

**MUNICIPALITY OF CHATHAM-KENT
PUBLIC UTILITIES COMMISSION**

CHATHAM WATER POLLUTION CONTROL PLANT

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.

With the new plant fully operational, and the new Certificate of Approval with its stringent MOE criteria, the Chatham WPCP had no non-compliance issues in 2007.

**Municipality of Chatham-Kent
Public Utilities Commission**

Chatham Water Pollution Control Plant

**Certificate of Approval # 1213-5J3MUF
CONDITION 7**

TABLE 2- Effluent Limits	
Effluent Parameter	Monthly Average Concentration in mg/L
CBOD5	15
Total Suspended Solids	15
Total Ammonia Nitrogen	3.0 non – freezing period
Total Ammonia Nitrogen	4.0 freezing period
Total Phosphorus	0.75
Total Cl2 Residual	0.01
E-Coli	200 organisms per 100mL

**Chatham Water Pollution Control Plant
2007 Reporting Period**

**Plant Rated Capacity (m3/day): 36,000
Average Daily Flow (m3/day): 24,800
% of Plant Capacity: 68.8%**

Parameter	Total Monthly Flow 1000 m3	Average Daily Flow 1000 m3	CBOD5 Mg./L	Total S.S. Mg./L	Total Ammonia Mg./L	Total P Mg./L	Total CL2 Res. Mg./L	E-Coli
JANUARY	1193.5	35.5	1.3	5.0	0.20	0.34	0.01	70
FEBRUARY	632.8	22.6	1.5	5.0	0.20	0.54	0.01	82
MARCH	892.8	28.8	2.6	4.0	0.13	0.46	0.01	74
APRIL	792.2	26.4	4.3	4.0	0.16	0.40	0.01	22
MAY	793.6	25.6	2.6	5.0	0.30	0.46	0.01	10
JUNE	627.0	20.9	1.4	4.0	0.20	0.60	0.01	10
JULY	613.8	19.8	2.7	3.0	0.40	0.36	0.01	19
AUGUST	691.3	22.3	2.0	4.0	0.50	0.39	0.00	43
SEPTEMBER	648.0	21.6	1.7	4.0	0.20	0.40	0.01	136
OCTOBER	694.4	22.4	2.0	3.0	0.23	0.50	0.01	74
NOVEMBER	663.0	22.1	0.8	5.0	0.30	0.20	0.01	149
DECEMBER	821.5	26.5	1.0	5.0	0.20	0.33	0.01	16
TOTAL	9063.3							
AVERAGE	755.3	24.8	2.0	4.3	0.25	0.25	0.01	59