



ANNUAL REPORT

<b>Drinking-Water System Number:</b>	220003369
<b>Drinking-Water System Name:</b>	Ridgetown Drinking Water System
<b>Drinking-Water System Owner:</b>	Municipality of Chatham-Kent
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 1 - December 31, 2024

Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [ X ]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [ X ] No [ ]

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Chatham-Kent PUC Office 325 Grand Ave E Box 1191 Chatham, ON N7M 5L8
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List all Drinking-Water Systems (if any), which receive all their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
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 its drinking water?

Yes [ ] No [ ]

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**

Ground water for the Ridgetown Drinking Water System is obtained through five deep wells. The drinking water system is comprised of two treatment facilities, one located on Erie Street South and the other located on Scane Road.

The three wells, Well # C1, Well #2 - Hitch, and Well # 3A - Harris, supply raw water from submersible well pumps through a common pipe to the treatment system at the Erie Street site. Water from these wells is disinfected with sodium hypochlorite and then passed through a cascade aerator for methane gas reduction before being discharged into reservoirs on site. Treated water from the North and South reservoirs is subsequently discharged to the distribution system by high lift pumps.

The two Scane Wells, Well # S1, and Well # S2 supply raw water from submersible well pumps through a common pipe to the treatment system at the Scane Road site. Water from these wells is disinfected with sodium hypochlorite and then passed through a cascade aerator for methane gas reduction before being discharged into the reservoir on site. Treated water from the reservoir is subsequently discharged to the distribution system by high lift pumps.

Ridgetown Drinking Water System serves the community of Ridgetown, with the Ridgetown Elevated Tank providing storage, and serves the community of Highgate, with the Highgate Reservoir and Booster Pumping Station providing storage.

Fluoride is naturally occurring in the source water in concentrations greater than the 1.5 mg/L Ontario Drinking Water Quality Standard. Sodium is also naturally occurring in the source water in concentrations greater than the 20 mg/L aesthetic objective.

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

1. Sodium Hypochlorite

**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**

<b>Expense</b>	<b>Cost (\$)</b>
Cathcart Street, Ridgetown Reconstruction (Watermain)	170,600
SCADA, Controls, Communication & Associated Equipment	62,000
Laboratory Analysis	23,804
Sodium Hypochlorite	21,386
Well # S2 Submersible Pump Motor (inventory)	3,928
Highgate Reservoir & Booster Pumping Station Inlet Valve Rebuild & Pressure Reduction Valve Maintenance	2,950
Well # 3A Submersible Pump Motor (inventory)	2,750
Chemical Feed Panel Fittings & Line	2,700
Standby / Emergency Generator Inspection & Maintenance	2,575
Well # S2 Flow Meter Repair	2,142

**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**

<b>Incident Date &amp; AWQI No.</b>	<b>Parameter</b>	<b>Result</b>	<b>Unit of Measure</b>	<b>Corrective Action</b>	<b>Corrective Action Date</b>
Jan 18 # 164363	Fluoride Concentration in a Treated Water Sample	Erie St = 1.8 Scane Rd = 1.7	mg/L	Re-sample and Test Erie St = 1.9 Scane Rd = 1.8	Jan 22
June 23 # 165299	Distribution System Pressure Loss	< 20	psi	Large service break repaired Sample and Test 0 E.coli, 0 Coliforms	June 23
Nov 5 # 166831	Distribution System Pressure Loss	< 20	psi	Boil Water Advisory Watermain break repaired Flushing Sample and Test 0 E.coli, 0 Coliforms	Nov 5 & 6
Nov 12 # 166873	Distribution System Pressure Loss	< 20	psi	Boil Water Advisory Watermain break repaired Flushing Sample and Test 0 E.coli, 0 Coliforms	Nov 12 & 13
Dec 23 # 167105	Sodium Concentration in a Distribution Sample	15 Cunningham Ave = 75 67 Ebenezer St W = 74	mg/L	Re-sample and Test 15 Cunningham Ave = 71 67 Ebenezer St W = 72	Jan 13, 2025

Microbiological testing done under the Schedule 10 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 #)
<b>Raw</b> (Each Well)	264	0 – 0	0 – 1	0	
<b>Treated</b> (Scane & Erie)	106	0 – 0	0 – 0	106	< 10 - 20
<b>Distribution</b>	306	0 – 0	0 – 0	306	< 10 - 20

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

	Number of Grab Samples	Range of Results (min #)-(max #)
<b>Turbidity</b> Raw (Each Well)	259	0.080 – 3.480 NTU
<b>Chlorine</b> Treated (Erie & Scane)	8760	0.95 – 3.23 mg/L
<b>Fluoride</b>	Fluoride Naturally Occurring	

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

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

Date of legal instrument issued	Parameter	Date Sampled	Result Erie	Result Scane	Unit of Measure
None					

Summary of Inorganic parameters tested during this reporting period or the most recent sample results. Sampled every 3 years under Schedule 13-2(1)(b).

Parameter	Sample Date	Result Value Erie	Result Value Scane	MAC Limit	Unit of Measure	Exceedance
<b>Antimony</b>	Jan 15	< 0.50	< 0.50	6	ug/L	No
<b>Arsenic</b>	Jan 15	< 1.0	< 1.0	10	ug/L	No
<b>Barium</b>	Jan 15	110	180	1000	ug/L	No
<b>Boron</b>	Jan 15	860	890	5000	ug/L	No
<b>Cadmium</b>	Jan 15	< 0.090	< 0.090	5	ug/L	No
<b>Chromium</b>	Jan 15	< 5.0	< 5.0	50	ug/L	No
<b>*Lead</b>	See Schedule 15.1 Summary					
<b>Mercury</b>	Jan 15	< 0.1	< 0.1	1.0	ug/L	No
<b>Selenium</b>	Jan 15	< 2.0	< 2.0	50	ug/L	No
<b>Sodium</b>	Jan 15	71	72	20	mg/L	Yes - Reported Dec 23, 2024 AWQI # 167105
<b>Uranium</b>	Jan 15	< 0.10	< 0.10	20	ug/L	No
<b>Fluoride</b>	Jan 15	1.8	1.7	1.5	mg/L	Yes - Reported Jan 18, 2024 AWQI # 164363
<b>Nitrite</b>	Oct 7	< 0.010	< 0.010	1	mg/L	No
<b>Nitrate</b>	Oct 7	< 0.10	< 0.10	10	mg/L	No

**Summary of lead testing under Schedule 15.1 during this reporting period**

Location Type	Number of Samples	Range of Lead Results ug/L (min#) – (max #)	MAC Limit ug/L	Number of Exceedances / Adverses
Residential	0			
Non-Residential	0			
Distribution	26	< 0.50 – 0.87	10	0

**Summary of Organic parameters sampled during this reporting period or the most recent sample results. Sampled every 3 years under Schedule 13-4(1)(b).**

Parameter	Sample Date	Result Value Erie	Result Value Scane	MAC Limits	Unit of Measure	Exceedance
Alachlor	Jan 15	< 0.5	< 0.5	5	ug/L	No
Atrazine + N-dealkylated metabolites	Jan 15	< 1.0	< 1.0	5	ug/L	No
Azinphos-methyl	Jan 15	< 2.0	< 2.0	20	ug/L	No
Benzene	Jan 15	< 0.10	< 0.10	1	ug/L	No
Benzo(a)pyrene	Jan 15	< 0.0050	< 0.0050	0.01	ug/L	No
Bromoxynil	Jan 15	< 0.5	< 0.5	5	ug/L	No
Carbaryl	Jan 15	< 5.0	< 5.0	90	ug/L	No
Carbofuran	Jan 15	< 5.0	< 5.0	90	ug/L	No
Carbon Tetrachloride	Jan 15	< 0.10	< 0.10	2	ug/L	No
Chlorpyrifos (Dursban)	Jan 15	< 1.0	< 1.0	90	ug/L	No
Diazinon	Jan 15	< 1.0	< 1.0	20	ug/L	No
Dicamba	Jan 15	< 1.0	< 1.0	120	ug/L	No
1,2-Dichlorobenzene	Jan 15	< 0.20	< 0.20	200	ug/L	No
1,4-Dichlorobenzene	Jan 15	< 0.20	< 0.20	5	ug/L	No
1,2-Dichloroethane	Jan 15	< 0.20	< 0.20	5	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan 15	< 0.10	< 0.10	14	ug/L	No
Dichloromethane	Jan 15	< 0.50	< 0.50	50	ug/L	No
2-4 Dichlorophenol	Jan 15	< 0.25	< 0.25	900	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan 15	< 1.0	< 1.0	100	ug/L	No
Diclofop-methyl	Jan 15	< 0.90	< 0.90	9	ug/L	No
Dimethoate	Jan 15	< 2.5	< 2.5	20	ug/L	No
Diquat	Jan 15	< 7.0	< 7.0	70	ug/L	No
Diuron	Jan 15	< 10	< 10	150	ug/L	No
Ethylbenzene	Jan 15	< 0.10	< 0.10	140	ug/L	No
Glyphosate	Jan 22	< 10	< 10	280	ug/L	No
Haloacetic Acids (HAA) (Distribution)	Jan 15 Apr 15 Jul 15 Oct 7	< 5 11 5 6		80	ug/L	No
<b>Running Annual Average:</b>		7				
Malathion	Jan 15	< 5.0	< 5.0	190	ug/L	No
2 Methal-4-chlorophenoxyacetic acid (MCPA)	Jan 15	< 10	< 10	100	ug/L	No
Metolachlor	Jan 15	< 0.5	< 0.5	50	ug/L	No
Metribuzin (Sencor)	Jan 15	< 5.0	< 5.0	80	ug/L	No

Monochlorobenzene	Jan 15	< 0.10	< 0.10	80	ug/L	No
Paraquat	Jan 15	< 1.0	< 1.0	10	ug/L	No
Pentachlorophenol	Jan 15	< 0.50	< 0.50	60	ug/L	No
Phorate	Jan 15	< 0.50	< 0.50	2	ug/L	No
Picloram	Jan 15	< 5.0	< 5.0	190	ug/L	No
Polychlorinated Biphenyls (PCB)	Jan 15	< 0.05	< 0.05	3	ug/L	No
Prometryne	Jan 15	< 0.25	< 0.25	1	ug/L	No
Simazine	Jan 15	< 1.0	< 1.0	10	ug/L	No
Terbufos	Jan 15	< 0.50	< 0.50	1	ug/L	No
Tetrachloroethylene	Jan 15	< 0.10	< 0.10	10	ug/L	No
2,3,4,6-Tetrachlorophenol	Jan 15	< 0.50	< 0.50	100	ug/L	No
Trihalomethanes (THM) (Distribution)	Jan 15 Apr 15 Jul 15 Oct 7		49 46 58 61	100	ug/L	No
<b>Running Annual Average:</b>			54			
Toluene	Jan 15	< 0.20	< 0.20	60	ug/L	No
Triallate	Jan 15	< 1.0	< 1.0	230	ug/L	No
Trichloroethylene	Jan 15	< 0.10	< 0.10	5	ug/L	No
2,4,6-Trichlorophenol	Jan 15	< 0.50	< 0.50	5	ug/L	No
Trifluralin	Jan 15	< 1.0	< 1.0	45	ug/L	No
Vinyl Chloride	Jan 15	< 0.20	< 0.20	1	ug/L	No
Xylenes	Jan 15	< 0.10	< 0.10	90	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 Erie	Result Value Scane	Unit of Measure	Date of Sample
Fluoride (naturally occurring) (Treated)	1.8	1.7	mg/L	Jan 15
Trihalomethanes (THM) (Distribution)	54 (Running Annual Average)		µg/L	Jan 15, Apr 15, Jul 15 & Oct 7

Summary of additional voluntary sampling and testing during this reporting period.

Date of Sample	Parameter	Colby Well #1	Hitch Well #2	Harris Well #3A	Scane Well #1	Scane Well #2	Unit of Measure
Jan 15	Nitrite - Raw Nitrate - Raw	< 0.010 < 0.10	< 0.010 < 0.10	< 0.010 < 0.10	< 0.010 < 0.10	< 0.010 < 0.10	mg/L
Apr 15	Nitrite - Raw Nitrate - Raw	< 0.010 < 0.10	< 0.010 < 0.10	< 0.010 < 0.10	< 0.010 < 0.10	< 0.010 < 0.10	
Jul 15	Nitrite - Raw Nitrate - Raw	< 0.010 < 0.10	< 0.010 < 0.10	< 0.010 < 0.10	< 0.010 < 0.10	< 0.010 < 0.10	
Oct 7	Nitrite - Raw Nitrate - Raw	< 0.010 < 0.10	< 0.010 < 0.10	< 0.010 < 0.10	< 0.010 < 0.10	< 0.010 < 0.10	