

2009 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 City of Chatham. Wastewater is collected by 20 sewage pump stations and conveyed by a mostly separated but some combined sewer systems to the plant. The treated wastewater is discharged to the Thames River.

The Chatham Water Pollution Control Plant was first constructed in 1964 and in late 2004 finished its final expansion. 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 facility has a Certificate of Approval capacity of 36,000 m³/day with a peak flow of 72,000 m³/day. The rated capacity of Plant 1 is 12,000 m³/day and Plant 2 is 24,000 m³/day.

The existing treatment system uses 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, the plant operates digester gas/natural gas fired boilers. The system recovers thermal energy from the digester gas produced in the anaerobic digesters. Recovered energy is consumer within the plant to offset purchases.

Non-compliance issues for 2009:

On March 11, 2009 there was a bypass at Pump Station #7 in Chatham due to the heavy amounts of rain. Sampling was done according to the C of A bypass section. Approximately 125m³ of raw sewage was diverted to Indian Creek.

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Month	Total Monthly Flow 1000 m3	Average Daily Flow 1000 m3/day	% of Plant Capacity	CBOD mg/l	Total S.S. mg/l	Total Ammonia mg/l	Total P mg/l	E.Coli /100ml CFU
Limits: Freezing				15	15	4.0	0.75	200
Limits: Non Freezing				15	15	3.0	0.75	200
January	809.1	26.1	36.2	3.2	2.0	0.1	0.4	73
February	1237.6	44.2	122.7	3.5	7.0	0.3	0.5	10
March	1233.8	39.8	110.5	2.1	4.0	0.2	0.4	16
April	948.0	31.6	87.7	4.4	3.1	0.1	0.4	24
May	679.5	22.5	62.5	2.7	4.0	0.2	0.5	11
June	633.0	21.1	58.6	1.9	3.0	0.3	0.6	10
July	514.6	16.6	46.1	2.4	4.0	0.3	0.4	12
August	536.3	17.3	48.0	3.0	4.0	0.2	0.4	30
September	447.0	14.9	41.3	2.0	3.0	0.2	0.4	55
October	597.5	19.3	53.6	1.3	2.0	0.7	0.3	14
November	504.9	16.8	46.6	1.6	3.0	0.7	0.4	20
December	611.7	20.2	56.1	1.2	2.0	0.2	0.3	21
	Yearly Total Flow 1000 m3	Yearly Averages						
	8753	24.2	64.1	2.4	3.4	0.29	0.4	19