

## **2008 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 m<sup>3</sup>/day with a peak flow of 72,000 m<sup>3</sup>/day. The rated capacity of Plant 1 is 12,000 m<sup>3</sup>/day and Plant 2 is 24,000 m<sup>3</sup>/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 2008:**

A sample for plant effluent was not taken and analysed for E.coli for the week of December 22.

The sampling program has been modified to include additional steps to confirm samples have been submitted for analysis.

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<b>Month</b>	<b>Total Monthly Flow 1000 m3</b>	<b>Average Daily Flow 1000 m3/day</b>	<b>% of Plant Capacity</b>	<b>CBOD mg/l</b>	<b>Total S.S. mg/l</b>	<b>Total Ammonia mg/l</b>	<b>Total P mg/l</b>	<b>E.Coli /100ml CFU</b>
Limits: Freezing				15	15	4.0	0.75	200
Limits: Non Freezing				15	15	3.0	0.75	200
<b>January</b>	1010.6	32.6	90.5	2.4	3.0	0.10	0.34	28
<b>February</b>	1009.2	34.8	96.6	2.2	3.0	0.12	0.40	17
<b>March</b>	1205.9	38.9	54.0	1.0	4.0	0.19	0.33	19
<b>April</b>	867.0	28.9	80.2	1.4	4.0	0.20	0.40	26
<b>May</b>	620.0	19.9	55.2	1.0	3.0	0.10	0.56	52
<b>June</b>	774.0	24.8	68.8	2.0	4.0	0.20	0.44	12
<b>July</b>	762.6	24.6	68.3	6.3	4.0	0.20	0.60	10
<b>August</b>	558.0	18.0	50.0	1.0	3.0	0.20	0.58	10
<b>September</b>	642.0	21.4	59.4	5.5	3.0	0.20	0.27	10
<b>October</b>	542.5	17.5	48.6	4.2	3.0	0.20	0.40	10
<b>November</b>	771.0	25.7	71.3	1.7	8.0	0.8	0.40	10
<b>December</b>	1131.5	36.5	50.1	4.3	3.0	0.2	0.24	71
	<b>Yearly Total Flow m3</b>	<b>Yearly Averages</b>						
	824.5	27.0	66.0	2.8	3.8	0.23	0.41	22.9

**C of A # 7618-6TMPJH**