

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

Drinking-Water System Number:	220001799
Drinking-Water System Name:	Richard H. Neath Water Purification Plant
Drinking-Water System Owner:	City of Owen Sound
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	April 1, 2003 – December 31, 2003

<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 [<input checked="" type="checkbox"/>] No []</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [<input checked="" type="checkbox"/>] No []</p> <p>Location where 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><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served:</p> <div style="border: 1px solid black; padding: 2px; width: 100px; margin-left: 20px;">n/a</div> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No [<input checked="" type="checkbox"/>]</p> <p>Number of Interested Authorities you report to:</p> <div style="border: 1px solid black; padding: 2px; width: 100px; margin-left: 20px;">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 [<input checked="" type="checkbox"/>]</p>
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List Drinking-Water Systems, which receive all of their drinking water from your system:

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 []

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 21,000 people, that are divided up into 5 pressure zones. Our process includes raw water screening, prechlorination, zebra mussel control, flash mixing, coagulation/flocculation, post chlorination, UV disinfection(to be completed Feb 2004), and Fluoridation. The City has a 5 million-gallon reservoir, with a booster station.

List all water treatment chemicals used over this reporting period

Gaseous Chlorine, Sodium Silicafluoride, and SternPac.

Were any significant expenses incurred to?

- Install required equipment
 Repair required equipment
 Replace required equipment

Describe

[Installed components] As part of the new regulations, we have installed four (4) UV reactors on the effluent pipes to meet CT requirements to deactivate Giardia, virus, and Cryptosporidium to a specific log-removal. Other work done being done is the installation of a 800KW diesel generator, and decommissioning of a 355KW Diesel generator. New chemical storage tanks have been installed to run SternPac 2300 (a summer coagulant), and Hydrofluosilicic Acid(Liquid Fluoride) with secondary containment. Computer system upgrade, four (4) new magnetic flow meters installed on filter effluent pipes.

[Repaired items] Raw water Pump (P6) at water plant, centrifugal pump (P1) repairs at East Hill Pumping Station,

[Replace items] Flocculator drive for Filter #3. The dry fluoride system was decommissioned in September 2003.

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

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"

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	Range of HPC Results (#-#)
Raw	40	0-770	0-2600	n/a	n/a
Treated	40	0	0	8	<10-10
Distribution	350	0	0	83	<10-718

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	.02-1.40 NTU
Chlorine	8760	1.04-1.66
Fluoride (If the DWS provides fluoridation)	160	.32-.85

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 or order.

Date of order or C of A	Parameter	Date Sampled	Result	Unit of Measure
April 16, 2003 CofA# 6756-5JASPB	Aluminum	Sep 2	.162	mg/L
CofA# 6756-5JASPB dated April 16, 2003	Aluminum	Oct 27	.163	mg/L

Provincial Order # 4337-5KLW4T dated March 20, 2003	Total Suspended Solids	June 2003	37	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	Total Suspended Solids	July 2003	71	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	Total Suspended Solids	August 2003	51	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	Total Suspended Solids	September 2003	56	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	Total Suspended Solids	October 2003	110	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	Total Suspended Solids	November 2003	n/a	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	Total Suspended Solids	December 2003	103	mg/L

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Oct 27	<.001	mg/L	No
Arsenic	Jan 27	nd		No
Barium	Jan 27	.015		No
Boron	Jan 27	.01		No
Cadmium	Jan 27	nd		No
Chromium	Jan 27	nd		No
Lead	Oct 27	.0009	mg/L	No
Mercury	Jan 27	nd		No
Selenium	Jan 27	nd		No
Uranium	Jan 27	nd		No
Fluoride	Oct 27	.2	mg/L	No
Nitrite	Oct 27	.4	mg/L	No
Nitrate	Oct 27	<.1	mg/L	No

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Aalachlor	Apr 29	nd	mg/l	No
Aldicarb	Apr 29	nd	mg/l	No
Aldrin + Dieldrin	Apr 29	nd	mg/l	No
Atrazine + N-dealkylated metabolites	Apr 29	nd	mg/l	No
Azinphos-methyl	Apr 29	nd	mg/l	No
Bendiocarb	Apr 29	nd	mg/l	No
Benzene	Apr 29	nd	mg/l	No
Benzo(a)pyrene	Sep 2	<.00001	mg/l	No
Bromoxynil	Apr 29	nd	mg/l	No
Carbaryl	Apr 29	nd	mg/l	No
Carbofuran	Apr 29	nd	mg/l	No
Carbon Tetrachloride	Apr 29	nd	mg/l	No
Chlordane (Total)	Apr 29	nd	mg/l	No
Chlorpyrifos	Apr 29	nd	mg/l	No
Cyanazine	Apr 29	nd	mg/l	No
Diazinon	Apr 29	nd	mg/l	No
Dicamba	Apr 29	nd	mg/l	No
1,2-Dichlorobenzene	Apr 29	nd	mg/l	No
1,4-Dichlorobenzene	Apr 29	nd	mg/l	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Apr 29	nd	mg/l	No
1,2-Dichloroethane	Apr 29	nd	mg/l	No
1,1-Dichloroethylene (vinylidene chloride)	Apr 29	nd	mg/l	No
Dichloromethane	Apr 29	nd	mg/l	No
2-4 Dichlorophenol	Apr 29	nd	mg/l	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Apr 29	nd	mg/l	No
Diclofop-methyl	Apr 29	nd	mg/l	No
Dimethoate	Apr 29	nd	mg/l	No
Dinoseb	Apr 29	nd	mg/l	No
Diquat	Apr 29	nd	mg/l	No
Diuron	Apr 29	nd	mg/l	No
Glyphosate	Apr 29	nd	mg/l	No
Heptachlor + Heptachlor Epoxide	Apr 29	nd	mg/l	No
Linadane (Total)	Apr 29	nd	mg/l	No
Malathion	Apr 29	nd	mg/l	No
Methoxychlor	Apr 29	nd	mg/l	No
Metolachlor	Apr 29	nd	mg/l	No
Metribuzin	Apr 29	nd	mg/l	No
Monochlorobenzene	Apr 29	nd	mg/l	No
Paraquat	Apr 29	nd	mg/l	No

Parathion	Apr 29	nd	mg/l	No
Pentachlorophenol	Apr 29	nd	mg/l	No
Phorate	Apr 29	nd	mg/l	No
Picloram	Apr 29	nd	mg/l	No
Polychlorinated Biphenyls(PCB)	Apr 29	nd	mg/l	No
Prometryne	Apr 29	nd	mg/l	No
Simazine	Apr 29	nd	mg/l	No
THM (NOTE: show latest quarterly average)	Oct 27	.036	mg/l	No
Temephos	Apr 29	nd	mg/l	No
Terbufos	Apr 29	nd	mg/l	No
Tetrachloroethylene	Apr 29	nd	mg/l	No
2,3,4,6-Tetrachlorophenol	Apr 29	nd	mg/l	No
Triallate	Apr 29	nd	mg/l	No
Trichloroethylene	Apr 29	nd	mg/l	No
2,4,6-Trichlorophenol	Apr 29	nd	mg/l	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Apr 29	nd	mg/l	No
Trifluralin	Apr 29	nd	mg/l	No
Vinyl Chloride	Apr 29	nd	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
n/a			

(Only if category is large municipal residential, small municipal residential, large municipal non residential, small municipal non residential, large non municipal non residential)

Appendix A

Notification Date	Adverse Location	Adverse Parameter	Adverse Result	Units	Remedial Action
10-Apr	Wolf's Service Station	HPC	718	cfu/1mL	Flushed hydrant 4-A-82 for 30 minutes Free Cl2 .61 mg/L Total Cl2 was .82 mg/L. 1 set of samples were collected upstream, downstream, and at location. Results came back good.
9-May	O'Connor's	Low Chlorine Residual	0.03	mg/L	Opened flush hydrant, the residual at 16:15 was 0.05 mg/L. Left running continuously.
27-May	O'Connor's	Low Chlorine Residual	0.02	mg/L	Opened flush hydrant and left open.
28-May	O'Connor's	Low Chlorine Residual	0	mg/L	Continued flushing at flush hydrant, at 12:15 PM Free Cl2 was .15 mg/l, Total Cl2 was .22 mg/L
29-May	O'Connor's	Low Chlorine Residual	0.02	mg/L	Opened Flush hydrant, at 14:40 Free Cl2 was .06 mg/L. Flush hydrant left open over night. Cl2 .14 mg/L @ 8:40 am May 30/03
14-Jul	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.03	mg/L	Flushed hydrant for 1/2 hr. Free Cl2 was .47 mg/L Total .58 mg/L
21-Jul	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.03	mg/L	Flushed hydrant for 35 min, Free Cl2 was .82 mg/L
25-Jul	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.01	mg/L	Flushed hydrant 80 min, Free CL2 was .85 mg/L, Total was .96 mg/L
28-Jul	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.01	mg/L	Flushed hydrant for 50 minutes, Free Cl2 was .72 mg/L
11-Aug	VLA	Low Chlorine Residual	0.01	mg/L	Flushed for 10 hours 50 mins, Free Cl2 .30 mg/L
	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.01	mg/L	Flushed for 50 min, Free Cl2 was .78 mg/L
18-Aug	Stone Tree	Low Chlorine Residual	0.01	mg/L	Post Cl2 increased to 1.35 mg/L. Flushed for 13 hours 47 min, Free Cl2 was .25 mg/L
	VLA	Low Chlorine Residual	0.02	mg/L	Flushed for 3 hrs 5 min, Free Cl2 .25 mg/L
21-Aug	951 7th Street East	Low Chlorine Residual	0.02	mg/L	Flushed 30 mins, Free Cl2 was .33 mg/L.
	999 7th Street East	Low Chlorine Residual	0.02	mg/L	Flushed 30 mins, Free Cl2 was .32 mg/L.
2-Sep	Stone Tree	Low Chlorine Residual	0.01	mg/L	Flushed 10hrs 45 min, Free Cl2 .20 mg/L, Total CL2 was .32 mg/L
	VLA	Low Chlorine Residual	0.03	mg/L	Flushed, Free Cl2 was .47 mg/L, Total Cl2 was .60 mg/L
8-Sep	Stone Tree	Low Chlorine Residual	0.02	mg/L	Flushed 8 hrs 20 min, Free Cl2 .23 mg/L

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	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.02	mg/L	Flushed 30 mins, Free Cl2 was .84 mg/L
	VLA	Low Chlorine Residual	0.03	mg/L	Flushed 6 hrs, Free Cl2 .52 mg/L, Total Cl2 was .64 mg/L
16-Sep	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.01	mg/L	Flushed for 50 mins, Free Cl2 was .88 mg/L
	VLA	Low Chlorine Residual	0.01	mg/L	Flushed 6 hrs, Free Cl2 .38 mg/L
22-Sep	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.02	mg/L	Flushed 30 mins, Free Cl2 was .62 mg/L
20-Oct	Stone Tree	Low Chlorine Residual	0.03	mg/L	Flushed 5 hrs, Free Cl2 was .22 mg/L, Total Cl2 was .32 mg/L
28-Oct	VLA	Low Chlorine Residual	0.02	mg/L	Flushed 1 hr 40 min, Free Cl2 was .28 mg/L
	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.02	mg/L	Flushed 30 minutes, Free Cl2 was .33 mg/L
4-Nov	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.02	mg/L	Flushed 55 minutes, Free Cl2 was .74 mg/L
6-Nov	Filter # 1 Effluent	Turbidity	1.14	NTU	Optimize dosage
	Filter # 2 Effluent	Turbidity	1.16	NTU	Optimize dosage
	Filter # 3 Effluent	Turbidity	1.40	NTU	Optimize dosage
7-Nov	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.01	mg/L	Flushed 55 minutes, Free Cl2 was .30 mg/L
10-Nov	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.03	mg/L	Flushed 45 minutes, Free Cl2 was .69 mg/L
15-Nov	Filter Effluents	High Turbidities	>1.0	NTU	Optimize dosage
17-Nov	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.01	mg/L	Flushed 55 minutes, Free Cl2 was .84 mg/L
21-Nov	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.01	mg/L	Flushed 65 minutes, Free Cl2 was .77 mg/L
27-Nov	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.02	mg/L	Flushed 65 minutes, Free Cl2 was .72 mg/L
8-Dec	3599 East Bayshore Road (Highfield's)	Low Chlorine Residual	0.03	mg/L	Flushed 40 minutes, Free Cl2 was .86 mg/L