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>5</td><td>7</td><td>9</td></tr></table>	1	1	0	0	0	0	5	7	9	<table border="1" style="display:inline-table;"><tr><td>0</td><td>5</td></tr><tr><td>1</td><td>5</td></tr></table>	0	5	1	5	<table border="1" style="display:inline-table;"><tr><td>3</td><td>1</td></tr></table>	3	1	<table border="1" style="display:inline-table;"><tr><td>2</td></tr></table>	2	<table border="1" style="display:inline-table;"><tr><td>R</td></tr></table>	R
4	6																							
1	1	0	0	0	0	5	7	9																
0	5																							
1	5																							
3	1																							
2																								
R																								
1 2	3 11	16 19	20 21	22	80																			

C.P.	0 1	FLOWS	Parameter Code	Dec.	Monthly Results
12 13					
		Total Flow	(10 ³ m ³)	3	4 8 . 5 6 6
		Average Daily Flow	(10 ³ m ³ /d)	3	1 . 5 6 7
		Maximum Daily Flow	(10 ³ m ³ /d)	3	3 . 1 1 0
			30 34	35	38

2 6	BYPASS	Parameter Code	Dec.	Monthly Results	# of Occurrences
12 13					
	Plant Bypass Volume	(10 ³ m ³)	3	. . . . .	. . . . .
	Duration	(hours)	1	. . . . .	. . . . .
	Secondary Bypass Volume	(10 ³ m ³)	3	. . . . .	. . . . .
	Duration	(hours)	1	. . . . .	. . . . .
		30 34	35	38	

0 3	RAW SEWAGE	Parameter Code	Dec.	Monthly Results	# of Samples
12 13					
	BOD ₅	(mg/L)	0	1 5 3 .	0 4
	Suspended Solids	(mg/L)	0	1 6 9 .	0 4
	TKN	(mg/L)	2	4 2 . 3	0 4
	Total Phosphorus	(mg/L)	1	6 . 0	0 4
		30 34	35	38	

0 4	FINAL EFFLUENT	Parameter Code	Dec.	Monthly Results	# of Samples
12 13					
	CBOD ₅	(mg/L)	1	2 . 5	0 4
	Suspended Solids	(mg/L)	1	3 . 1	0 4
	Ammonia + Ammonium	(mg/L)	2	. 3 1	0 4
	TKN	(mg/L)	2	. . . . .	. . . . .
	Total Phosphorus	(mg/L)	2	. 5 4	0 4
		30 34	35	38	

0 7	DISINFECTION	Parameter Code	Dec.	Monthly Results	# of Samples
12 13					
	Chlorine Used - (kg as Cl ₂)	(kg as Cl ₂)	1	. . . . .	. . . . .
	Chlorine Dosage - (mg/L as Cl ₂)	(mg/L as Cl ₂)	1	. . . . .	. . . . .
	Chlorine Residual - (mg/L as Cl ₂)	(mg/L as Cl ₂)	1	. . . . .	. . . . .
		30 34	35	38	

Randy Clendenning 519-490-5592 Randy.Clendenning@ch2m.com

Return completed blue form to:

Municipality: Corporation of the Town of Petrolia	Operating Authority: CH2M HILL
Project Name: Petrolia WPCP	Mailing Address: 546 Maude St Box 329 Petrolia ON N0N 1R0
Mailing Address: 411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	

File No.	Works Number	Data Period	Days	Discharge Type	Update Code
4 6 <small>1 2</small>	1 1 0 0 0 0 5 7 9 <small>3 11</small>	0 6 1 5 <small>16 19</small>	3 0 <small>20 21</small>	2 <small>22</small>	R <small>80</small>

C.P.	0 1 <small>12 13</small>	FLOWS	Parameter Code	Dec.	Monthly Results
		Total Flow	(10 ³ m ³) 5 0 0 1 0 <small>30 34</small>	3 <small>35</small>	6 0 . 8 4 9 <small>38</small>
		Average Daily Flow	(10 ³ m ³ /d) 5 0 0 1 5 <small>30 34</small>	3 <small>35</small>	2 . 0 2 8 <small>38</small>
		Maximum Daily Flow	(10 ³ m ³ /d) 5 0 0 2 0 <small>30 34</small>	3 <small>35</small>	3 . 5 2 6 <small>38</small>

2 6 <small>12 13</small>	BYPASS	Parameter Code	Dec.	Monthly Results	# of Occurrences
	Plant Bypass Volume	(10 ³ m ³) 5 0 0 2 6 <small>30 34</small>	3 <small>35</small>	 <small>38</small>	 <small>80</small>
	Duration	(hours) 8 0 5 6 3 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>
	Secondary Bypass Volume	(10 ³ m ³) 5 0 0 4 0 <small>30 34</small>	3 <small>35</small>	 <small>38</small>	 <small>80</small>
	Duration	(hours) 8 0 5 6 5 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>

0 3 <small>12 13</small>	RAW SEWAGE	Parameter Code	Dec.	Monthly Results	# of Samples
	BOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	0 <small>35</small>	 <small>38</small>	 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	0 <small>35</small>	9 6 . <small>38</small>	0 4 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	1 1 3 . <small>38</small>	0 4 <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	1 <small>35</small>	2 9 . 0 <small>38</small>	0 4 <small>80</small>

0 4 <small>12 13</small>	FINAL EFFLUENT	Parameter Code	Dec.	Monthly Results	# of Samples
	CBOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	1 <small>35</small>	2 . 3 <small>38</small>	0 4 <small>80</small>
	Ammonia + Ammonium	(mg/L) 0 0 0 1 9 <small>30 34</small>	2 <small>35</small>	5 . 3 <small>38</small>	0 4 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	. 3 4 <small>38</small>	0 4 <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	2 <small>35</small>	. 5 3 <small>38</small>	0 4 <small>80</small>

0 7 <small>12 13</small>	DISINFECTION	Parameter Code	Dec.	Monthly Results	# of Samples
	Chlorine Used - (kg as Cl ₂)	5 0 1 0 0 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>
	Chlorine Dosage - (mg/L as Cl ₂)	8 0 4 1 0 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>
	Chlorine Residual - (mg/L as Cl ₂)	8 0 4 2 0 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>

Randy Clendenning 519-490-5592 Randy.Clendenning@ch2m.com

Return completed blue form to:

Municipality: Corporation of the Town of Petrolia	Operating Authority: CH2M HILL
Project Name: Petrolia WPCP	Mailing Address: 546 Maude St Box 329 Petrolia ON N0N 1R0
Mailing Address: 411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	

File No.	Works Number	Data Period	Days	Discharge Type	Update Code
4 6 <small>1 2</small>	1 1 0 0 0 0 5 7 9 <small>3 11</small>	0 7 1 5 <small>16 19</small>	3 1 <small>20 21</small>	2 <small>22</small>	R <small>80</small>

C.P.	0 1 <small>12 13</small>	FLOWS	Parameter Code	Dec.	Monthly Results
		Total Flow	(10 ³ m ³) 5 0 0 1 0 <small>30 34</small>	3 <small>35</small>	5 4 . 4 3 4 <small>38</small>
		Average Daily Flow	(10 ³ m ³ /d) 5 0 0 1 5 <small>30 34</small>	3 <small>35</small>	1 . 7 5 6 <small>38</small>
		Maximum Daily Flow	(10 ³ m ³ /d) 5 0 0 2 0 <small>30 34</small>	3 <small>35</small>	2 . 0 2 8 <small>38</small>

2 6 <small>12 13</small>	BYPASS	Parameter Code	Dec.	Monthly Results	# of Occurrences
	Plant Bypass Volume	(10 ³ m ³) 5 0 0 2 6 <small>30 34</small>	3 <small>35</small>	. . . . . <small>38</small>	. . . 0 <small>80</small>
	Duration	(hours) 8 0 5 6 3 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . 0 <small>80</small>
	Secondary Bypass Volume	(10 ³ m ³) 5 0 0 4 0 <small>30 34</small>	3 <small>35</small>	. . . . . <small>38</small>	. . . 0 <small>80</small>
	Duration	(hours) 8 0 5 6 5 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	

0 3 <small>12 13</small>	RAW SEWAGE	Parameter Code	Dec.	Monthly Results	# of Samples
	BOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	0 <small>35</small>	. . . 9 8 . <small>38</small>	. . . 0 5 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	0 <small>35</small>	. . . 1 0 2 . <small>38</small>	. . . 0 5 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	. . . 3 2 . 5 <small>38</small>	. . . 0 5 <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	1 <small>35</small>	. . . 5 . 1 <small>38</small>	. . . 0 5 <small>80</small>

0 4 <small>12 13</small>	FINAL EFFLUENT	Parameter Code	Dec.	Monthly Results	# of Samples
	CBOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	1 <small>35</small>	. . . 2 . 7 <small>38</small>	. . . 0 5 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	1 <small>35</small>	. . . 3 . 3 <small>38</small>	. . . 0 5 <small>80</small>
	Ammonia + Ammonium	(mg/L) 0 0 0 1 9 <small>30 34</small>	2 <small>35</small>	. . . . 3 6 <small>38</small>	. . . 0 5 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	. . . . . <small>38</small>	. . . . . <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	2 <small>35</small>	. . . . 4 4 <small>38</small>	. . . 0 5 <small>80</small>

0 7 <small>12 13</small>	DISINFECTION	Parameter Code	Dec.	Monthly Results	# of Samples
	Chlorine Used - (kg as Cl ₂)	5 0 1 0 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . . <small>80</small>
	Chlorine Dosage - (mg/L as Cl ₂)	8 0 4 1 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . . <small>80</small>
	Chlorine Residual - (mg/L as Cl ₂)	8 0 4 2 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . . <small>80</small>

Randy Clendenning 519-490-5592 Randy.Clendenning@ch2m.com

Return completed blue form to:

Municipality: Corporation of the Town of Petrolia	Operating Authority: CH2M HILL
Project Name: Petrolia WPCP	Mailing Address: 546 Maude St Box 329 Petrolia ON N0N 1R0
Mailing Address: 411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	

File No.	Works Number	Data Period	Days	Discharge Type	Update Code
4 6 <small>1 2</small>	1 1 0 0 0 0 5 7 9 <small>3 11</small>	0 8 1 5 <small>16 19</small>	3 1 <small>20 21</small>	2 <small>22</small>	R <small>80</small>

C.P.	0 1 <small>12 13</small>	FLOWS	Parameter Code	Dec.	Monthly Results
		Total Flow	(10 ³ m ³) 5 0 0 1 0 <small>30 34</small>	3 <small>35</small>	5 6 . 6 2 6 <small>38</small>
		Average Daily Flow	(10 ³ m ³ /d) 5 0 0 1 5 <small>30 34</small>	3 <small>35</small>	1 . 8 2 7 <small>38</small>
		Maximum Daily Flow	(10 ³ m ³ /d) 5 0 0 2 0 <small>30 34</small>	3 <small>35</small>	3 . 4 3 5 <small>38</small>

2 6 <small>12 13</small>	BYPASS	Parameter Code	Dec.	Monthly Results	# of Occurrences
	Plant Bypass Volume	(10 ³ m ³) 5 0 0 2 6 <small>30 34</small>	3 <small>35</small>	 <small>38</small>	 <small>80</small>
	Duration	(hours) 8 0 5 6 3 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>
	Secondary Bypass Volume	(10 ³ m ³) 5 0 0 4 0 <small>30 34</small>	3 <small>35</small>	 <small>38</small>	 <small>80</small>
	Duration	(hours) 8 0 5 6 5 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>

0 3 <small>12 13</small>	RAW SEWAGE	Parameter Code	Dec.	Monthly Results	# of Samples
	BOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	0 <small>35</small>	7 5 . <small>38</small>	0 4 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	0 <small>35</small>	7 8 . <small>38</small>	0 4 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	3 4 . 8 <small>38</small>	0 4 <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	1 <small>35</small>	4 . 9 <small>38</small>	0 4 <small>80</small>

0 4 <small>12 13</small>	FINAL EFFLUENT	Parameter Code	Dec.	Monthly Results	# of Samples
	CBOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	1 <small>35</small>	3 . 0 <small>38</small>	0 4 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	1 <small>35</small>	2 . 4 <small>38</small>	0 4 <small>80</small>
	Ammonia + Ammonium	(mg/L) 0 0 0 1 9 <small>30 34</small>	2 <small>35</small>	. 3 1 <small>38</small>	0 4 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	. <small>38</small>	 <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	2 <small>35</small>	. 4 7 <small>38</small>	0 4 <small>80</small>

0 7 <small>12 13</small>	DISINFECTION	Parameter Code	Dec.	Monthly Results	# of Samples
	Chlorine Used - (kg as Cl ₂)	5 0 1 0 0 <small>30 34</small>	1 <small>35</small>	. <small>38</small>	 <small>80</small>
	Chlorine Dosage - (mg/L as Cl ₂)	8 0 4 1 0 <small>30 34</small>	1 <small>35</small>	. <small>38</small>	 <small>80</small>
	Chlorine Residual - (mg/L as Cl ₂)	8 0 4 2 0 <small>30 34</small>	1 <small>35</small>	. <small>38</small>	 <small>80</small>

Randy Clendenning 519-490-5592 Randy.Clendenning@ch2m.com

Aug-15

Municipality: Corporation of the Town of Petrolia	Operating Authority: CH2M HILL
Project Name: Petrolia WPCP	Mailing Address: 546 Maude St Box 329 Petrolia ON N0N 1R0
Mailing Address: 411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	

File No.	Works Number	Data Period	Days	Discharge Type	Update Code
4 6	1 1 0 0 0 0 5 7 9	0 9 1 5	3 0	2	R
1 2	3 11	16 19	20 21	22	80

C.P.	0 1	FLOWs	Parameter Code	Dec.	Monthly Results
12 13			(10 ³ m ³)	3	5 2 . 8 1 6
		Total Flow	5 0 0 1 0		
		Average Daily Flow	5 0 0 1 5	3	1 . 7 6 1
		Maximum Daily Flow	5 0 0 2 0	3	2 . 0 0 3
			30 34	35	38

2 6	BYPASS	Parameter Code	Dec.	Monthly Results	# of Occurrences
12 13		(10 ³ m ³)	3		. . . .
	Plant Bypass Volume	5 0 0 2 6			. . . .
	Duration	8 0 5 6 3	1		. . . .
	Secondary Bypass Volume	5 0 0 4 0	3		. . . .
	Duration	8 0 5 6 5	1		. . . .
		30 34	35	38	

0 3	RAW SEWAGE	Parameter Code	Dec.	Monthly Results	# of Samples
12 13		(mg/L)	0	1 2 9 .	. 0 5
	BOD ₅	0 0 0 0 1			. 0 5
	Suspended Solids	0 0 0 0 6	0	1 3 6 .	. 0 5
	TKN	0 0 0 2 0	2	3 4 . 4	. 0 5
	Total Phosphorus	0 0 0 3 3	1	5 . 5	. 0 5
		30 34	35	38	

0 4	FINAL EFFLUENT	Parameter Code	Dec.	Monthly Results	# of Samples
12 13		(mg/L)	1	2 . 2	. 0 5
	CBOD ₅	0 0 0 0 1			. 0 5
	Suspended Solids	0 0 0 0 6	1	2 . 7	. 0 5
	Ammonia + Ammonium	0 0 0 1 9	2	. 2 1	. 0 5
	TKN	0 0 0 2 0	2	. . . .	. . . .
	Total Phosphorus	0 0 0 3 3	2	. 7 0	. 0 5
		30 34	35	38	

0 7	DISINFECTION	Parameter Code	Dec.	Monthly Results	# of Occurrences
12 13		(kg as Cl ₂)	1	. . . .	. . . .
	Chlorine Used -	5 0 1 0 0			. . . .
	Chlorine Dosage - (mg/L as Cl ₂)	8 0 4 1 0	1		. . . .
	Chlorine Residual - (mg/L as Cl ₂)	8 0 4 2 0	1		. . . .
		30 34	35	38	

Randy Clendenning 519-490-5592 Randy.Clendenning@ch2m.com

Return completed blue form to:

Municipality: Corporation of the Town of Petrolia	Operating Authority: CH2M HILL
Project Name: Petrolia WPCP	Mailing Address: 546 Maude St Box 329 Petrolia ON N0N 1R0
Mailing Address: 411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	

File No.	Works Number	Data Period	Days	Discharge Type	Update Code
4 6 <small>1 2</small>	1 1 0 0 0 0 5 7 9 <small>3 11</small>	1 0 1 5 <small>16 19</small>	3 1 <small>20 21</small>	2 <small>22</small>	R <small>80</small>

C.P.	0 1 <small>12 13</small>	FLOWS	Parameter Code	Dec.	Monthly Results
		Total Flow	(10 ³ m ³) 5 0 0 1 0 <small>30 34</small>	3 <small>35</small>	5 0 . 4 0 0 <small>38</small>
		Average Daily Flow	(10 ³ m ³ /d) 5 0 0 1 5 <small>30 34</small>	3 <small>35</small>	1 . 6 2 6 <small>38</small>
		Maximum Daily Flow	(10 ³ m ³ /d) 5 0 0 2 0 <small>30 34</small>	3 <small>35</small>	3 . 2 4 8 <small>38</small>

2 6 <small>12 13</small>	BYPASS	Parameter Code	Dec.	Monthly Results	# of Occurrences
	Plant Bypass Volume	(10 ³ m ³) 5 0 0 2 6 <small>30 34</small>	3 <small>35</small>	 <small>38</small>	 <small>80</small>
	Duration	(hours) 8 0 5 6 3 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>
	Secondary Bypass Volume	(10 ³ m ³) 5 0 0 4 0 <small>30 34</small>	3 <small>35</small>	 <small>38</small>	 <small>80</small>
	Duration	(hours) 8 0 5 6 5 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>

0 3 <small>12 13</small>	RAW SEWAGE	Parameter Code	Dec.	Monthly Results	# of Samples
	BOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	0 <small>35</small>	1 8 6 . <small>38</small>	0 4 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	0 <small>35</small>	1 8 3 . <small>38</small>	0 4 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	3 8 . 7 <small>38</small>	0 4 <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	1 <small>35</small>	5 . 8 <small>38</small>	0 4 <small>80</small>

0 4 <small>12 13</small>	FINAL EFFLUENT	Parameter Code	Dec.	Monthly Results	# of Samples
	CBOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	1 <small>35</small>	3 . 8 <small>38</small>	0 4 <small>80</small>
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	1 <small>35</small>	5 . 2 <small>38</small>	0 4 <small>80</small>
	Ammonia + Ammonium	(mg/L) 0 0 0 1 9 <small>30 34</small>	2 <small>35</small>	. 4 2 <small>38</small>	0 4 <small>80</small>
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	. <small>38</small>	 <small>80</small>
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	2 <small>35</small>	. 8 0 <small>38</small>	0 4 <small>80</small>

0 7 <small>12 13</small>	DISINFECTION	Parameter Code	Dec.	Monthly Results	# of Samples
	Chlorine Used - (kg as Cl ₂)	5 0 1 0 0 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>
	Chlorine Dosage - (mg/L as Cl ₂)	8 0 4 1 0 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>
	Chlorine Residual - (mg/L as Cl ₂)	8 0 4 2 0 <small>30 34</small>	1 <small>35</small>	 <small>38</small>	 <small>80</small>

Randy Clendenning 519-490-5592 Randy.Clendenning@ch2m.com

Return completed blue form to:

Municipality: Corporation of the Town of Petrolia	Operating Authority: CH2M HILL
Project Name: Petrolia WPCP	Mailing Address: 546 Maude St Box 329 Petrolia ON N0N 1R0
Mailing Address: 411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	

File No.	Works Number	Data Period	Days	Discharge Type	Update Code
4 6 <small>1 2</small>	1 1 0 0 0 0 5 7 9 <small>3 11</small>	1 1 1 5 <small>16 19</small>	3 0 <small>20 21</small>	2 <small>22</small>	R <small>80</small>

C.P.	0 1 <small>12 13</small>	FLOWS	Parameter Code	Dec.	Monthly Results
		Total Flow	(10 ³ m ³) 5 0 0 1 0 <small>30 34</small>	3 <small>35</small>	4 9 . 8 6 6 <small>38</small>
		Average Daily Flow	(10 ³ m ³ /d) 5 0 0 1 5 <small>30 34</small>	3 <small>35</small>	1 6 6 2 <small>38</small>
		Maximum Daily Flow	(10 ³ m ³ /d) 5 0 0 2 0 <small>30 34</small>	3 <small>35</small>	2 . 0 7 5 <small>38</small>

2 6 <small>12 13</small>	BYPASS	Parameter Code	Dec.	Monthly Results	# of Occurrences
	Plant Bypass Volume	(10 ³ m ³) 5 0 0 2 6 <small>30 34</small>	3 <small>35</small>	. . . . . <small>38</small>	. . . . .
	Duration	(hours) 8 0 5 6 3 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . .
	Secondary Bypass Volume	(10 ³ m ³) 5 0 0 4 0 <small>30 34</small>	3 <small>35</small>	. . . . . <small>38</small>	. . . . .
	Duration	(hours) 8 0 5 6 5 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . .

0 3 <small>12 13</small>	RAW SEWAGE	Parameter Code	Dec.	Monthly Results	# of Samples
	BOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	0 <small>35</small>	8 9 <small>38</small>	. 0 4
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	0 <small>35</small>	8 1 <small>38</small>	. 0 4
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	3 3 . 8 <small>38</small>	. 0 4
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	1 <small>35</small>	5 . 3 <small>38</small>	. 0 4

0 4 <small>12 13</small>	FINAL EFFLUENT	Parameter Code	Dec.	Monthly Results	# of Samples
	CBOD ₅	(mg/L) 0 0 0 0 1 <small>30 34</small>	1 <small>35</small>	2 . 0 <small>38</small>	. 0 4
	Suspended Solids	(mg/L) 0 0 0 0 6 <small>30 34</small>	1 <small>35</small>	1 . 3 <small>38</small>	. 0 4
	Ammonia + Ammonium	(mg/L) 0 0 0 1 9 <small>30 34</small>	2 <small>35</small>	. 2 0 <small>38</small>	. 0 4
	TKN	(mg/L) 0 0 0 2 0 <small>30 34</small>	2 <small>35</small>	. . . . . <small>38</small>	. . . . .
	Total Phosphorus	(mg/L) 0 0 0 3 3 <small>30 34</small>	2 <small>35</small>	. 5 1 <small>38</small>	. 0 4

0 7 <small>12 13</small>	DISINFECTION	Parameter Code	Dec.	Monthly Results	# of Occurrences
	Chlorine Used - (kg as Cl ₂)	5 0 1 0 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . .
	Chlorine Dosage - (mg/L as Cl ₂)	8 0 4 1 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . .
	Chlorine Residual - (mg/L as Cl ₂)	8 0 4 2 0 <small>30 34</small>	1 <small>35</small>	. . . . . <small>38</small>	. . . . .

Randy Clendenning 519-490-5592 Randy.Clendenning@ch2m.com

Return completed blue form to:

Municipality: Corporation of the Town of Petrolia	Operating Authority: CH2M HILL
Project Name: Petrolia WPCP	Mailing Address: 546 Maude St Box 329 Petrolia ON N0N 1R0
Mailing Address: 411 Greenfield St. Box 1270 Petrolia ON N0N 1R0	

File No.	Works Number	Data Period	Days	Discharge Type	Update Code
4 6	1 1 0 0 0 0 5 7 9	1 2 1 5	3 1	2	R
1 2	3 11	16 19	20 21	22	80

C.P.	0 1	FLOWS	Parameter Code	Dec.	Monthly Results
12 13			5 0 0 1 0	3	5 1 . 0 8 6
		Total Flow (10 ³ m ³)	5 0 0 1 5	3	1 . 6 4 8
		Average Daily Flow (10 ³ m ³ /d)	5 0 0 2 0	3	3 . 0 7 6
		Maximum Daily Flow (10 ³ m ³ /d)	30 34	35	38

2 6	BYPASS	Parameter Code	Dec.	Monthly Results	# of Occurrences
12 13		5 0 0 2 6	3	. . . . .	. . . . .
	Plant Bypass Volume (10 ³ m ³)	8 0 5 6 3	1	. . . . .	. . . . .
	Duration (hours)	5 0 0 4 0	3	. . . . .	. . . . .
	Secondary Bypass Volume (10 ³ m ³)	8 0 5 6 5	1	. . . . .	. . . . .
	Duration (hours)	30 34	35	38	

0 3	RAW SEWAGE	Parameter Code	Dec.	Monthly Results	# of Samples
12 13		0 0 0 0 1	0	1 2 6 .	. 0 5
	BOD ₅ (mg/L)	0 0 0 0 6	0	9 3 .	. 0 5
	Suspended Solids (mg/L)	0 0 0 2 0	2	3 5 .	. 0 5
	TKN (mg/L)	0 0 0 3 3	1	4 . 7	. 0 5
	Total Phosphorus (mg/L)	30 34	35	38	

0 4	FINAL EFFLUENT	Parameter Code	Dec.	Monthly Results	# of Samples
12 13		0 0 0 0 1	1	2 . 0	. 0 5
	CBOD ₅ (mg/L)	0 0 0 0 6	1	1 . 7	. 0 5
	Suspended Solids (mg/L)	0 0 0 1 9	2	. 3 3	. 0 5
	Ammonia + Ammonium (mg/L)	0 0 0 2 0	2	. . . . .	. . . . .
	TKN (mg/L)	0 0 0 3 3	2	. 5 9	. 0 5
	Total Phosphorus (mg/L)	30 34	35	38	

0 7	DISINFECTION	Parameter Code	Dec.	Monthly Results	# of Occurrences
12 13		5 0 1 0 0	1	. . . . .	. . . . .
	Chlorine Used - (kg as Cl ₂)	8 0 4 1 0	1	. . . . .	. . . . .
	Chlorine Dosage - (mg/L as Cl ₂)	8 0 4 2 0	1	. . . . .	. . . . .
	Chlorine Residual - (mg/L as Cl ₂)	30 34	35	38	

Randy Clendenning 519-490-5592 Randy.Clendenning@ch2m.com

Return completed blue form to:

2015 AVERAGE MONTHLY ANALYTICAL RESULTS

Petrolia W.P.C.P.
 Operations Number: 11000579
 Operating Authority: O.M.I. Canada Inc.
 Municipality: Town of Petrolia

Month	FLOWS		RAW INFLUENT Monthly Average					FINAL EFFLUENT Monthly Average						Geomean Avg	
	Influent Flow m3	Avg. Flows m3/Day	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml
January	31,531	1,017	158	118	31.6	4.7	265	2.8	4.7	0.47	47	0.036	17.1	0.43	2
February	23,980	856	130	89	31.3	4.6	221	4.8	5.0	0.63	65	0.175	12.2	5.00	5
March	46,931	1,564	126	87	25.2	3.6	217	4.4	5.5	0.66	86	0.533	9.9	3.13	4
April	50,611	1,687	148	138	29.4	4.7	259	2.4	5.5	0.58	72	0.214	10.4	0.25	2
May	48,566	1,567	153	169	42.3	6.0	259	2.5	3.1	0.54	28	0.053	19	0.31	2
June	60,849	2,028	96	113	29.0	4.1	252	2.3	5.3	0.53	51	0.098	11.8	0.34	2
July	54,434	1,756	98	102	32.5	5.1	238	2.7	3.3	0.44	28	0.051	21	0.36	3
August	56,626	1,827	75	78	34.8	4.9	245	3.0	2.4	0.47	35	0.028	21.9	0.31	2
September	52,816	1,761	129	136	34.4	5.5	240	2.2	2.7	0.70	26	0.092	18.3	0.21	2
October	50,400	1,626	186	183	38.7	5.8	246	3.8	5.2	0.80	37	1.847	22.4	0.42	35
November	49,866	1,662	89	81	33.8	5.3	262	2.0	1.3	0.51	31	0.013	17.2	0.20	2
December	51,086	1,648	122	93	35.0	4.7	259	2.0	1.7	0.59	38	0.018	15.5	0.33	6

Total Flow m3	577,696
---------------	---------

Daily Average m3	1,583
------------------	-------

2015 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Numb 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: January

YEAR: 2015

Analyst : Doug Marsh

Test # Date	Aeration MLSS	RAW INFLUENT					FINAL EFFLUENT									
	mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 7-Jan	E-2816 W-3600 R-4410	114	74	30.3	4.20	288	4.0	3.0	1.04	66	0.097	15.9	0.38	2	0.86	7.27
2 14-Jan	E-3648 W-2992 R-4490	155	162	34.5	4.30	254	2.8	2.5	0.29	42	0.015	16.5	0.14	2	0.07	7.04
3 21-Jan	E-2832 W3292 R-4730	174	140	31.4	5.20	254	1.5	3.8	0.39	38	0.015	17.5	0.26	2	0.26	7.21
4 28-Jan	E-2052 W-2660 R-3572	188	96	30.3	5.00	262	2.9	9.5	0.16	42	0.018	18.4	0.95	2	0.02	6.77
5																
Number of Tests		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Monthly Average:		158	118	31.6	4.7	265	2.8	4.7	0.47	47	0.036	17.1	0.43	2	0.30	7.07

Comments:

Jan 7 - Total Phos was a bit high due to the Alum line frozen. Extreme cold temps this year.
 Alum line has heat trace, but put a heater in the Alum channel for extra caution

2015 Weekly Analytical and Monthly Average Results

Petrolia W.P.C.P.
Operations Numb 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: February

YEAR: 2015

Analyst : Doug Marsh

Test # Date	Aeration MLSS	RAW INFLUENT					FINAL EFFLUENT									
	mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 4-Feb	E-1836 W-2744 R-3812	132	106	35.0	5.10	228	2.0	3.5	0.52	28	0.034	14.5	1.18	2	0.30	6.97
2 11-Feb	E-1968 W-2764 R-2216	130	102	33.5	4.6	222	2.0	2.0	0.58	40	0.031	16.3	0.50	2	0.34	7.31
3 18-Feb	E-984 W-700 K-frozen line	112	70	29.6	4.5	214	10.0	8.5	0.76	68	0.130	12.2	7.70	56	0.46	7.24
4 25-Feb	E-1472 W-2060 R-3572	146	76	27.0	4.1	218	5.2	5.8	0.65	122	0.104	5.9	10.60	2	0.36	7.50
5																
Number of Tests		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Monthly Average:		130	89	31.3	4.6	221	4.8	5.0	0.63	65	0.075	12.2	5.00	5	0.37	7.26

Comments:

Ammonia levels increased due to the RAS line freezing. Not a sufficient amount of bugs going to aeration and extreme cold weather

The line was thawed and solids starting to return to aeration tanks

The E-Coli sample for Feb 25 has exceeded age limit: courier service delivered late

2015 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

MONTH: March

Petrolia W.P.C.P.

Operations Number: 110000579

YEAR: 2015

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

Analyst : Doug Marsh

Municipality: Town of Petrolia

Test # Date	Aeraton MLSS RAW INFLUENT						FINAL EFFLUENT									
	mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 4-Mar	E-1824 W-2768 R-2820	135	152	32.7	5.3	226	3.7	5.8	0.73	104	0.648	10.3	4.65	2	0.38	7.87
2 11-Mar	E-1748 W-2760 R3460	104	56	20.0	2.9	220	4.1	6.3	0.80	76	0.840	11.4	6.10	2	0.58	7.38
3 18-Mar	E-2096 W-2060 R-3776	86	48	24.6	2.7	206	4.0	4.0	0.48	92	0.31	7.30	0.37	10	0.35	7.58
4 25-Mar	E-1932 W-2576 R-3710	178	92	23.6	3.6	216	5.8	6.0	0.64	70	0.33	10.5	1.39	8	0.51	7.24
5																
Number of Tests		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Monthly Ave.:		126	87	25.2	3.6	217	4.4	5.5	0.66	86	0.533	9.9	3.13	4	0.46	7.52

Comments:

2015 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: April

YEAR: 2015

Analyst : Doug Marsh

Test # Date	Aeration MLSS	RAW INFLUENT					FINAL EFFLUENT									
	mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 1-Apr	E-2168 W-2376 R-4532	224	218	16.6	4.3	240	3.8	5.5	0.72	92	0.310	10.7	1.26	2	0.64	7.17
2 8-Apr	E-2168 W-2640 R-3500	112	74	31.0	4.4	232	2.0	7.8	0.82	64	0.156	10.7	0.13	2	0.58	7.14
3 15-Apr	E-1800 W-2256 R-to thick	105	88	32.0	3.8	258	2.0	4.8	0.40	60	0.320	10.0	0.71	2	0.26	7.10
4 22-Apr	E-2476 W-2836 R-vac pump	112	100	32.9	4.9	272	2.0	4.8	0.46	74	0.210	8.4	0.15	2	0.34	7.04
5 29-Apr	E-2152 W-2168 R-to thick	187	210	34.5	6.1	292	2.0	4.8	0.49	70	0.076	12.4	0.35	2	0.34	7.01
Number of Tests		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Monthly Average:		148	138	29.4	4.7	259	2.4	5.5	0.58	72	0.214	10.4	0.52	2	0.43	7.09

Comments:

2015 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Number: 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: May

YEAR: 2015

Analyst : Doug Marsh

Test # Date	Aeration MLSS	RAW INFLUENT					FINAL EFFLUENT									
	mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 6-May	E-2512 W-2912 R-4634	128	170	36.0	5.9	272	2.0	2.5	0.72	36	0.016	22.3	0.35	2	0.54	7.33
2 13-May	E-2140 W-2364 R-2648	272	338	43.1	7.1	274	2.0	3.3	0.79	40	0.101	18.3	0.59	2	0.67	7.20
3 20-May	E-1880 W-2828 R-3260	110	60	40.1	4.9	238	4.0	3.0	0.34	34	0.017	20.2	0.02	2	0.14	7.40
4 27-May	E-2032 W-2320 R-3008	100	106	49.9	5.9	250	2.0	3.5	0.30	28	0.053	15.1	0.28	2	0.11	7.38
5																
Number of Tests		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Monthly Average:		153	169	42.3	6.0	259	2.5	3.1	0.54	35	0.047	19.0	0.31	2	0.37	7.33

Comments:

2015 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Numb 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: June

YEAR: 2015

Analyst : Doug Marsh

Test # Date	Aeration MLSS	RAW INFLUENT					FINAL EFFLUENT									
	mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 3-Jun	E-2060 W-2460 R-2840	94	84	35.8	4.5	242	3.0	5.0	0.35	52	0.019	15.7	0.08	2	0.38	7.29
2 10-Jun	E-1892 W-2508 R-5940	131	130	21.4	3.3	254	2.0	6.3	0.65	38	0.188	14.4	0.61	2	0.48	7.24
3 17-Jun	E-2028 W-2712 R-4368	55	56	32.4	4.6	252	2.0	5.0	0.58	50	0.121	1.3	0.47	2	0.53	7.84
4 24-Jun	E-2376 W-2660 R-3428	105	182	26.3	4.0	258	2.0	5.0	0.53	62	0.065	15.6	0.20	2	0.35	7.85
5																
Number of Tests		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Monthly Average:		96	113	29.0	4.1	252	2.3	5.3	0.53	51	0.098	11.8	0.34	2	0.44	7.56

Comments:

2015 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Number 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: July

YEAR: 2015

Analyst : Doug Marsh

Test # Date	Aeration MLSS	RAW INFLUENT					FINAL EFFLUENT									
	mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 2-Jul	E-1776 W-2120 R-3960	82	104	31.0	4.7	274	2.0	2.5	0.29	50	0.045	13.6	0.14	2	0.20	7.21
2 8-Jul	E-1768 W-2104 R-2920	114	110	37.3	5.8	252	3.0	3.0	0.61	26	0.051	24.3	0.30	2	0.47	7.18
3 15-Jul	E-1728 W-2036 R3008	164	182	25.9	4.7	230	1.5	2.3	0.34	24	0.043	20.6	0.14	4	0.54	7.14
4 22-Jul	E-1688 W-1844 R-2356	65	46	35.8	5.5	216	3.0	2.5	0.57	20	0.057	21.1	0.66	2	0.34	7.16
5 29-Jul	E-1728 W-1804 R-2172	66	68	32.7	4.9	220	4.0	6.0	0.38	18	0.059	25.2	0.54	7	0.47	6.80
Number of Tests		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Monthly Average:		98	102	32.5	5.1	238	2.7	3.3	0.44	28	0.051	21.0	0.36	3	0.40	7.10

Comments:

2015 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Number 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: August

YEAR: 2015

Analyst : Doug Marsh

Test # Date	Aeration MLSS	RAW INFLUENT					FINAL EFFLUENT										
	mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH	
1 5-Aug	E-1792 W-1808 R-2400	72	70	33.8	4.50	220	5.0	1.8	0.27	34	0.009	16.9	0.15	2	0.11	7.15	
2 12-Aug	E-1920 W-3008 R-2096	72	46	35.4	5.20	250	3.0	3.5	0.29	16	0.028	26.4	0.30	2	0.16	6.74	
3 19-Aug	E-2144 W-2168 R-3632	102	120	37.3	5.30	264	2.0	2.8	0.68	56	0.052	20.8	0.46	2	0.57	7.60	
4 26-Aug	E-1756 W-2040 R-2680	52	76	32.6	4.70	244	2.0	1.3	0.64	34	0.021	23.5	0.34	2	0.52	7.33	
5																	
Number of Tests		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Monthly Average:		75	78	34.8	4.9	245	3.0	2.4	0.47	35	0.028	21.9	0.31	2	0.34	7.21	

Comments:

2015 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Number 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: September

YEAR: 2015

Analyst : Doug Marsh

Test # Date	Aeration MLSS	RAW INFLUENT					FINAL EFFLUENT									
	mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 2-Sep	E-1736 W-1940 R-2856	78	46	39.7	5.0	244	2.0	2.8	0.80	48	0.07	16.3	0.24	2	0.69	7.54
2 9-Sep	E-1428 W-2236 R-2496	87	52	32.2	5.0	236	3.0	2.0	0.98	34	0.03	15.0	0.09	2	0.89	7.39
3 16-Sep	E-2080 W-2256 R-2876	105	162	32.5	5.9	244	2.0	2.0	0.55	18	0.019	17.9	0.29	2	0.56	6.80
4 23-Sep	E-2184 W-2428 R-2892	124	138	25.0	5.5	214	2.0	1.3	0.60	18	0.116	18.6	0.20	2	0.64	6.74
5 30-Sep	E-1892 W-2592 R-3372	253	282	42.2	6.0	264	2.0	5.3	0.56	10	0.227	23.7	0.25	2	0.41	6.55
Number of Tests		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Monthly Average:		129	136	34.3	5.5	240	2.2	2.7	0.70	26	0.092	18.3	0.21	2	0.64	7.00

Comments:

2015 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Number 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: October

YEAR: 2015

Analyst : Doug Marsh

Test # Date	Aeration MLSS	RAW INFLUENT					FINAL EFFLUENT									
	mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 7-Oct	E-2084 W-2240 R-3420	245	256	38.8	6.50	246	2.0	3.8	0.71	32	1.650	25.3	0.13	2	0.57	7.14
2 14-Oct	E-1888 W-2072 R-3020	113	72	35.4	4.70	230	5.0	8.0	0.75	28	2.550	23.5	0.34	30	0.55	7.03
3 21-Oct	E-2808 W-3048 R-2908	227	248	39.6	6.30	252	5.0	2.8	1.10	72	3.150	19.2	1.01	4	0.55	7.75
4 28-Oct	E-4346 W-2076 R-2044	160	156	40.9	5.70	256	3.0	6.0	0.63	16	0.039	21.5	0.21	6400	0.67	7.11
5																
Number of Tests		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Monthly Average:		186	183	38.7	5.8	246	3.8	5.2	0.80	37	1.847	22.4	0.42	35	0.59	7.26

Comments:
 Oct 28th sample is high in e-coli and ammonia as there were heavy rains when I collected sample. Surge tank was overflowing, Final effluent was a bit cloudy

2015 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Numb 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: November

YEAR: 2015

Analyst : Doug Marsh

Test # Date	Aeration RAW INFLUENT						FINAL EFFLUENT									
	MLSS mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 4-Nov	E-2148 W-2164 R-3360	108	90	42.8	6.6	276	2.0	2.0	0.47	36	0.013	18.6	0.17	2	0.47	7.08
2 12-Nov	E-2016 W-2284 R-2704	118	92	36.4	4.8	252	2.0	1.0	0.48	28	0.009	16.2	0.14	4	0.33	7.48
3 18-Nov	E-2052 W-2172 R-2868	76	50	33.0	4.8	248	2.0	1.0	0.53	18	0.007	15.7	0.12	2	0.53	6.98
4 25-Nov	E-2096 W-2364 R-3448	55	92	22.8	5.0	272	2.0	1.3	0.56	42	0.021	18.2	0.36	2	0.44	7.14
5																
Number of Tests		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Monthly Average:		89	81	33.8	5.3	262	2.0	1.3	0.51	31	0.013	17.2	0.20	2	0.44	7.17

Comments:

2015 WEEKLY ANALYTICAL and MONTHLY AVERAGE RESULTS

Petrolia W.P.C.P.
Operations Numbe 110000579
Operating Authority: O.M.I. Canada Inc.
Municipality: Town of Petrolia

MONTH: December

YEAR: 2015

Analyst : Doug Marsh

Test # Date	Aeration MLSS	RAW INFLUENT					FINAL EFFLUENT									
	mg/L	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH
1 2-Dec	E-2104 W-2252 R-3036	154	150	36.1	5.4	262	2.0	1.3	0.57	38	0.005	12.5	0.01	2	0.49	7.13
2 9-Dec	E-2128 W-2268 R-3128	137	88	43.4	5.0	270	2.0	1.5	0.53	34	0.013	18.1	0.23	2	0.46	7.00
3 16-Dec	E-2240 W-2512 R-3160	109	84	36.3	4.8	254	2.0	1.8	0.73	28	0.039	14.7	1.09	2	0.64	6.86
4 23-Dec	E-2516 W-2764 R-3028	131	84	32.8	5.3	246	2.0	1.8	0.52	32	0.021	16.8	0.16	2	0.42	7.12
5 30-Dec	E-2672 W-3076 R-4276	77	58	26.2	3.0	264	2.0	2.3	0.61	60	0.013	15.6	0.17	20	0.52	7.55
Number of Tests		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Monthly Average:		122	93	35.0	4.7	259	2.0	1.7	0.59	38	0.018	15.5	0.33	6	0.51	7.13

Comments:

Dec 16 sample was high for Ammonia and Total Phosphorous due to final sampler had tripped - sample was taken from effluent channel
 Dec 30 e-coli was a little higher than usual due to heavy rains & freezing rain all thru the night on Dec 29

LAGOON DATA**LOCATION:**

Petrolia East

YEAR:

2015

	EAST LAGOON EFFLUENT								
Date	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH -log[H] ⁺
Mar-19-15 Pre-discharge	5.0	9.0	0.26	55	0.080	3.1	0.60	36	7.75
Mar-25-15 Pre-discharge	4.0	3.5	0.32	60	0.012	0.0	0.91	2	7.80
March Monthly Average	4.5	6.3	0.29	58	0.046	1.6	0.76	19	7.78

Comments:

LAGOON DATA**LOCATION:**

Petrolia East

YEAR:

2015

EAST LAGOON EFFLUENT									
Date	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH -log[H] ⁺
8-Apr Start Discharge	18.0	9.0	0.88	152	0.150	6.1	0.30	4	8.29
15-Apr Discharge	19.0	20.0	1.04	175	0.120	2.2	0.60	2	8.39
April Monthly Average	18.5	14.5	0.96	164	0.135	4.2	0.45	3	8.34

Comments:

East Lagoon - April 17/15 stopped the siphon discharge to bear Creek

April 17th - started two(2) siphons from "East" lagoon into "West" lagoon

LAGOON DATA**LOCATION:**

Petrolia West

YEAR:

2015

	WEST LAGOON EFFLUENT									
Date	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺
Mar-19-15 Pre-discharge	5	6.0	0.46	95	0.060	0.95	1.20	4	0.41	7.94
Mar-25-15 Pre-discharge	8.0	7.8	0.34	42	0.001	0.00	0.05	2	0.18	7.50
March Monthly Average	7	6.9	0.40	69	0.031	0.48	0.63	3	0.30	7.72

Comments:

LAGOON DATA**LOCATION:**

Petrolia West

YEAR:

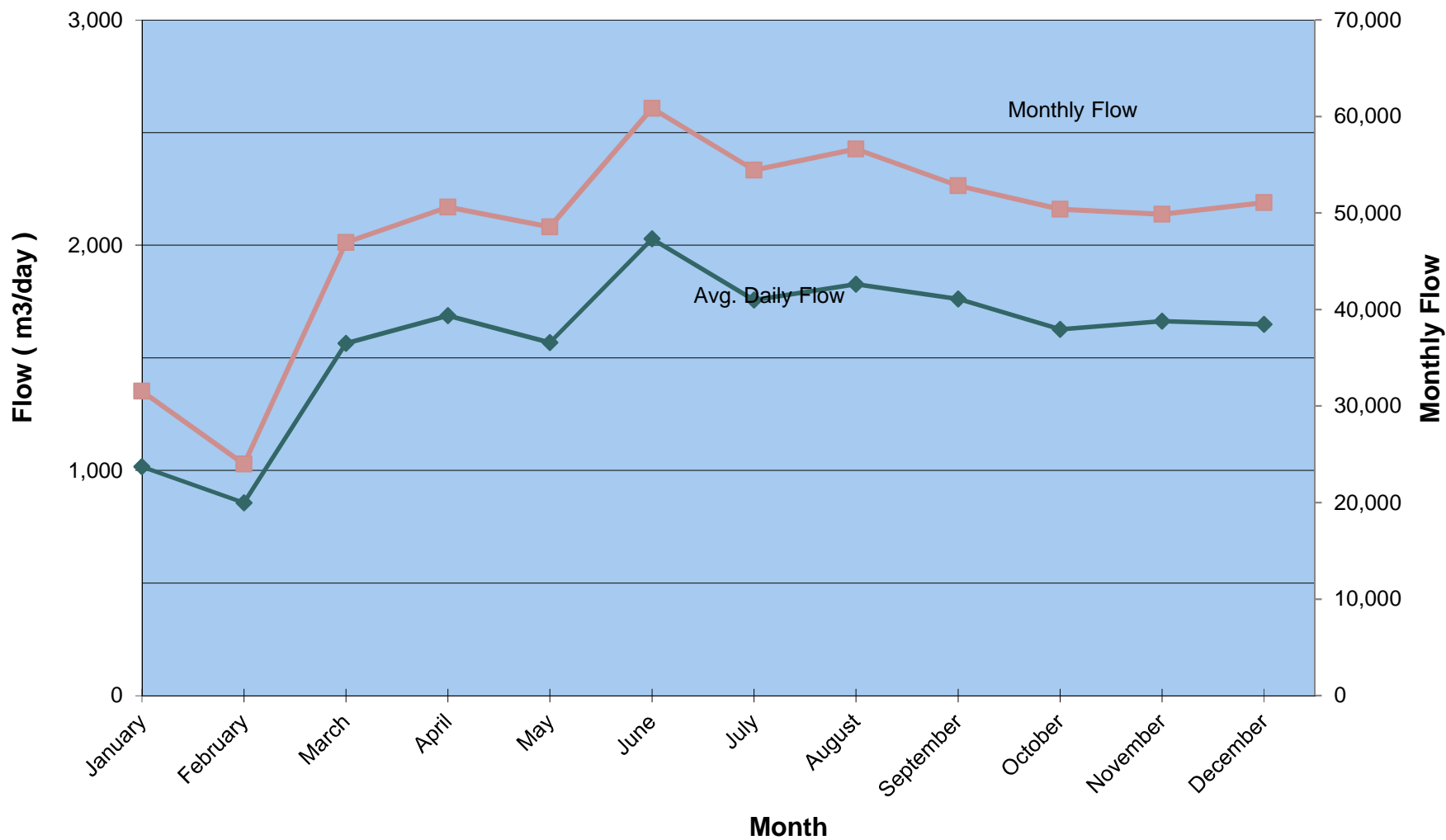
2015

WEST LAGOON EFFLUENT									
Date	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Alkalinity CaCO3 mg/L	Nitrite NO2 mg/L	Nitrate NO3 mg/L	Ammonia NH3 mg/L	E-Coli Per 100ml	pH -log[H] ⁺
1-Apr Start Discharge	8	8.0	0.18	47	0.030	0.06	0.10	2	7.50
8-Apr Discharge	18	9.0	0.88	152	0.150	6.12	0.30	4	8.29
15-Apr Stop Discharge	16	69.0	1.01	150	0.120	2.20	0.50	2	7.74
April Monthly Average	14	28.7	0.69	116	0.100	2.79	0.30	3	7.84

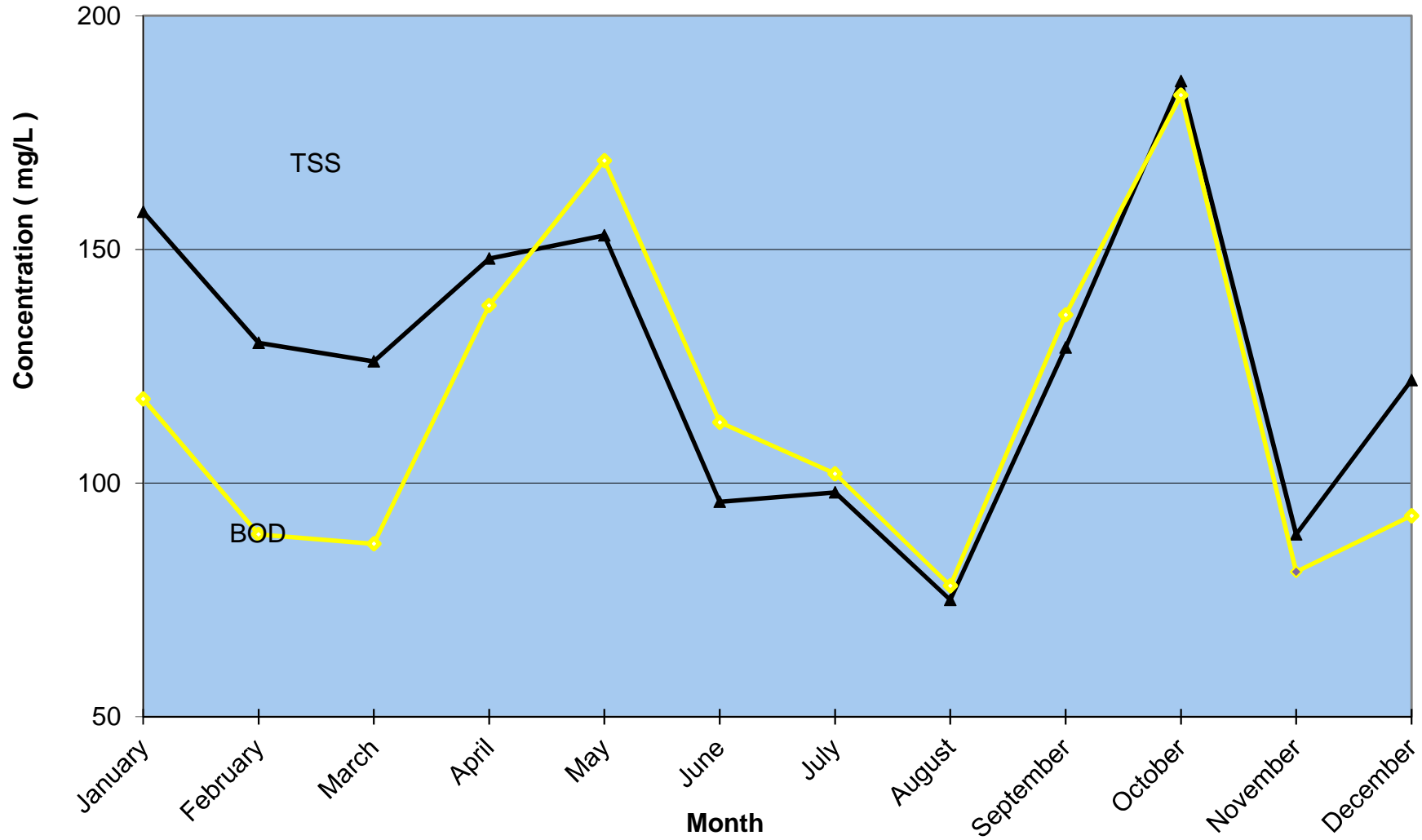
Comments:

Discharge was stopped on April 15th upon receiving April 8th results of CBOD5 above ECA discharge parameters

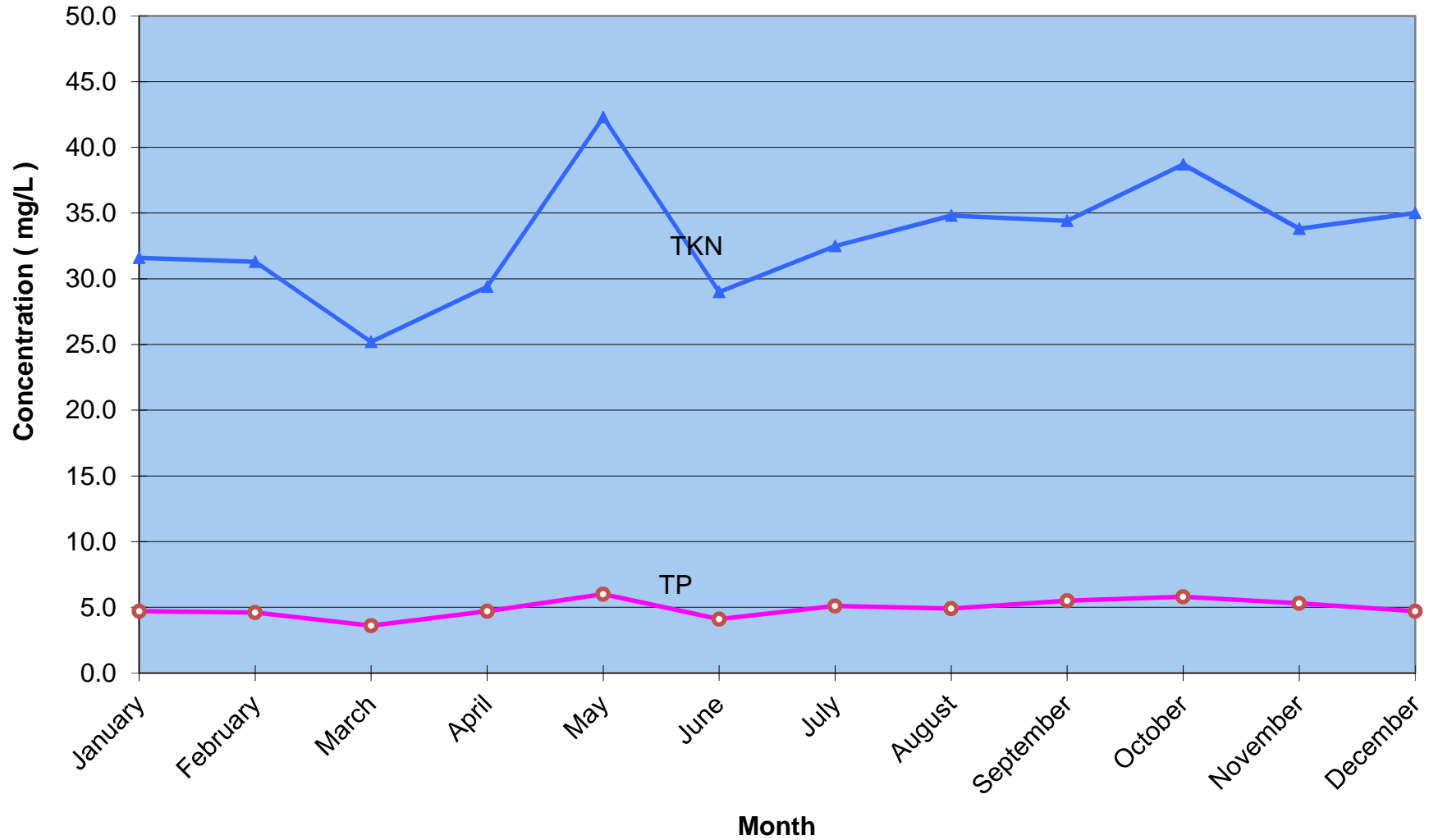
Petrolia W.P.C.P. 2015 Influent Flows



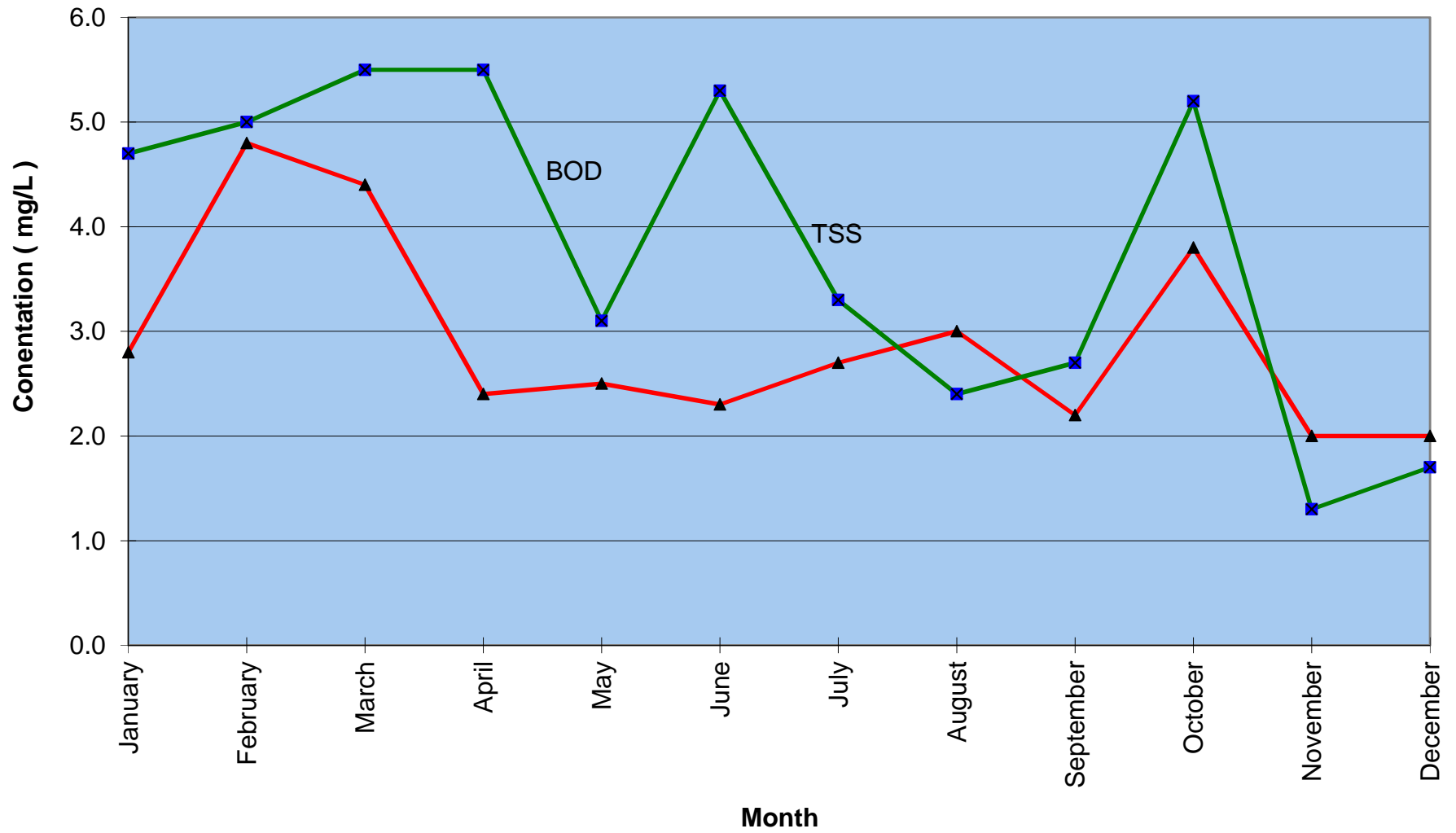
Petrolia W.P.C.P. 2015 Influent BOD and T.S.S.



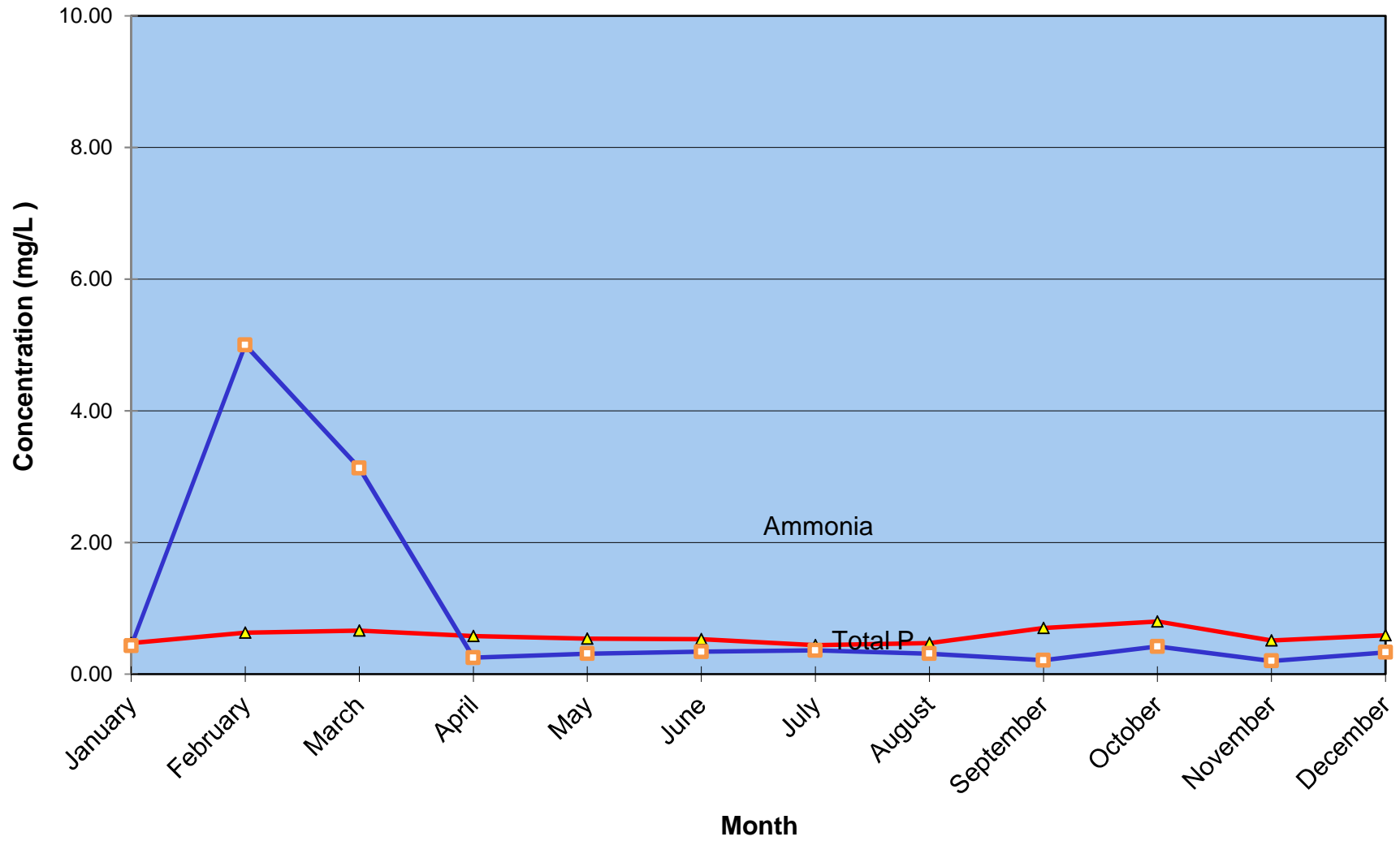
Petrolia W.P.C.P. 2015 Influent TKN and Total P



Petrolia W.P.C.P. 2015 Effluent BOD and TSS



Petrolia W.P.C.P. 2015 Effluent Total P & Ammonia



Petrolia WPCP Flow Diversion to Lagoons



Year: 2015 Month: January

Date	East	West	Description of Flow
1		10.39	Infiltration
2			Waste from Digesters
3		14.16	Infiltration
4		30.61	Infiltration / Heavy rains all thru the day
5		15.52	Infiltration
6	578.79		
7		10.08	Infiltration
8		28.26	
9		7.92	Infiltration
10		7.49	Infiltration
11		44.15	Infiltration
12		53.71	Infiltration
13		3.46	Infiltration
14		6.92	Infiltration
15		8.08	Infiltration
16	214		Wasting from Digesters
17		6.85	Infiltration
18		82.04	Infiltration
19	237		Wasting from Digesters
20		6.11	Infiltration
21		78.26	Divert flow - lower clarifier to plug scum chamber
22	526.85		clean foam from clarifier inlet channel, weirs, aeration effluent channel, contact chamber
23		11.37	Infiltration
24		98.87	Digester overflow
25		89.01	Digester Overflow
26	187.92		Flushec foam from alum dosing channel- cleaned weirs
27		8.31	Infiltration
28	551.06		Retrieve walkway grading from filter influent channel, working on filter piping (cracked-need parts)
29		7.77	Infiltration
30	132.01		Wasting from Digesters
31		8.63	Infiltration
Total	2427.6	637.97	

Petrolia WPCP Flow Diversion to Lagoons

Year: 2015 Month: February



Date	East	West	Description of Flow
1		6.76	Infiltration
2	146.39		Wasting from Digesters
3		4.75	Infiltration
4		5.22	Infiltration
5		2.66	Infiltration
6	284.81		Wasting from Digesters
7		7.26	Infiltration
8		5.38	Infiltration
9		4.09	Infiltration
10	255.61		Wasting from Digesters
11		439.76	False reading
12		138.21	False reading - Condensation ice on transducer - washed off with warm water
13	226.82		Wasting from Digesters
14		5.82	Infiltration
15		5.19	Infiltration
16		2.71	Infiltration
17	320.63		Flood & clean clarifiers, wiers, contact chamber
18	490.23		Wasting from Digesters
19		94.73	False reading
20		37.71	False reading - Rags under transducer - removed rags
21		5.00	Infiltration
22		4.61	Infiltration
23		2.41	Infiltration
24		8191.27	False reading
25		2443.03	False reading - Everything covered with snow & chamber also full of snow / Shoveled & melted snow with hot water
26		3.98	Infiltration
27		7.51	Infiltration
28		6.39	Infiltration
29			
30			
31			
Total	1724.49	11424.45	

Flow recorder changes over at midnighnt / Flow is read the following morning

Petrolia WPCP Flow Diversion to Lagoons



Year: 2015 Month: March

Date	East	West	Description of Flow
1		9.79	Infiltration
2		17.35	Infiltration, warm & sunny, snow melting
3		21.60	Benko - cleaned Main pump station, only one load
4	194.26		Wasting from Digesters
5		2.13	Infiltration
6		4.29	Infiltration
7		4.61	Infiltration
8		3.89	Infiltration
9		5.10	Infiltration - warm weather, snow starting to melt
10		7.96	Infiltration
11		17.06	Infiltration - cleaned garage floor, this drain flows to lagoon
12		51.42	Cleaning filter Influent channel
13		430.84	cleaned aeration channel, alum channel. Clarifiers, weirs and Contact chamber
14		126.03	false reading - residual foam from cleaning skewing the transducer, cleaned & flushed off transducer
15		37.30	Infiltration - very warm, melting snow
16		188.60	Infiltration - ditch outside plant is overflowing, going into M.H. at the gate entrance
17		41.84	Infiltration - also snow melting around the lagoon chamber and running in to it
18		28.60	Infiltration - warming up, snow melting
19		22.62	Infiltration
20	249.97		Wasting from Digesters
21		32.75	Infiltration
22		22.27	Infiltration
23	241.94		Wasting from Digesters
24		19.49	Infiltration
25		27.64	Infiltration, rainy day
26		25.63	Infiltration, flood & skim filter influent channel
27		18.58	Infiltration
28		14.35	Infiltration
29		46.40	Infiltration
30	413.47		Wasting to digeaters, clean clarifiers, weirs, contact chamber
Total	1099.64	1228.14	

Flow recorder changes over at midninght / Flow is read the following morning

Petrolia WPCP Flow Diversion to Lagoons



Year: 2015 Month: April

Date	East	West	Description of Flow
1	974.46		Filter OOS - opened "West" Lagoon Discharge valve
2	816.66		Filter OOS - repaired coupling, faceplate & put back in service
3	22.78		Infiltration
4	16.78		Infiltration
5	18.74		Infiltration
6	318.94		Filter OOS
7	310.12		Filter OOS - coupling loose - repaired & put back in service
8		20.70	Infiltration - Rainy day
9		1861.22	Infiltration - Heavy rains, thunderstorms, power failures, surge tank overflowing to lagoon
10		2697.80	False Reading, large pieces of grease under transducer
11		17.45	Infiltration
12		11.65	Infiltration
13		14.76	Infiltration
14		12.98	Infiltration
15		10.35	Infiltration
16		9.18	Infiltration
17		856.22	Clean surge tank, filter influent channel, filter walls, backwash pit
18		12.94	Infiltration
19		11.20	Infiltration
20	272.20		Wasting from Digesters, rains throughout the day
21		15.42	Infiltration - rains throughout the night
22		13.66	Infiltration
23	235.24		Wasting from Digesters
24	184.90		Wasting from Digesters
25		14.56	Infiltration
26		16.74	Infiltration
27		13.92	Infiltration
28		11.52	Infiltration
29	390.66		Clean Clarifiers, weirs, contact chamber
30		8.75	Infiltration
Total	3561.48	5631.02	

Flow recorder changes over at midnight / Flow is read the following morning

Petrolia WPCP Flow Diversion to Lagoons

Year: 2015 Month: May



Date	East	West	Description of Flow
1	109.6		Wasting from Digesters
2		6.18	Infiltration
3		41.84	Skim Filter Influent channel
4	696		Wasting from digesters, clean clarifiers, weirs
5	340.9		Wasting from digesters, clean clarifiers, weirs, contact chamber
6		128.78	Clean filter Influent channel, filter walls, filter ends
7		5.65	Infiltration
8		5.82	Infiltration
9		5.71	Infiltration
10		64.36	Infiltration, heavy rains thru the night
11		1145.23	False reading - grease under miltronics (cleaned) grease sometimes gets pushed thru after heavy rain and high flows
12	414.87		Wasting from Digesters
13		10.11	Infiltration
14		9.27	Infiltration
15	129.83		Wasting from Digesters
16		11.73	Infiltration
17		12.64	Infiltration
18		8.21	Infiltration
19		6.43	Infiltration
20		58.33	Filter Backwash pump tripped
21		5.14	Infiltration
22	130.27		Wasting from Digesters
23		8.63	Infiltration
24		7.19	Infiltration
25	771.00		Cleaning clarifiers, weirs, contact chamber, Flushing bar screens & Influent channel
26		5.58	Infiltration
27		65.04	Infiltration, heavy rains & thunder storms
28	1366.20		Flushing and cleaning foam from alum channel & clean clarifiers, weirs, contact chamber
29	1303.18		Saurs on site - cleaning surge tank, filter influent channel and filter bed ends, clean filter hood
30		11.23	Infiltration
31		10.72	Infiltration
Total	5261.85	1633.82	

Flow recorder changes over at midnight / Flow is read the following morning

May 28, 29 - These are False readings due to sludge under transducer

Petrolia WPCP Flow Diversion to Lagoons

Year: 2015 Month: June



Date	East	West	Description of Flow
1		212.17	repairing surge tank "flow box"
2		14.08	Infiltration
3		33.41	Infiltration
4		11.20	Infiltration
5	110.31		Wasting from Digesters
6		6.34	Infiltration
7		10.01	Infiltration
8	561.86		Wasting from Digesters, clean clarifiers, contact chamber, weirs
9		21.16	Infiltration
10		98.73	Infiltration - heavy rains thru night and in morning
11		26.08	Infiltration
12		10.65	Infiltration
13		19.93	Infiltration - rains
14		18.91	Infiltration - rains
15		9.75	Infiltration
16		5.33	Infiltration
17		4.73	Infiltration
18		6.55	Infiltration
19		107.31	Infiltration - heavy rains and thunder storms
20	285.13		Wasting from Digesters
21		13.33	Infiltration
22		42.88	Infiltration, rains in afternoon
23		10.57	Infiltration
24		335.41	Infiltration, heavy rain storms, surge tank overflowing - Bear creek is full
25	795.95		Cleaning clarifiers, weirs, contact chamber - CT Environmental cleaning plant grit line & chamber & Barrets lane wet-well
26	41.62		Wasting from Digesters
27		467.90	Infiltration, heavy rain storms all day surge tank overflowing - Bear creek is full
28		610.76	Infiltration, heavy rain storms all day surge tank overflowing - Bear creek is full
29	231.36		Wasting from Digesters
30		915.92	Drained / cleaned / inspected "South" clarifier, clean clarifiers weirs, contact chamber
31			
Total	2026.23	3013.11	

Flow recorder changes over at midnight / Flow is read the following morning

Petrolia WPCP Flow Diversion to Lagoons

Year: 2015 Month: July



Date	East	West	Description of Flow
1		8.82	Infiltration
2		8.13	Infiltration
3	141.5		Wasting to lagoon
4		5.17	Infiltration
5		4.04	Infiltration
6	487.92		Wasting to lagoon, clean clarifiers, weirs, contact chamber
7		9.03	Infiltration
8		6.60	Infiltration
9		5.54	Infiltration
10	270.1		Clean alum channel & contact chamber
11		6.50	Infiltration
12		5.43	Infiltration
13		23.66	Infiltration - rain and thunderstorms overnight
14		18.39	Infiltration
15	128.94		Cleaned clarifiers & weirs
16		9.63	Infiltration
17	325.58		Flood and clean filter influent channel, clean filter walls, filtre room walls
18		5.98	Infiltration
19		35.68	Infiltration - rain storm in morning
20	89.71		Wasting to lagoon
21		10.43	Infiltration
22		9.60	Infiltration
23		7.04	Infiltration
24		5.56	Infiltration
25		4.02	Infiltration
26		5.64	Infiltration
27	488.28		Flood and clean clarifiers, weirs, contact chamber
28	78.79		CT on site & cleaned main pump station
29		7.16	Infiltration
30	274.23		Wasting to lagoon
31	324.63		Wasting to lagoon - clean clarifiers, weirs, contact chamber
Total	2609.68	202.05	

Flow recorder changes over at midninght / Flow is read the following morning

Petrolia WPCP Flow Diversion to Lagoons

Year: 2015 Month: August



Date	East	West	Description of Flow
1		4.41	Infiltration
2		27.73	Infiltration
3		137.42	Infiltration
4	171.99		Wasting to Lagoon
5		7.66	Infiltration
6	61.25		Wasting to Lagoon
7		201.46	False reading - sludge under transducer
8		8.93	Infiltration
9		7.84	Infiltration
10		6.53	Infiltration
11	55.23		Wasting to Lagoon
12	72.07		Wasting to Lagoon
13	190.61		Clean clarifiers, weirs, contact chamber
14	118.6		Flood and clean filter influent channel
15		139.10	Infiltration
16		17.70	Infiltration
17		9.11	Infiltration
18	184.55		clean clarifiers, weirs, contact chamber
19		6.12	Infiltration
20	169.14		clean alum channel & contact chamber
21		9.98	Infiltration
22		5.20	Infiltration
23		8.97	Infiltration
24	230.17		Wasting to Lagoon
25		6.43	Infiltration
26		5.29	Infiltration
27	133.12		clean clarifiers, weirs, surge tank, filter influent channel. Filter walls, contact chamber
28	116.27		Dump 6 inches from each clarifiers
29		8.73	Infiltration
30		8.01	Infiltration
31	144.10		Wasting to Lagoon
Total	1647.1	626.62	

Flow recorder changes over at midnighnt / Flow is read the following morning

Petrolia WPCP Flow Diversion to Lagoons

Year: 2015 Month: September



Date	East	West	Description of Flow
1	417.2		clean clarifiers, weirs, contact chamber
2	356.38		clean aeration effluent channels and aeration influent chamber
3		8.70	Infiltration
4		19.86	Infiltration
5		10.95	Infiltration
6		3.83	Infiltration
7		4.15	Infiltration
8		5.57	Infiltration
9	330.22		clean clarifiers, weirs, contact chamber
10		4.73	Infiltration
11	166.29		Wasting to lagoon
12		5.39	Infiltration
13		4.23	Infiltration
14		3.85	Infiltration
15		4.22	Infiltration
16	314.03		clean clarifiers, weirs, contact chamber
17		4.35	Infiltration
18	36.63		Waste to lagoon
19		5.50	Infiltration
20		3.78	Infiltration
21		3.84	Infiltration
22	535.12		clean clarifiers, weirs, contact chamber, Alum channel, Influent chamber with step-screen
23	543.67		clean surge tank, filter influent channel, backwash chamber
24		3.80	Infiltration
25		3.69	Infiltration
26		4.25	Infiltration
27		9.53	Infiltration
28	224.45		Waste to lagoon
29		5.53	Infiltration
30		4.02	Infiltration
31			
Total	2923.99	123.77	

Flow recorder changes over at midnighnt / Flow is read the following morning

Petrolia WPCP Flow Diversion to Lagoons

Year: 2015 Month: October



Date	East	West	Description of Flow
1	259.58		Wasting to Lagoon from digesters
2		7.34	Infiltration
3		7.68	Infiltration
4	233.9		Wasting to Lagoon from digesters, cleaning clarifiers, weirs, contact chamber
5		15.21	Infiltration
6		7.17	Infiltration
7		15.95	Infiltration
8	509.71		Wasting to Lagoon from digesters
9		79.36	Infiltration
10		3.47	Infiltration
11		4.02	Infiltration
12		77.04	Infiltration
13	288.69		Wasting to Lagoon from digesters
14		4.39	Infiltration
15		8.93	Infiltration
16	279.72		Wasting to Lagoon from digesters
17		5.57	Infiltration
18		4.48	Infiltration
19	623.19		wasting to lagoons, cleaned clarifer, weirs, alum channel, contact chamber
20		116.75	False reading - cleaned transducer
21	53.89		
22		39.18	False reading
23		43.09	False reading
24		36.77	False reading
25		12.88	False reading
26	293.40		waste from digesters
27		8.07	Infiltration
28	375.44		Heavy rains through the night and today, cleaning filter influent channel
29		9.29	Infiltration
30	271.84		waste to lagoons & rinsed lagoon influent chamber with contact chamber water
31		10.51	Infiltration
Total	3189.36	517.15	

Flow recorder changes over at midnighnt / Flow is read the following morning

Petrolia WPCP Flow Diversion to Lagoons

Year: 2015 Month: November



Date	East	West	Description of Flow
1		12.41	Infiltration - rained yesterday
2	319.7		Wasting to lagoon
3		5.67	Infiltration
4	361.69		clean clarifiers, weirs, contact chamber, alum channel, aeration effluent channel
5		9.39	Infiltration
6	284.52		Wasting to lagoon
7		8.62	Infiltration
8		5.48	Infiltration
9	299		Wasting to lagoon
10		8.33	Infiltration
11		6.62	Infiltration
12	552.02		Plant shutdown for electrical hookup, cleaned surge tank, filter influent channel
13	290.29		Wasting to lagoon
14		7.23	Infiltration
15		7.30	Infiltration
16		9.35	Infiltration
17		20.71	Infiltration, Construction on MH in road - excess water pumped down line with trash pump
18	485.05		Wasting to lagoon, clean clarifiers, weirs, contact chamber
19		19.73	Infiltration @ MH road
20		35.81	Infiltration @ MH road
21		29.98	Infiltration @ MH road
22		25.31	Infiltration @ MH road
23		1501.75	Flow diverted for construction on final effluent line
24		367.99	Flow diverted for construction on final effluent line / redirected through at 09:30
25		39.03	Infiltration @ MH road
26		27.52	Infiltration @ MH road
27	160.07		Wasting to lagoon
28		24.39	Infiltration @ MH road
29		35.20	Infiltration @ MH road
30	326.75		Wasting to lagoon
31			
Total	3079.09	2207.82	

Flow recorder changes over at midnight / Flow is read the following morning

Petrolia WPCP Flow Diversion to Lagoons

Year: 2015 Month: December



Date	East	West	Description of Flow
1		39.26	Infiltration @ New MH in roadway / they use pump to pump out ditches
2	265.59		Clean clarifiers, wiers, contact chamber
3		31.70	Infiltration @ New MH in roadway
4	203.04		Wasting to lagoon
5		109.89	False reading - Foam under transducer
6		125.99	False reading - Foam under transducer
7		142.10	Cleaning lagoon splitter box/ clean lagoon transducer
8	230.36		Wasting to lagoon
9		32.00	Infiltration @ new MH in roadway
10		21.49	Infiltration @ New MH in roadway
11	67.59		Wasting to lagoon
12		15.23	Infiltration @ new MH in roadway
13		16.58	Infiltration @ new MH in roadway
14		39.22	Infiltration @ New MH in roadway / Rained most of the day today - sometimes heavy
15		18.73	Infiltration @ New MH in roadway
16		17.28	Infiltration @ New MH in roadway
17		21.50	Infiltration @ New MH in roadway
18	120.38		Wasting to lagoon
19		10.72	Infiltration / also @ MH in roadway
20		11.68	Infiltration / also @ MH in roadway
21		62.80	Rained from 03:00 - All Day + into evening - lots of infiltration + clean filter effluent
22		30.01	Infiltration/ also at MH in roadway
23	489.68		clean aeration effluent channels, alum channel, clarifiers, wiers, contact chamber
24	160.71		Wasting to lagoon
25		41.07	Infiltration / also @ MH in roadway
26		44.10	Infiltration / also @ MH in roadway
27		124.35	Infiltration / also @ MH in roadway
28		81.67	Infiltration / also @ MH in roadway
29		175.53	Infiltration / Freezing rain + thaw / Surge tank overflow
30		69.19	Infiltration / also @ MH in roadway
31	187.73		Infiltration / wasting digesters/ infiltraion @ roadway MH
Total	1725.08	1282.09	

Flow recorder changes over at midninght / Flow is read the following morning

Municipality: Town of Petrolia	
Project Name: Petrolia Water Pollution Control Plant	Operating Authority: CH2M
Address: 411 Greenfield St. Box 1270, Petrolia, ON N0N 1R0	Address: 546 Maude Street, Box 329, Petrolia, ON N0N 1R0

File No. 4 6	Works Number 1 1 0 0 0 0 5 7 9	Data Period Month Year 0 4 1 5	Discharge Type 2	Update Code R
1 2	3 11	16 19	20 21 22	80

C.P. 3 5	FLOW S	Parameter Code 5 0 0 1 0	Dec. 3	Monthly Results 5 0 6 1 1
12 13	Total Flow <i>(10³m³)</i>	30 34	35	38 46
	Avg. Day Flow <i>(10³m³/d)</i>	5 0 0 1 5	3	1 6 8 7
	Max. Day Flow <i>(10³m³/d)</i>	5 0 0 2 0	3	3 6 5 0

3 5	BYPASS	Parameter Code 5 0 2 7 0	Dec. 3	Monthly Results	No. of Occurrences
12 13	Plant Bypass Vol. <i>(10³m³)</i>	30 34	35	38 46	48 51
	Duration <i>(Hrs.)</i>	8 1 6 8 0	1		

3 6	RAW SEWAGE	Parameter Code 0 0 0 0 1	Dec. 0	Monthly Average Results 1 4 8	No. of Samples 5
12 13	BOD <i>(mg/L)</i>	30 34	35	38 46	48 51
	SS <i>(mg/L)</i>	0 0 0 0 6	0	1 3 8	5
	TKN <i>(mg/L)</i>	0 0 0 2 0	2	2 9 4	5
	Total P. <i>(mg/L)</i>	0 0 0 3 3	1	4 7	5

3 9	FINAL EFFLUENT	Parameter Code 5 0 2 8 0	Dec. 3	Monthly Results 6 6 7 6 6	} Seasonal Discharge Lagoons Only	
2 13	Total Effl. Volume To Watercourse <i>(10³m³)</i>	30 34	35	38 46		48 51
	Flow Duration <i>(Hrs.)</i>	8 1 6 8 0	1	3 3 6		
	Cell Depth <i>(m)</i>	5 0 2 9 0	1	1 9		
	CBOD5 <i>(mg/L)</i>	0 0 0 0 1	1	1 4 0		
	SS <i>(mg/L)</i>	0 0 0 0 6	1	2 8 7		
	Ammonia <i>(mg/L)</i>	0 0 0 1 9	2	3 0		
	TKN <i>(mg/L)</i>	0 0 0 2 0	2	6 9		
	Total P. <i>(mg/L)</i>	0 0 0 3 3	2	6 9		

0 9	DISINFECTION	Parameter Code 5 0 3 2 0	Dec. 1	Monthly Results 1 4 0	No. of Samples 5
12 13	Chlorine Used <i>(kg as Cl₂)</i>	30 34	35	38 46	48 51
	Chlorine Dosage <i>(mg/L as Cl₂)</i>	8 0 4 1 0	1	2 8 7	5
	Chlorine Resid. <i>(mg/L as Cl₂)</i>	8 0 4 2 0	1	3 0	5

Operator's Comments and **Contact Person's Phone number:**

Randy Clendenning 519-490-5592
Randy.Clendenning@ch2m.com

Return completed blue form to:

