Ontario

Ministry of the Environment | Ministère de l'Environnement

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

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:	January 1, 2006 – December 31, 2006

Complete if your Category is Large Municipal Residential or Small Municipal Residential	***Complete for all other Categories.***
Does your Drinking-Water System serve more than 10,000 people? Yes [X] No [ ]	**Number of Designated Facilities served: n/a**
Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No [ ]	**Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [X]**
Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection. • Owen Sound City Website • City Clerk's Office, City Hall • Public Works Office • Water Treatment Plant • Library	**Number of Interested Authorities you report to: n/a** **Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [X]**

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.
[X] Public access/notice via the web
[ ] Public access/notice via Government Office
[X] Public access/notice via a newspaper
[X] Public access/notice via Public Request
[X] 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. The City distribution network is divided into 6 pressure zones.

The Water Treatment process includes raw water screening, prechlorination, zebra mussel control (chlorination at Intake), flash mixing, coagulation/flocculation, post chlorination, UV disinfection, and Fluoridation.

The City has a 22,000 m^3 reservoir, with a booster station that provides addition pressure in the Southeast portion of the City and outskirts.

NEW FOR 2006

A new Booster station is in operation to provide added pressure to the southwest part of the City. This will become a 6th pressure zone to the City's Distribution network.

A new Residue Management system was completed at the Water Treatment Plant to handle backwash water. This consisted of a Polymer system (used to settle suspended solids quickly), a Sodium Bisulphite system (used to remove the chlorine residual), and a holding tank.

Several Watermain replacement projects including
- **8th Avenue @ 19th Street West**
- **2nd Avenue East**
- **6th Street East**

List all water treatment chemicals used over this reporting period

Gaseous Chlorine, Hydrofluosilicic Acid, SternPAC, and SternPAC 2300, Sodium Bisulphite, and MagnaFloc 110L (polymer)

Were any significant expenses incurred to?

[X] 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

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 #)
Raw	54	0-450	0-7400	n/a	n/a
Treated	53	0	0	0	0-10
Distribution	462	0	0	105	<10-20

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	**8760**	**0.02 – 1.48 NTU**
Chlorine	**8760**	**0.75 – 1.51 mg/L**
Fluoride (If the DWS provides fluoridation)	**8760**	**0.20 - 0.71 mg/L**

***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
CofA# 9037-5WBLZX February 20th, 2004	**Aluminum**	**May 11**	**0.090**	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	**Total Suspended Solids**	**January 2006**	**312**	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	**Total Suspended Solids**	**February 2006**	**106**	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	**Total Suspended Solids**	**March 2006**	**94**	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	**Total Suspended Solids**	**April 2006**	**178**	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	**Total Suspended Solids**	**May-August 2006**	**n/a**	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	**Total Suspended Solids**	**September 2006**	**68**	mg/L

Provincial Order # 4337-5KLW4T dated March 20, 2003	**Total Suspended Solids**	**October 2006**	**39**	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	**Total Suspended Solids**	**November 2006**	**33**	mg/L
Provincial Order # 4337-5KLW4T dated March 20, 2003	**Total Suspended Solids**	**December 2006**	**217**	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	Feb 22	<.001	mg/L	**No**
Arsenic	Feb 22	<.001	mg/L	**No**
Barium	Feb 22	0.013	mg/L	**No**
Boron	Feb 22	0.021	mg/L	**No**
Cadmium	Feb 22	<.0001	mg/L	**No**
Chromium	Feb 22	<.002	mg/L	**No**
Lead	May 11	0.002	mg/L	**No**
Mercury	Feb 22	<.00006	mg/L	**No**
Selenium	Feb 22	<.001	mg/L	**No**
Sodium		n/a	n/a	n/a
Uranium	Feb 22	<.001	mg/L	**No**
Fluoride	Dec 31	0.58	mg/L	**No**
Nitrite	Nov 21	<.1	mg/L	**No**
Nitrate	Nov 21	0.3	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	**Feb 22**	**<.0003**	**mg/L**	**No**
Aldicarb	Feb 22	**<.003**	mg/L	**No**
Aldrin + Dieldrin	Feb 22	**<.00002**	mg/L	**No**
Atrazine + N-dealkylated metabolites	Feb 22	**<.0005**	mg/L	**No**
Azinphos-methyl	Feb 22	**<.001**	mg/L	**No**
Bendiocarb	Feb 22	**<.003**	mg/L	**No**
Benzene	Feb 22	**<.0005**	mg/L	**No**
Benzo(a)pyrene	Feb 22	**<.000005**	mg/L	**No**
Bromoxynil	Feb 22	**<.0003**	mg/L	**No**
Carbaryl	Feb 22	**<.003**	mg/L	**No**
Carbofuran	Feb 22	**<.001**	mg/L	**No**
Carbon Tetrachloride	Feb 22	**<.0002**	mg/L	**No**
Chlordane (Total)	Feb 22	**<.00004**	mg/L	**No**
Chlorpyrifos	Feb 22	**<.0005**	mg/L	**No**
Cyanazine	Feb 22	**<.0005**	mg/L	**No**
Diazinon	Feb 22	**<.001**	mg/L	**No**
Dicamba	Feb 22	**<.005**	mg/L	**No**
1,2-Dichlorobenzene	Feb 22	**<.0001**	mg/L	**No**
1,4-Dichlorobenzene	Feb 22	**<.0001**	mg/L	**No**
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Feb 22	**<.0002**	mg/L	**No**
1,2-Dichloroethane	Feb 22	**<.0003**	mg/L	**No**

1,1-Dichloroethylene (vinylidene chloride)	Feb 22	**<.0001**	mg/L	**No**
Dichloromethane	Feb 22	**<.0003**	mg/L	**No**
2-4 Dichlorophenol	Feb 22	**<.0001**	mg/L	**No**
2,4-Dichlorophenoxy acetic acid (2,4-D)	Feb 22	**<.005**	mg/L	**No**
Diclofop-methyl	Feb 22	**<.0004**	mg/L	**No**
Dimethoate	Feb 22	**<.001**	mg/L	**No**
Dinoseb	Feb 22	**<.0005**	mg/L	**No**
Diquat	Feb 22	**<.005**	mg/L	**No**
Diuron	Feb 22	**<.005**	mg/L	**No**
Glyphosate	Feb 22	**<.025**	mg/L	**No**
Heptachlor + Heptachlor Epoxide	Feb 22	**<.0001**	mg/L	**No**
Lindane (Total)	Feb 22	**<.0001**	mg/L	**No**
Malathion	Feb 22	**<.005**	mg/L	**No**
Methoxychlor	Feb 22	**<.0001**	mg/L	**No**
Metolachlor	Feb 22	**<.003**	mg/L	**No**
Metribuzin	Feb 22	**<.003**	mg/L	**No**
Monochlorobenzene	Feb 22	**<.0002**	mg/L	**No**
Paraquat	Feb 22	**<.001**	mg/L	**No**
Parathion	Feb 22	**<.003**	mg/L	**No**
Pentachlorophenol	Feb 22	**<.0001**	mg/L	**No**
Phorate	Feb 22	**<.0003**	mg/L	**No**
Picloram	Feb 22	**<.005**	mg/L	**No**
Polychlorinated Biphenyls(PCB)	Feb 22	**<.00005**	mg/L	**No**
Prometryne	Feb 22	**<.0001**	mg/L	**No**
Simazine	Feb 22	**<.0005**	mg/L	**No**
THM (NOTE: show latest annual average)	Nov 21	**.0287**	mg/L	**No**
Temephos	Feb 22	**<.01**	mg/L	**No**
Terbufos	Feb 22	**<.0003**	mg/L	**No**
Tetrachloroethylene	Feb 22	**<.0002**	mg/L	**No**
2,3,4,6-Tetrachlorophenol	Feb 22	**<.0001**	mg/L	**No**
Triallate	Feb 22	**<.01**	mg/L	**No**
Trichloroethylene	Feb 22	**<.0001**	mg/L	**No**
2,4,6-Trichlorophenol	Feb 22	**<.0001**	mg/L	**No**
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Feb 22	**<.01**	mg/L	**No**
Trifluralin	Feb 22	**<.0005**	mg/L	**No**
Vinyl Chloride	Feb 22	**<.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
1	24-Feb	62662	16th Ave & 8th St E	Free Cl_2	0.03	mg/L	Hydrant flushed 2hrs 5 min, End residual was 1.09 mg/L
2	24-Feb	62665	Industrial Zone	Low Pressure	20	psi	Pressure drop approx. 20 psi at the highest point. Pumps slowed down due to flow meter calibration.
3	13-Mar	62883	Filter # 3	Turbidity	1.31	NTU	Increase Coagulant Dosage.
4	16-Mar	62965	Filter # 4	Turbidity	1.48	NTU	Filter taken offline and backwashed.
5	17-Mar	62967	Filter # 3	Turbidity	1.15	NTU	Dropped below 1 NTU after 48 min.
6	20-Jun	65069	3054 3rd Ave W	Free Cl_2	0.03	mg/L	Location was flushed for 30 min, end Free Cl2 was .52 mg/L
7	14-Jul	65938	Eastside Harbour Front	Free Cl_2	0.03	mg/L	Flushed main for 25 min, end residual was .81 mg/L
8	4-Aug	66749	1598 19th Ave E	Free Cl_2	0.00	mg/L	Flushed hydrant for 30 min, end residual was .75 mg/L
9	8-Aug	66812	1789 10th Street E	Free Cl_2	0.04	mg/L	Flushed hydrant for 20 min, Cl2 residual .77 mg/L
			1689 10th St E	Free Cl_2	0.00	mg/L	Flushed hydrant for 20 min, Cl2 residual .72 mg/L
			801 16th Ave E	Free Cl_2	0.00	mg/L	Flushed hydrant for 50 min, Cl2 residual .54 mg/L
10	11-Aug	66912	1046 11th Ave E	Free Cl_2	0.03	mg/L	Flushed hydrant for 20 min, end cl2 was .22 mg/L
11	14-Aug	66967	999 7th St E	Free Cl_2	0.00	mg/L	Flushed hydrant for 65 min, end cl2 was .26 mg/L
12	15-Aug	66981	996 6th St E	Free Cl_2	0.03	mg/L	Flushed hydrant for 45 min, end cl2 was .35 mg/L
13	15-Aug	66992	1002 4th St E	Free Cl_2	0.03	mg/L	Flushed hydrant for 35 min, end cl2 was .32 mg/L
			1040 4th St E	Free Cl_2	0.01	mg/L	Flushed hydrant for 50 min, end cl2 was .31 mg/L
14	22-Aug	67181	894 11th Ave E	Free Cl_2	0.01	mg/L	Flushed hydrant for 20 min, end cl2 was .26 mg/L

#	Notification Date	AWQI #(s)	Adverse Location	Adverse Parameter	Adverse Result	Units	Remedial Action
15	25-Sep	68091	Keppel Sarawak School RR2	Free Cl_2	0.01	mg/L	Flushed hydrant for 15 min, end cl2 was .67 mg/L
16	4-Dec	69276	Filter 2 Effluent	Turbidity	1.42	NTU	Optimized coagulant dosage
			Filter 4 Effluent	Turbidity	1.20	NTU	Optimized coagulant dosage
17	11-Dec	69394	999 7th St E	Free Cl_2	0.01	mg/L	Flushed hydrant for 20 min, end cl2 was .37 mg/L
			801 16th Ave E	Free Cl_2	0.03	mg/L	Flushed hydrant for 43 min, end cl2 was 1.13 mg/L
			996 6th St E	Free Cl_2	0.01	mg/L	Flushed hydrant for 20 min, end cl2 was .26 mg/L
18	18-Dec	69498	925 7th St E	Free Cl_2	0.00	mg/L	Flushed hydrant for 30 min, end cl2 was .71 mg/L