

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

**Drinking-Water System Number:**  
**Drinking-Water System Name:**  
**Drinking-Water System Owner:**  
**Drinking-Water System Category:**  
**Period being reported:**

220001799	
Richard H. Neath Water Purification Plant	
City of Owen Sound	
Large Municipal Residential	
January 1, 2005 – 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 [X] No [ ]</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;">                 Owen Sound City Website, City Clerk's Office, Public Works Office             </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p>Number of Designated Facilities served:</p> <div style="border: 1px solid black; padding: 2px; width: 100px; margin: 5px 0;">n/a</div> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [X]</p> <p>Number of Interested Authorities you report to:</p> <div style="border: 1px solid black; padding: 2px; width: 100px; margin: 5px 0;">n/a</div> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [X]</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
Leith Water Distribution System	260065312

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 [X] 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**

The Richard H. Neath Water Purification plant is a surface water plant with direct filtration, serving a population of 22,000 people, that are divided up into 5 pressure zones. The process includes raw water screening, prechlorination, zebra mussel control, flash mixing, coagulation/flocculation, post chlorination, UV disinfection, and Fluoridation. The City has a 22,000 m<sup>3</sup> reservoir, with a booster station that provides addition pressure in the Southeast portion of the City and outskirts.

**NEW FOR 2005**

A new Booster station is currently being installed to provide added pressure to the southwest part of the City. This will become a 6<sup>th</sup> pressure zone to the City. Completion of this project will be Spring 2006.

As of December 2005, the Owen Sound distribution system was extended to serve the former hamlet of Leith and adjacent residences along Grey Road 15. Please note this services the Town of Meaford.

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

**Gaseous Chlorine, Hydrofluosilicic Acid, SternPac, and SternPac 2300.**

**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**

**[Installed components]**

- Backwash Holding Tank with building attached

- Expansion to existing building to increase size of chlorine room and add an additional room for our polymer and dechlorination chemical feed equipment for handling backwash water.
- Beattie Street Booster Pumping Station (currently in progress, will be complete in Spring 2006).
- New watermain installation from water plant to City Limits on East Bayshore Road.
- Leith and Grey Road 15 residents are hooked up to City's water system.
- Installation of softstarts on Lowlift pumps.
- Programming changes to computer system to increase plant efficiency.
- Improve drainage at Bay Reservoir.

**[Repaired items]**

- Filter # 1 – Cleaning and repair to underdrain system and new filter media installed.

**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**

**Please see Appendix "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 #)
<b>Raw</b>	53	0-160	0-18000	n/a	n/a
<b>Treated</b>	51	0	0	12	<10
<b>Distribution</b>	438	0	0	144	<10 - 40

**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 #)
<b>Turbidity</b>	<b>8760</b>	<b>0-0.51 NTU</b>
<b>Chlorine</b>	<b>8760</b>	<b>.57 – 1.41 mg/L</b>
<b>Fluoride (If the DWS provides fluoridation)</b>	<b>8760</b>	<b>.24 - .73 mg/L</b>

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

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

**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	Unit of Measure
<b>CofA# 9037-5WBLZX February 20<sup>th</sup>, 2004</b>	<b>Aluminum</b>	<b>Mar 17</b>	<b>0.042</b>	mg/L
<b>Provincial Order # 4337-5KLW4T dated March 20, 2003</b>	<b>Total Suspended Solids</b>	<b>January 2005</b>	<b>144</b>	mg/L
<b>Provincial Order # 4337-5KLW4T dated March 20, 2003</b>	<b>Total Suspended Solids</b>	<b>February 2005</b>	<b>130</b>	mg/L
<b>Provincial Order # 4337-5KLW4T dated March 20, 2003</b>	<b>Total Suspended Solids</b>	<b>March 2005</b>	<b>185</b>	mg/L
<b>Provincial Order # 4337-5KLW4T dated March 20, 2003</b>	<b>Total Suspended Solids</b>	<b>April 2005</b>	<b>229</b>	mg/L
<b>Provincial Order # 4337-5KLW4T dated March 20, 2003</b>	<b>Total Suspended Solids</b>	<b>May 2005</b>	<b>103</b>	mg/L
<b>Provincial Order # 4337-5KLW4T dated March 20, 2003</b>	<b>Total Suspended Solids</b>	<b>June 2005</b>	<b>121</b>	mg/L
<b>Provincial Order # 4337-5KLW4T dated March 20, 2003</b>	<b>Total Suspended Solids</b>	<b>July 2005</b>	<b>109</b>	mg/L
<b>Provincial Order # 4337-5KLW4T dated March 20, 2003</b>	<b>Total Suspended Solids</b>	<b>August 2005</b>	<b>98</b>	mg/L
<b>Provincial Order # 4337-5KLW4T dated March 20, 2003</b>	<b>Total Suspended Solids</b>	<b>September 2005</b>	<b>n/a</b>	

<b>Provincial Order # 4337-5KLW4T dated March 20, 2003</b>	<b>Total Suspended Solids</b>	<b>October 2005</b>	<b>68</b>	mg/L
<b>Provincial Order # 4337-5KLW4T dated March 20, 2003</b>	<b>Total Suspended Solids</b>	<b>November 2005</b>	<b>119</b>	mg/L
<b>Provincial Order # 4337-5KLW4T dated March 20, 2003</b>	<b>Total Suspended Solids</b>	<b>December 2005</b>	<b>90</b>	mg/L

**Summary of Inorganic parameters tested during this reporting period or the most recent sample results**

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Mar 17	<.001	mg/L	No
Arsenic	Mar 17	.001	mg/L	No
Barium	Mar 17	.013	mg/L	No
Boron	Mar 17	.007	mg/L	No
Cadmium	Mar 17	<.0001	mg/L	No
Chromium	Mar 17	<.002	mg/L	No
Lead	Jun 27	.0014	mg/L	No
Mercury	Mar 17	<.00006	mg/L	No
Selenium	Mar 17	<.001	mg/L	No
Sodium	n/a	n/a	n/a	n/a
Uranium	Mar 17	<.0001	mg/L	No
Fluoride	Dec 31	.54	mg/L	No
Nitrite	Mar 17	<.1	mg/L	No
Nitrate	Mar 17	.4	mg/L	No

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Mar 17	<.0003	mg/L	No
Aldicarb	Mar 17	<.003	mg/L	No
Aldrin + Dieldrin	Mar 17	<.00002	mg/L	No
Atrazine + N-dealkylated metabolites	Mar 17	<.0005	mg/L	No
Azinphos-methyl	Mar 17	<.00021	mg/L	No
Bendiocarb	Mar 17	<.003	mg/L	No
Benzene	Mar 17	<.0005	mg/L	No
Benzo(a)pyrene	Mar 17	<.000005	mg/L	No
Bromoxynil	Mar 17	<.000094	mg/L	No

Carbaryl	Mar 17	<.003	mg/L	No
Carbofuran	Mar 17	<.001	mg/L	No
Carbon Tetrachloride	Mar 17	<.0002	mg/L	No
Chlordane (Total)	Mar 17	<.00004	mg/L	No
Chlorpyrifos	Mar 17	<.0005	mg/L	No
Cyanazine	Mar 17	<.0005	mg/L	No
Diazinon	Mar 17	<.001	mg/L	No
Dicamba	Mar 17	<.005	mg/L	No
1,2-Dichlorobenzene	Mar 17	<.0001	mg/L	No
1,4-Dichlorobenzene	Mar 17	<.0002	mg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Mar 17	<.00014	mg/L	No
1,2-Dichloroethane	Mar 17	<.0001	mg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Mar 17	<.0001	mg/L	No
Dichloromethane	Mar 17	<.0003	mg/L	No
2-4 Dichlorophenol	Mar 17	<.0001	mg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Mar 17	<.005	mg/L	No
Diclofop-methyl	Mar 17	<.0004	mg/L	No
Dimethoate	Mar 17	<.001	mg/L	No
Dinoseb	Mar 17	<.0005	mg/L	No
Diquat	Mar 17	<.005	mg/L	No
Diuron	Mar 17	<.005	mg/L	No
Glyphosate	Mar 17	<.025	mg/L	No
Heptachlor + Heptachlor Epoxide	Mar 17	<.0001	mg/L	No
Lindane (Total)	Mar 17	<.001	mg/L	No
Malathion	Mar 17	<.005	mg/L	No
Methoxychlor	Mar 17	<.0001	mg/L	No
Metolachlor	Mar 17	<.003	mg/L	No
Metribuzin	Mar 17	<.003	mg/L	No
Monochlorobenzene	Mar 17	<.0002	mg/L	No
Paraquat	Mar 17	<.001	mg/L	No
Parathion	Mar 17	<.003	mg/L	No
Pentachlorophenol	Mar 17	<.0001	mg/L	No
Phorate	Mar 17	<.0003	mg/L	No
Picloram	Mar 17	<.005	mg/L	No
Polychlorinated Biphenyls(PCB)	Mar 17	<.00005	mg/L	No
Prometryne	Mar 17	<.0001	mg/L	No
Simazine	Mar 17	<.0005	mg/L	No
THM (NOTE: show latest annual average)	Nov 23	.0295	mg/L	No
Temephos	Mar 17	<.01	mg/L	No
Terbufos	Mar 17	<.0003	mg/L	No
Tetrachloroethylene	Mar 17	<.0002	mg/L	No
2,3,4,6-Tetrachlorophenol	Mar 17	<.0001	mg/L	No

Triallate	Mar 17	<.01	mg/L	No
Trichloroethylene	Mar 17	<.0001	mg/L	No
2,4,6-Trichlorophenol	Mar 17	<.0001	mg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Mar 17	<.01	mg/L	No
Trifluralin	Mar 17	<.0005	mg/L	No
Vinyl Chloride	Mar 17	<.0002	mg/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
NONE			

**(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)**

**APPENDIX "A"**

Notification Date	AWQI #(s)	Adverse Location	Adverse Parameter	Adverse Result	Units	Remedial Action
18-Jan	51945	Filter #4	Turbidity	2.89	NTU	Reduced filter rate, shut off municipal pump, and backwashed. Only for 20 minutes.
09-Mar	53036	EHPS Zone	Negative Pressure	n/a	n/a	Flushed Fire Hydrants, and Bacti samples were sent away for analysis.
24-May	54775	VLA - 16th St	Free Chlorine	0.04	mg/L	Flushed hydrant 1-A-23 for 20 minutes, end Free was .38 mg/L
		VLA - 15th St	Free Chlorine	0.00	mg/L	Flushed hydrant 4-A-124 for 28 minutes, end Free was .26 mg/L
31-May	55022	354 3rd Ave W	Free Chlorine	0.02	mg/L	Flushed hydrant for 25 minutes, end Free was .83 mg/L
21-Jun	55844	402 6th Ave W (Hydrant 3-A-11)	Free Chlorine	0.02	mg/L	Flushed hydrant for 25 minutes, end Free was .51 mg/L
21-Jun	55833	405 6th Ave W (Hydrant 3-A-34)	Free Chlorine	0.04	mg/L	Flushed hydrant for 30 minutes, end Free was .48 mg/L
18-Jul	56960	1300 1st Ave E (Hydrant # 1-B-17)	Free Chlorine	0.00	mg/L	Flushed hydrant for 30 minutes, end Free was .61 mg/L
20-Jul	57045	1390 2nd Ave W (Hydrant 4-B-17)	Free Chlorine	0.02	mg/L	Flushed hydrant for 24 minutes, end Free was .65 mg/L
25-Jul	57378	3599 3rd Ave East	Free Chlorine	0.03	mg/L	Flushed hydrant for 55 minutes, end Free was .55 mg/L
02-Aug	57676	3599 3rd Ave East	Free Chlorine	0.04	mg/L	Flushed hydrant for 74 minutes, end Free was .60 mg/L
04-Aug	57768	176 2nd Ave E	Free Chlorine	0.02	mg/L	Flushed hydrant for 25 minutes, end Free was .63 mg/L
		218 2nd Ave E (Hydrant # 3-B-19)	Free Chlorine	0.04	mg/L	Flushed hydrant for 21 minutes, end Free was .57 mg/L
08-Aug	57905	Stone Tree	Free Chlorine	0.04	mg/L	Flushed hydrant for 3hr 39 min, end Free was .24 mg/L
		Industrial Zone	Low Pressure	n/a	n/a	Power bump caused pump failure, pumps were reset, end hydrants flushed, and bacti samples collected.
15-Aug	58140	1492 14th Ave E (Hydrant # 1-C-175)	Free Chlorine	0.03	mg/L	Flushed hydrant for 8 minutes, end Free was .26 mg/L
	58140	1407 14th St E (Hydrant # 1-C-3)	Free Chlorine	0.01	mg/L	Flushed hydrant for 4 minutes, end Free was .84 mg/L

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Notification Date	AWQI #(s)	Adverse Location	Adverse Parameter	Adverse Result	Units	Remedial Action
15-Aug	58133	Stone Tree	Free Chlorine	0.04	mg/L	Flushed hydrant for 27 hrs, end Free was .23 mg/L
17-Aug	58207	951 7th St E (Hydrant # 2-D-66)	Free Chlorine	0.01	mg/L	Flushed hydrant for 19 minutes, end Free was .23 mg/L
		999 7th St E (Hydrant # 2-D-67)	Free Chlorine	0.01	mg/L	Flushed hydrant for 38 minutes, end Free was .30 mg/L
19-Aug	58329	225 9th Ave East	Free Chlorine	0.03	mg/L	Flushed hydrant for 2 hrs, end Free was .20 mg/L
22-Aug	58390	3599 East Bayshore Road	Free Chlorine	0.03	mg/L	Flushed hydrant for 34 minutes, end Free was .64 mg/L
22-Aug	58385	996 6th St E (Hydrant # 2-D-69)	Free Chlorine	0.02	mg/L	Flushed hydrant for 10 minutes, end Free was .24 mg/L
		Stone Tree	Free Chlorine	0.04	mg/L	Flushed hydrant for 5 hours, end Free was .23 mg/L
24-Aug	58461	560 9th ST E (Hydrant # 2-E-29)	Free Chlorine	0.00	mg/L	Flushed hydrant for 68 minutes, end Free was .21 mg/L
29-Aug	58601	Stone Tree	Free Chlorine	0.03	mg/L	Flushed hydrant for 5 hrs 5 min, end Free was .23 mg/L
		521 5th St E (Hydrant # 2-E-87)	Free Chlorine	0.01	mg/L	Flushed hydrant for 15 minutes, end Free was .37 mg/L
		3595 3rd Ave East	Free Chlorine	0.02	mg/L	Flushed hydrant for 40 minutes, end Free was .68 mg/L
30-Aug	58632	173 6th Ave E (Hydrant # 2-E-101)	Free Chlorine	0.04	mg/L	Flushed hydrant for 35 minutes, end Free was .22 mg/L
		132 6th Ave E (Hydrant # 2-E-5)	Free Chlorine	0.03	mg/L	Flushed hydrant for 23 minutes, end Free was .20 mg/L
		228 6th Ave E (Hydrant # 2-E-100)	Free Chlorine	0.03	mg/L	Flushed hydrant for 23 minutes, end Free was .21 mg/L
		249 6th Ave E (Hydrant # 2-E-4)	Free Chlorine	0.01	mg/L	Flushed hydrant for 27 minutes, end Free was .21 mg/L
31-Aug	58652	143 7th Ave E	Free Chlorine	0.04	mg/L	Flushed hydrant for 58 minutes, end Free was .24 mg/L
07-Sep	58844	Stone Tree	Free Chlorine	0.03	mg/L	Flushed hydrant for 4 hrs, end Free was .23 mg/L
20-Sep	59345	Stone Tree	Free Chlorine	0.03	mg/L	Flushed hydrant for 6 hrs, end Free was .25 mg/L
		3599 East Bayshore Road	Free Chlorine	0.01	mg/L	Flushed hydrant for 30 minutes, end Free was .22 mg/L

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

Notification Date	AWQI #(s)	Adverse Location	Adverse Parameter	Adverse Result	Units	Remedial Action
27-Sep	59616	Stone Tree	Free Chlorine	0.04	mg/L	Flushed hydrant for 3 hrs 50 min, end Free was .31 mg/L
		3599 East Bayshore Road	Free Chlorine	0.01	mg/L	Flushed hydrant for 30 minutes, end Free was .34 mg/L
03-Oct	59853	Stone Tree	Free Chlorine	0.03	mg/L	Flushed hydrant for 270 minutes, end Free was .21 mg/L
18-Oct	60280	VLA 16th St W	Free Chlorine	0.01	mg/L	Flushed hydrant for 4 hrs 10 mins, end Free was .72 mg/L
01-Dec	61350	Filter 4 Effluent	Turbidity	1.42	NTU	Below 1 NTU by 10:40 a.m. Over for 2hrs 35 mins.