

**2015 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 expansion in 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 36,000m³/day with a Peak Flow Rate of 72,000m³/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 2015:

There were no non compliance issues respecting the C of A during this reporting period.

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Plant rated capacity of 36,000m3/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 m3	Avg Daily Flow /Month 1000 m3/day	Avg Daily Flow/Year 1000m3/ 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
Non Freezing							3				0.01
Limits: Freezing	None	None	36	100	15	15	4	0.75	6.0 - 9.5	200	0.01
Jan	577	18.6			2.0	2.3	0.10	0.33	7.59	32.2	0.01
Feb	432	15.4			2.0	1.8	0.09	0.39	7.61	23.0	0.01
Mar	812	26.2			2.2	4.0	0.14	0.31	7.73	34.7	0.01
Apr	806	26.9			2.0	2.5	0.07	0.29	7.69	24.5	0.01
May	638	20.6			2.0	3.8	0.12	0.32	7.61	20.2	0.01
Jun	748	24.9			2.0	3.4	0.13	0.42	7.57	25.9	0.01
Jul	708	22.8			2.0	2.3	0.07	0.49	7.72	12.6	0.01
Aug	599	18.0			2.0	2.2	0.08	0.39	7.61	20.5	0.01
Sept	503	16.8			2.0	1.8	0.57	0.11	7.48	33.2	0.01
Oct	530	17.1			2.0	2.3	0.11	0.07	7.80	102.5	0.01
Nov	515	17.2			2.0	2.8	0.11	0.13	7.84	24.9	0.01
Dec	577	18.6			2.0	2.0	0.06	0.11	7.79	101.2	0.01
AVG	620		20.3	56.3	2.0	2.6	0.14	0.28	7.67	38.0	0.01
	Yearly Total Flow 1000 m3	Yearly Maximums									
	7405	26.9			2.2	4.0	0.57	0.49	7.84	102.5	0.01