

**2016 Compliance Report for the Chatham Water Pollution Control Plant  
Public Utilities Commission for the Municipality of Chatham-Kent**

The Chatham Water Pollution Control Plant provides treatment for wastewater for the community of Chatham. Wastewater is collected by 24 sewage pump stations and conveyed by a largely separated sanitary sewer system. Some combined sewers remain. Final effluent is discharged to the Thames River.

The Chatham Water Pollution Control Plant was first constructed in 1964 and underwent expansions in 1992 and 2004. The development of the facility has followed the growth of the municipality and the advancement in technology and regulations. The Combined Plant 1 and Plant 2 Rated Capacity is 36,000m<sup>3</sup>/day with a Peak Flow Rate of 72,000m<sup>3</sup>/day.

The treatment system includes the following processes:

- Raw sewage pumping
- Screening collection and removal
- Aerated grit removal using a grit chamber, grit slurry and cyclone
- Chemical phosphorus removal
- Primary treatment, primary sludge collection and pumping
- Biological treatment using the Conventional Activated Sludge process
- Final settling
- Disinfection using Chlorine Gas and Sulphur Dioxide
- Two-stage anaerobic digestion, sludge pumping and digested gas handling
- Sludge Dewatering

In addition, recovered methane gas produced from the anaerobic digesters is used to power digester gas/natural gas fired boilers and the heat is consumed within the plant to offset the energy purchases. Also, recovered methane gas produced from the anaerobic digesters is used to power a methane fired generator to produce electrical power back to the hydro grid with a payback in revenue.

**ECA # 6551-8WXKHC**

**Non-compliance issues for 2016:**

An exceedance of the average monthly concentration effluent limit for Total Phosphorus occurred for the months of May and June.

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Plant rated capacity of 36,000m<sup>3</sup>/day

The total sewage flow to the works during a calendar year divided by the number of days during which sewage was flowing to the works that year

Month	Total Monthly Flow 1000 m <sup>3</sup>	Avg Daily Flow /Month 1000 m <sup>3</sup> /day	Avg Daily Flow/Year 1000m <sup>3</sup> /day	% of Plant Capacity	CBOD5 mg/L	Total S.S. mg/L	Total Ammonia mg/L	Total P mg/L	pH	E.Coli/100 mL CFU GeoMean	Total Chlorine mg/L
<b>Limits: Dec 15 - Apr 15</b>	None	None	36	100	15	15	4	0.75	6.0 - 9.5	200	0.01
<b>Limits: Apr 16 - Dec 14</b>	None	None	36	100	15	15	3	0.75	6.0 - 9.5	200	0.01
<b>Jan</b>	692	22.3			2.0	1.3	0.05	0.12	7.67	13.2	0.01
<b>Feb</b>	708	24.4			2.0	1.8	0.11	0.37	7.65	29.4	0.01
<b>Mar</b>	962	31.0			2.3	5.0	0.05	0.42	7.88	31.0	0.01
<b>Apr</b>	1041	34.7			2.3	5.3	0.10	0.37	7.87	107.2	0.01
<b>May</b>	656	21.2			2.4	4.6	0.09	0.98	7.74	31.9	0.01
<b>Jun</b>	534	17.8			2.0	2.0	0.09	0.83	7.80	25.5	0.01
<b>Jul</b>	528	17.0			2.0	2.0	0.14	0.45	7.81	8.2	0.01
<b>Aug</b>	535	17.3			2.2	3.6	0.26	0.54	7.74	13.5	0.01
<b>Sept</b>	507	16.9			2.0	2.8	0.11	0.44	7.85	34.4	0.01
<b>Oct</b>	493	15.9			2.0	3.6	0.22	0.08	7.90	15.0	0.01
<b>Nov</b>	442	14.7			2.0	6.0	0.12	0.20	7.99	21.0	0.01
<b>Dec</b>	457	14.7			2.0	2.8	0.15	0.15	7.91	10.0	0.01
<b>YEAR</b>			20.7	57							
	<b>Yearly Total Flow 1000 m<sup>3</sup></b>	<b>Yearly Maximums</b>									
	7555	34.7			2.4	6.0	0.26	0.98	7.99	107.2	0.01

