

**Part III Form 2
Section 11. ANNUAL REPORT.**

Drinking-Water System Number:	210003985
Drinking-Water System Name:	Mount Brydges Water Works
Drinking-Water System Owner:	Township of Strathroy-Caradoc
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2005 to December 31, 2005

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></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>Middlesex Power Distribution Corporation 351 Frances Street Strathroy, Ontario N7G 2L7</p> </div>	<p><u>Complete for all other Categories.</u></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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List Drinking-Water Systems, which receive all of their drinking water from your system:

None

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 [X]

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

- [X] 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 Mount Brydges Water Supply is obtained from two deep drilled wells operating under the Permit to Take Water # 91-P-0036 and has a total rated capacity of 3110m³/d.

Well Pumphouse

-a pump house located at 9110 Oriole Drive serving Wells #1 and #2, housing control panels, valves, pressure gauges, flow meters and including:

- a sodium hypochlorite disinfection system consisting of one 170L capacity sodium hypochlorite solution storage tank with containment and two positive displacement chemical metering pumps with a feed line discharging into the well pump header at the exit from the pump house, rated at 283 L/d and 1034 kPa and 454L/d and 690 kPa respectively;
- a 45 kW 60 Hz propane fired stand-by emergency generator set, serving the well water pump house.
- One on-line residual chlorine analyzer, and one on line turbidimeter

Transmission Main

- 250 mm nominal diameter water main approximately 2.4 km long connecting the water supply from the wells to the Reservoir,
- 150 mm retention loop watermain to feed customers in close proximatety to the well house

Reservoir

- one 1639m³ inground storage reservoir with two cells located at 8673 Glendon Drive Mount Brydges, including reservoir drainage and overflow facilities;

High Lift Pumping Station

- highlift pumping station is joined to the reservoir by a common wall and consists of the following:
- four vertical centrifugal pumps each complete with suction piece, bowl assembly, impeller shafting and motor complete with valves (gate, solenoid controlled hydraulic check and pressure reducing), piping sampling tap and control panels, performance ratings of pumps are as follows:
- pump 1 rating capacity of 41 L/s, rating total head of 51.2m, pump 2 capacity of 60 L/s, rating total head of 51.2m, and pumps 3 and 4 each with rating capacity of 58.13 L/s, and rating total head each of 63.4m.
- chlorine residual is monitored entering and leaving the reservoir

The highlift pumps pump to the distribution system and to the storage tower that has a holding capacity of 720 m³. The tower also is equipped with chlorine residual monitoring.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite

Were any significant expenses incurred to?

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

Describe

<p>-an inspection of the water tower was performed in 2005.</p> <p>-a UPS was installed at the water tower to provide power back-up to the SCADA system</p>

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

There were no notices provided in 2005

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date

Microbiological testing done under section 8-2 during this reporting period

	Number of Samples	Range of E.Coli Or Fecal Results (#-#)	Range of Total Coliform Results (#-#)	Number of HPC Samples Or Background Colony Counts	Range of HPC Results (#-#) Or Background Colony Counts
Raw	104	0-0	0-0	104	0-1
Treated	52	0-0	0-0	52	0-0
Distribution	157	0-0	0-0	157	0-0

Operational testing done under Schedule 7, 8 or 9 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (#-#)
Turbidity	8760	0.002-19.9
Chlorine	8760	0.002-4.7
Chlorine Residual Distribution System	8760	0-4.99
Fluoride (If the DWS provides fluoridation)	N/A	

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

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

Well #1
Summary of additional testing and sampling carried out in accordance with the requirement of an approval or order.

Date of order or C of A	Parameter	Date Sampled	Result	Unit of Measure
Apr 5/01	Nitrite	Jan 14/05	ND	mg/L
	Nitrate		5.6	mg/L
	TKN		ND	mg/L
Apr 5/01	Nitrite	Feb 18/05	0.005<MDL	mg/L
	Nitrate		5.3	mg/L
	TKN		0.05<MDL	mg/L
	TON		0.05<MDL	mg/L
Apr 5/01	Nitrite	Mar 24/05	0.005<MDL	mg/L
	Nitrate		5.1	mg/L
	TKN		0.39	mg/L
	TON		0.25	mg/L
Apr 5/01	Nitrite	Apr 13/05	0.005<MDL.	mg/L
	Nitrate		5.42	mg/L
	TKN		0.35	mg/L
	TON		0.35	mg/L
Apr 5/01	Nitrite	May 18/05	0.015<MDL	mg/L
	Nitrate		5.96	mg/L
	TKN		0.05	mg/L
	TON		0.05<MDL	mg/L
Apr 5/01	Nitrite	Jun 14/05	0.005<MDL	mg/L
	Nitrate		6.84	mg/L
	TKN		0.21	mg/L
	TON		0.16	mg/L

Apr 5/01	Nitrite Nitrate TKN TON	Jul 13/05	0.005<MDL 7.49 0.05<MDL 0.05<MDL	mg/L mg/L mg/L mg/L
Apr 5/01	Nitrite Nitrate TKN TON	Aug 16/05	0.005<MDL 6.25 0.05<MDL 0.05<MDL	mg/L mg/L mg/L mg/L
Apr 5/01	Nitrite Nitrate TKN TON	Sep 21/05	0.005<MDL 6.47 0.32 0.08	mg/L mg/L mg/L mg/L
Apr 5/01	Nitrite Nitrate TKN TON	Oct 14/05	0.005<MDL 6.41 0.45 0.14	mg/L mg/L mg/L mg/L
Apr 5/01	Nitrite Nitrate TKN TON	Nov 18/05	0.005<MDL 6.12 0.16 0.05<MDL	mg/L mg/L mg/L mg/L
Apr 5/01	Nitrite Nitrate TKN TON	Dec 13/05	0.005<MDL 6.23 0.05<MDL 0.05<MDL	mg/L mg/L mg/L mg/L

Summary of Inorganic parameters tested during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Dec 8/04	ND	mg/L	No
Arsenic	Dec 8/04	ND	mg/L	No
Barium	Dec 8/04	0.037	mg/L	No
Boron	Dec 8/04	0.037	mg/L	No
Cadmium	Dec 8/04	ND	mg/L	No
Chromium	Dec 8/04	0.0038	mg/L	No
Lead	Dec 8/04		mg/L	No
Mercury	Dec 8/04	ND	mg/L	No
Selenium	Dec 8/04	ND	mg/L	No
Sodium	Dec 8/04	21	mg/L	Yes
Uranium	Dec 8/04	ND	mg/L	No
Fluoride	Dec 8/04	0.4	mg/L	No
Nitrite	Dec 14/05	0.005<MDL	mg/L	No
Nitrate	Dec 14/05	6.23	mg/L	No

Summary of Organic parameters sampled during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Dec 8/04	ND	ug/L	No
Aldicarb	Dec 8/04	ND	ug/L	No
Aldrin + Dieldrin	Dec 8/04	ND	ug/L	No
Atrazine + N-dealkylated metabolites	Dec 8/04	ND	ug/L	No
Azinphos-methyl	Dec 8/04	ND	ug/L	No
Bendiocarb	Dec 8/04	ND	ug/L	No
Benzene	Dec 8/04	ND	ug/L	No
Benzo(a)pyrene	Dec 8/04	ND	ug/L	No
Bromoxynil	Dec 8/04	ND	ug/L	No
Carbaryl	Dec 8/04	ND	ug/L	No
Carbofuran	Dec 8/04	ND	ug/L	No
Carbon Tetrachloride	Dec 8/04	ND	ug/L	No
Chlordane (Total)	Dec 8/04	ND	ug/L	No
Chlorpyrifos	Dec 8/04	ND	ug/L	No
Cyanazine	Dec 8/04	ND	ug/L	No
Diazinon	Dec 8/04	ND	ug/L	No
Dicamba	Dec 8/04	ND	ug/L	No
1,2-Dichlorobenzene	Dec 8/04	ND	ug/L	No
1,4-Dichlorobenzene	Dec 8/04	ND	ug/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Dec 8/04	ND	ug/L	No
1,2-Dichloroethane	Dec 8/04	ND	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Dec 8/04	ND	ug/L	No
Dichloromethane	Dec 8/04	ND	ug/L	No
2-4 Dichlorophenol	Dec 8/04	ND	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Dec 8/04	ND	ug/L	No
Diclofop-methyl	Dec 8/04	ND	ug/L	No
Dimethoate	Dec 8/04	ND	ug/L	No
Dinoseb	Dec 8/04	ND	ug/L	No
Diquat	Dec 8/04	ND	ug/L	No
Diuron	Dec 8/04	ND	ug/L	No
Glyphosate	Dec 8/04	ND	ug/L	No
Heptachlor + Heptachlor Epoxide	Dec 8/04	ND	ug/L	No
Linadane (Total)	Dec 8/04	ND	ug/L	No
Malathion	Dec 8/04	ND	ug/L	No
Methoxychlor	Dec 8/04	ND	ug/L	No
Metolachlor	Dec 8/04	ND	ug/L	No
Metribuzin	Dec 8/04	ND	ug/L	No
Monochlorobenzene	Dec 8/04	ND	ug/L	No
Paraquat	Dec 8/04	ND	ug/L	No
Parathion	Dec 8/04	ND	ug/L	No

Pentachlorophenol	Dec 8/04	ND	ug/L	No
Phorate	Dec 8/04	ND	ug/L	No
Picloram	Dec 8/04	ND	ug/L	No
Polychlorinated Biphenyls(PCB)	Dec 8/04	ND	ug/L	No
Prometryne	Dec 8/04	ND	ug/L	No
Simazine	Dec 8/04	ND	ug/L	No
THM (NOTE: show latest annual average)	Dec 8/04		ug/L	No
Temephos	Dec 8/04	ND	ug/L	No
Terbufos	Dec 8/04	ND	ug/L	No
Tetrachloroethylene	Dec 8/04	ND	ug/L	No
2,3,4,6-Tetrachlorophenol	Dec 8/04	ND	ug/L	No
Triallate	Dec 8/04	ND	ug/L	No
Trichloroethylene	Dec 8/04	ND	ug/L	No
2,4,6-Trichlorophenol	Dec 8/04	ND	ug/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Dec 8/04	ND	ug/L	No
Trifluralin	Dec 8/04	ND	ug/L	No
Vinyl Chloride	Dec 8/04	ND	ug/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
Nitrate	5.6	mg/L	Jan 14/05
Nitrate	5.3	mg/L	Feb 18/05
Nitrate	5.1	mg/L	Mar 24/05
Nitrate	5.42	mg/L	Apr 13/05
Nitrate	5.96	mg/L	May 18/05
Nitrate	6.84	mg/L	Jun 14/05
Nitrate	7.49	mg/L	Jul 13/05
Nitrate	6.25	mg/L	Aug 16/05
Nitrate	6.47	mg/L	Sep 21/05
Nitrate	6.41	mg/L	Oct 14/05
Nitrate	6.12	mg/L	Nov 18/05
Nitrate	6.23	mg/L	Dec 13/05

(Only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, non municipal year round residential, large non municipal non residential)

Well #2

Summary of additional testing and sampling carried out in accordance with the requirement of an approval or order.

Date of order or C of A	Parameter	Date Sampled	Result	Unit of Measure
Apr 5/01	Nitrite	Jan 14/05	ND	mg/L
	Nitrate		8.5	mg/L
	TKN		0.1	mg/L
Apr 5/01	Nitrite	Feb 18/05	0.005<MDL	mg/L
	Nitrate		8	mg/L
	TKN		0.09RDS	mg/L
	TON		0.08	mg/L
Apr 5/01	Nitrite	Mar 24/05	0.01	mg/L
	Nitrate		7.91	mg/L
	TKN		0.19	mg/L
	TON		0.12	mg/L
Apr 5/01	Nitrite	Apr 13/05	0.005<MDL.	mg/L
	Nitrate		7.82	mg/L
	TKN		0.38	mg/L
	TON		0.2	mg/L
Apr 5/01	Nitrite	May 18/05	0.019	mg/L
	Nitrate		8.12	mg/L
	TKN		0.34	mg/L
	TON		0.33	mg/L
Apr 5/01	Nitrite	Jun 14/05	0.005<MDL	mg/L
	Nitrate		6.8	mg/L
	TKN		0.18	mg/L
	TON		0.17	mg/L
Apr 5/01	Nitrite	Jul 13/05	0.005<MDL	mg/L
	Nitrate		6.46	mg/L
	TKN		0.05<MDL	mg/L
	TON		0.05<MDL	mg/L
Apr 5/01	Nitrite	Aug 16/05	0.009	mg/L
	Nitrate		7.23	mg/L
	TKN		0.05<MDL	mg/L
	TON		0.05<MDL	mg/L
Apr 5/01	Nitrite	Sep 21/05	0.005<MDL	mg/L
	Nitrate		7.31	mg/L
	TKN		0.19	mg/L
	TON		0.05<MDL	mg/L
Apr 5/01	Nitrite	Oct 14/05	0.005<MDL	mg/L
	Nitrate		7.34	mg/L
	TKN		0.05<MDL	mg/L
	TON		0.05<MDL	mg/L

Drinking-Water Systems Regulation O. Reg. 170/03

Apr 5/01	Nitrite Nitrate TKN TON	Nov 18/05	0.005<MDL 8.65 0.14 0.06	mg/L mg/L mg/L mg/L
Apr 5/01	Nitrite Nitrate TKN TON	Dec 13/05	0.005<MDL 7.80 0.05<MDL 0.05<MDL	mg/L mg/L mg/L mg/L

Summary of Inorganic parameters tested during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Dec 8/04	ND	mg/L	No
Arsenic	Dec 8/04	ND	mg/L	No
Barium	Dec 8/04	0.025	mg/L	No
Boron	Dec 8/04	0.024	mg/L	No
Cadmium	Dec 8/04	ND	mg/L	No
Chromium	Dec 8/04	0.0040	mg/L	No
Lead	Dec 8/04		mg/L	No
Mercury	Dec 8/04	ND	mg/L	No
Selenium	Dec 8/04	ND	mg/L	No
Sodium	Dec 8/04	7.0	mg/L	No
Uranium	Dec 8/04	ND	mg/L	No
Fluoride	Dec 8/04	0.2	mg/l	No
Nitrite	Dec 13/05	0.005<MDL	mg/L	No
Nitrate	Dec 13/05	7.80	mg/L	No

Summary of Organic parameters sampled during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Dec 8/04	ND	ug/L	No
Aldicarb	Dec 8/04	ND	ug/L	No
Aldrin + Dieldrin	Dec 8/04	ND	ug/L	No
Atrazine + N-dealkylated metabolites	Dec 8/04	ND	ug/L	No
Azinphos-methyl	Dec 8/04	ND	ug/L	No
Bendiocarb	Dec 8/04	ND	ug/L	No
Benzene	Dec 8/04	ND	ug/L	No
Benzo(a)pyrene	Dec 8/04	ND	ug/L	No
Bromoxynil	Dec 8/04	ND	ug/L	No
Carbaryl	Dec 8/04	ND	ug/L	No
Carbofuran	Dec 8/04	ND	ug/L	No
Carbon Tetrachloride	Dec 8/04	ND	ug/L	No
Chlordane (Total)	Dec 8/04	ND	ug/L	No

Chlorpyrifos	Dec 8/04	ND	ug/L	No
Cyanazine	Dec 8/04	ND	ug/L	No
Diazinon	Dec 8/04	ND	ug/L	No
Dicamba	Dec 8/04	ND	ug/L	No
1,2-Dichlorobenzene	Dec 8/04	ND	ug/L	No
1,4-Dichlorobenzene	Dec 8/04	ND	ug/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Dec 8/04	ND	ug/L	No
1,2-Dichloroethane	Dec 8/04	ND	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Dec 8/04	ND	ug/L	No
Dichloromethane	Dec 8/04	ND	ug/L	No
2-4 Dichlorophenol	Dec 8/04	ND	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Dec 8/04	ND	ug/L	No
Diclofop-methyl	Dec 8/04	ND	ug/L	No
Dimethoate	Dec 8/04	ND	ug/L	No
Dinoseb	Dec 8/04	ND	ug/L	No
Diquat	Dec 8/04	ND	ug/L	No
Diuron	Dec 8/04	ND	ug/L	No
Glyphosate	Dec 8/04	ND	ug/L	No
Heptachlor + Heptachlor Epoxide	Dec 8/04	ND	ug/L	No
Linadane (Total)	Dec 8/04	ND	ug/L	No
Malathion	Dec 8/04	ND	ug/L	No
Methoxychlor	Dec 8/04	ND	ug/L	No
Metolachlor	Dec 8/04	ND	ug/L	No
Metribuzin	Dec 8/04	ND	ug/L	No
Monochlorobenzene	Dec 8/04	ND	ug/L	No
Paraquat	Dec 8/04	ND	ug/L	No
Parathion	Dec 8/04	ND	ug/L	No
Pentachlorophenol	Dec 8/04	ND	ug/L	No
Phorate	Dec 8/04	ND	ug/L	No
Picloram	Dec 8/04	ND	ug/L	No
Polychlorinated Biphenyls(PCB)	Dec 8/04	ND	ug/L	No
Prometryne	Dec 8/04	ND	ug/L	No
Simazine	Dec 8/04	ND	ug/L	No
THM (NOTE: show latest annual average)	Dec 8/04		ug/L	No
Temephos	Dec 8/04	ND	ug/L	No
Terbufos	Dec 8/04	ND	ug/L	No
Tetrachloroethylene	Dec 8/04	ND	ug/L	No
2,3,4,6-Tetrachlorophenol	Dec 8/04	ND	ug/L	No
Triallate	Dec 8/04	ND	ug/L	No
Trichloroethylene	Dec 8/04	ND	ug/L	No
2,4,6-Trichlorophenol	Dec 8/04	ND	ug/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Dec 8/04	ND	ug/L	No

Drinking-Water Systems Regulation O. Reg. 170/03

Trifluralin	Dec 8/04	ND	ug/L	No
Vinyl Chloride	Dec 8/04	ND	ug/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
Nitrate	8.5	mg/L	Jan 14/05
Nitrate	8	mg/L	Feb 18/05
Nitrate	7.91	mg/L	Mar 24/05
Nitrate	7.82	mg/L	Apr 13/05
Nitrate	8.12	mg/L	May 18/05
Nitrate	6.8	mg/L	Jun 14/05
Nitrate	6.46	mg/L	Jul 13/05
Nitrate	7.23	mg/L	Aug 16/05
Nitrate	7.31	mg/L	Sep 21/05
Nitrate	7.34	mg/L	Oct 14/05
Nitrate	8.65	mg/L	Nov 18/05
Nitrate	7.80	mg/L	Dec 13/05

(Only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, non municipal year round residential, large non municipal non residential)

Distribution Sample

Summary of additional testing and sampling carried out in accordance with the requirement of an approval or order.

Date of order or C of A	Parameter	Date Sampled	Result	Unit of Measure
Feb 20/04	Selenium	Feb 18/05	3<MDL	mg/L
		May 16/05	3<MDL	mg/L
		Aug 16/05	3<MDL	mg/L
		Nov 18/05	3<MDL	mg/L

End of Distribution Sample (Birmingham Rd.)
Summary of Inorganic parameters tested during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Dec 8/04	ND	mg/L	No
Arsenic	Dec 8/04	ND	mg/L	No
Barium	Dec 8/04	0.031	mg/L	No
Boron	Dec 8/04	0.025	mg/L	No
Cadmium	Dec 8/04	ND	mg/L	No
Chromium	Dec 8/04	0.0033	mg/L	No
Lead	Nov 18/05	0.4	ug/L	No
Mercury	Dec 8/04		mg/L	No
Selenium	Dec 8/04	ND	mg/L	No
Sodium	Dec 8/04	16	mg/L	No
Uranium	Dec 8/04	ND	mg/L	No
Fluoride	Dec 8/04		mg/L	No
Nitrite	Dec 8/04		mg/L	No
Nitrate	Dec 8/04		mg/L	No

Summary of Organic parameters sampled during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: show latest annual average)	Feb 18/05	11	ug/L	No
	May 16/05	11	ug/L	No
	Aug 16/05	12	ug/L	No
	Nov 18/05	12	ug/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample

(Only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, non municipal year round residential, large non municipal non residential)