

Part III Form 2  
Section 11. ANNUAL REPORT.

<b>Drinking-Water System Number:</b>	22 000 3047
<b>Drinking-Water System Name:</b>	Cochrane Water Treatment Plant
<b>Drinking-Water System Owner:</b>	Corporation of the Town of Cochrane
<b>Drinking-Water System Category:</b>	Large Municipal Residential System
<b>Period being reported:</b>	January 1, 2005 to December 31, 2005

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [ x ]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [x] No [ ]</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Cochrane Telecom Services 153 Sixth Avenue Cochrane, ON P0L 1C0</p> </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p>Number of Designated Facilities served: <input style="width: 100px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]</p> <p>Number of Interested Authorities you report to: <input style="width: 100px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</p>
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**Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report**

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
n/a	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?  
Yes [ ] No [ ] – Not applicable

Indicate how you notified system users that your annual report is available, and is free of charge.

Public access/notice via the web

Public access/notice via Government Office

Public access/notice via a newspaper

Public access/notice via Public Request

Public access/notice via a Public Library

Public access/notice via other method \_\_\_\_\_

### Describe your Drinking-Water System

The water treatment works relies on groundwater from 3 wells, each with a capacity of 45.3 litres per second. The maximum flow for each well cannot exceed 50 litres per second. The wells are located at the east side of Golf Course Road, Lot 19, Concession 1, in the Town of Cochrane, next to the Plant. While the population of Cochrane is about 5,500, the Plant has the capacity of delivering 8,000 cubic metres per day.

The treatment process was designed to remove high iron content, manganese and hardness present in the raw water supplied that is produced by the three wells. "Lime Softening" is the process that is used. First, hydrated lime (calcium hydroxide) is added to the water. This increases the pH of the water causing the calcium carbonate, iron and manganese to precipitate out of the water. Most of the precipitated particles settle out in the two settling tanks. Then carbon dioxide is added in a re-carbonation tanks to reduce the pH to normal levels with the dual media filters used to filter out any remaining particles. The finished water is now stored in an interconnected twin-celled in-ground clear well/ reservoir that has a capacity of 2,300 cubic metres. Three high-lift pumps, each rated at 83.4 litres per second are used to pump the water into the Town's distribution system. On the other side of town, a 2,700 cubic metre elevated storage tank provides gravity flow to the town. This storage is used during peak demand times in the day, and is available to provide the very high flow rates that could be required by the fire department in case of a large fire.

The plan and storage tank (tower) have complete automatic control and alarm systems that notify the operator of any problems. The plant also has an emergency diesel generator that allows water to be treated and pumped in the event of a power outage.

Cochrane Water/Sewer Services employs the services of Accuracy Environmental Laboratories Ltd. For all testing of water samples. Accuracy also sub-contracts some of these samples to other laboratories who provide the required testing as per Regulation 170/03. All laboratories employed for Cochrane Water/Sewer Services' water testing are accredited:

Accuracy Environmental Labs Ltd.  
1470 Government Rd. W. Box 426  
Kirkland Lake, ON P2N 3J1  
(705) 642-3361

Caduceon Environmental Labs  
40 Camelot Drive  
Ottawa, ON K2G 5X1  
(613) 228-1145

**Maxxam Analytics**  
**6740 Campobello Rd.**  
**Mississauga, ON L5N 2L8**  
**(905) 817-5751**

**List all water treatment chemicals used over this reporting period**

**Chlorine Gas – Disinfection**  
**Sodium Bicarbonate – Flocculation/ Coagulation**  
**Hydrated Lime – Softening process**  
**Sodium Silicate – Flocculation / Coagulation**  
**Carbon Dioxide – pH Adjustment**

**Were any significant expenses incurred to?**

- Install required equipment
- Repair required equipment
- Replace required equipment

**Please provide a brief description and a breakdown of monetary expenses incurred**

- 1. Upgraded the computer in order to support SCADA program.**
- 2. Progressive Logistics Computers were serviced.**

**Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre**

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
n/a					

**Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.**

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	156	0	0	156	0
Treated	52	0	0	52	<2-6
Distribution	263	0	0	263	<2-21

**MAC for E.coli = 0 Counts/100 mL**

**MAC for Total Coliforms = 0 Counts/100 mL**

**MAC for Background Bacteria = 200 Counts/100 mL**

**Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.**

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity (Raw)	365	0
Turbidity (Treated)	361	0.03 – 0.12
Free Chlorine (Plant)	365	0.60 – 1.69
Free Chlorine (System)	312	0.10* - 1.80
Post Residual Chlorine (Plant)	365	0.61 – 1.78
Continuous Free Chlorine Analyzer	8760	0.087 – 1.231
Hardness	365	90.00-178.00
Temperature	365	7.8°C
pH	359	6.81 – 12.38
Colour	365	0
Fluoride** (If the DWS provides fluoridation)	108	0.50-0.87
Waste water suspended solids	12	3-28

*NOTE: For continuous monitors use 8760 as the number of samples.*

\* Note: a reading of 0.1 residual chlorine was taken December 13, 2005 from the Polar Bear Habitat. As per regulations, we immediately flushed and re-sampled and obtained a new reading of 0.43 mg/L.

\*\* By-law No. 355-2005 of the Corporation of the Town of Cochrane discontinued the use of fluoride effective April 25, 2005.

*NOTE: Record the unit of measure if it is not milligrams per litre.*

**Summary Nitrates & Nitrites tested during this reporting period.**

Date of sample	Nitrate Result Value	Nitrite Result Value	Unit of Measure	Exceedance
March 1, 2005	<0.1	<0.1	mg/L	No
July 5, 2005	<0.2	<0.3	mg/L	No
September 13, 2005	<0.2	<0.3	mg/L	No
December 6, 2005	<0.1	<0.1	mg/L	No

MAC for Nitrate = 10 mg/L      MAC for Nitrite = 1 mg/L

**Summary Total Trihalomethanes in the Distribution System during this reporting period.**

Date of sample	Result Value	Unit of Measure	Running Average	Exceedance
March 1, 2005	26.0	ug/L	25.60	No
July 5, 2005	29.73	ug/L		
September 13, 2005	23.7	ug/L		
December 6, 2005	23.0	ug/L		

MAC for Trihalomethanes = 100 ug/L (Running Average)

**Summary Lead tested in the Distribution System**

Date of sample	No. of Samples	Result Value	Unit of Measure	Standard	Exceedance
July 5, 2005	1	<0.0005	mg/L	10	No

**Summary of Inorganic parameters tested during this reporting period or the most recent sample results sampled at the Water Treatment Plant**

Parameter	Sample Date	Result Value	Unit of Measure	Standard	Exceedance
Arsenic	April 14, 2003	<0.002	ug/L	25	No
Barium	April 14, 2003	0.009	ug/L	1000	No
Boron	April 14, 2003	0.046	ug/L	5000	No
Cadmium	April 14, 2003	<0.00007	ug/L	5	No
Chromium	April 14, 2003	0.002	ug/L	50	No
Mercury	April 14, 2003	<0.05	mg/L	0.001	No
Selenium	April 14, 2003	<0.002	ug/L	10	No
Uranium	April 14, 2003	0.0002	ug/L	20	No

**Summary of Organic parameters sampled during this reporting period or the most recent sample results**

Parameter	Sample Date	Result Value	Unit of Measure	Standard	Exceedance
Alachlor	June 2, 2003	<0.0005	ug/L	5	No
Aldicarb	June 2, 2003	<0.0005	ug/L	9	No
Aldrin + Dieldrin	June 2, 2003	<0.002	ug/L	0.7	No
Atrazine + N-dealkylated metabolites	June 2, 2003	<0.0005	ug/L	5	No
Azinphos-methyl	June 2, 2003	<0.001	ug/L	20	No
Bendiocarb	June 2, 2003	<0.001	ug/L	40	No
Benzene	June 2, 2003	<0.30	ug/L	5	No
Bromoxynil	June 2, 2003	<0.0005	ug/L	5	No
Carbaryl	June 2, 2003	<0.001	ug/L	90	No
Carbofuran	June 2, 2003	<0.001	ug/L	90	No
Carbon Tetrachloride	June 2, 2003	<0.30	ug/L	5	No
Chlordane (Total)	June 2, 2003	<0.002	ug/L	7	No
Chlorpyrifos	June 2, 2003	<0.001	ug/L	90	No
Cyanazine	June 2, 2003	<0.001	ug/L	10	No
Diazinon	June 2, 2003	<0.001	ug/L	20	No
Dicamba	June 2, 2003	<0.0002	ug/L	120	No
1,2-Dichlorobenzene	June 2, 2003	<0.40	ug/L	200	No
1,4-Dichlorobenzene	June 2, 2003	<0.20	ug/L	5	No
1,2-Dichloroethane	June 2, 2003	<0.40	ug/L	5	No
1,1-Dichloroethylene (vinylidene chloride)	June 2, 2003	<0.60	ug/L	14	No
2-4 Dichlorophenol	June 2, 2003	<0.0003	ug/L	900	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	June 2, 2003	<0.0002	ug/L	100	No
Diclofop-methyl	June 2, 2003	<0.0002	ug/L	9	No
Dimethoate	June 2, 2003	<0.001	ug/L	20	No
Dinoseb	June 2, 2003	<0.00005	ug/L	10	No
Diquat	June 2, 2003	<0.010	ug/L	70	No
Diuron	June 2, 2003	<0.0005	ug/L	150	No
Glyphosate	June 2, 2003	<0.010	ug/L	280	No
Heptachlor + Heptachlor Epoxide	June 2, 2003	<0.002	ug/L	3	No

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<b>Lindane (Total)</b>	June 2, 2003	<0.002	ug/L	4	No
<b>Malathion</b>	June 2, 2003	<0.001	ug/L	190	No
<b>Methoxychlor</b>	June 2, 2003	<0.040	ug/L	900	No
<b>Metolachlor</b>	June 2, 2003	<0.001	ug/L	50	No
<b>Metribuzin</b>	June 2, 2003	<0.001	ug/L	80	No
<b>Paraquat</b>	June 2, 2003	<0.010	ug/L	10	No
<b>Parathion</b>	June 2, 2003	<0.001	ug/L	50	No
<b>Pentachlorophenol</b>	June 2, 2003	<0.002	ug/L	60	No
<b>Phorate</b>	June 2, 2003	<0.0002	ug/L	2	No
<b>Picloram</b>	June 2, 2003	<0.00005	ug/L	190	No
<b>Polychlorinated Biphenyls(PCB)</b>	June 2, 2003	<0.050	ug/L	3	No
<b>Prometryne</b>	June 2, 2003	<0.0002	ug/L	1	No
<b>Simazine</b>	June 2, 2003	<0.001	ug/L	10	No
<b>THM</b> (NOTE: show latest annual average)	Dec 6, 2005	25.60	ug/L	100	No
<b>Temephos</b>	June 2, 2003	<0.005	ug/L	280	No
<b>Terbufos</b>	June 2, 2003	<0.0002	ug/L	1	No
<b>2,3,4,6-Tetrachlorophenol</b>	June 2, 2003	<0.0005	ug/L	100	No
<b>Triallate</b>	June 2, 2003	<0.001	ug/L	230	No
<b>2,4,6-Trichlorophenol</b>	June 2, 2003	<0.0005	ug/L	5	No
<b>2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)</b>	June 2, 2003	<0.00005	ug/L	280	No
<b>Trifluralin</b>	June 2, 2003	<0.001	ug/L	45	No

## Summary of most recent sodium data tested at Water Treatment Plant

Date of Sample	No. of Samples	Result Value	Unit of Measure	Standard	Exceedence
Feb. 4, 2002	1	19	ug/L	20	No

**There were no exceedences reported during this period.**