

*March 28/2013 Correspondence
Item #1
Action Required
Item #1*



**Ontario Clean Water Agency
Agence Ontarienne Des Eaux**

March 11, 2013

Scott Gawley
Corporation of the Municipality of West Elgin
22413 Hoskins Line
Rodney, ON N0L 2C0

Re: Requirement under the Safe Drinking Water Act for a Summary Report

Dear Mr. Gawley;

Attached is the 2012 Summary Report for the West Elgin Water Treatment Plant. This report is completed in accordance with Schedule 22 of O. Reg. 170/03, under the Safe Drinking Water Act.

This Summary Report is to be provided to the members of the West Elgin Municipal Council. Please ensure this distribution by March 31, 2013.

We recently forwarded a copy of the 2012 Annual Report for the West Elgin Water Treatment Plant required under Section 11 of O. Reg. 170/03. Section 12 of O. Reg. 170/03, requires both the Summary Report and the Annual Report be made available for inspection by any member of the public during normal business hours, without charge. The reports should be made available for inspection at the office of the municipality, or at a location that is reasonably convenient to the users of the water system.

Please feel free to contact me should you require any additional information regarding these reports. I can be reached at 519-768-9925.

Sincerely,

A handwritten signature in cursive script that reads "Cindy Sigurdson".

Cindy Sigurdson
Process and Compliance Technician

cc. Dale LeBritton, Senior Operations Manager



**Ontario Clean Water Agency
Agence Ontarienne Des Eaux**

**Annual Summary Report
For the
West Elgin Water Treatment Plant
2012**

Prepared for the Municipality of West Elgin

By the Ontario Clean Water Agency

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SECTION 1: Overview

This summary report for the West Elgin Water Treatment Plant (West Elgin WTP) is published in accordance with Schedule 22 of Ontario's Drinking Water Systems Regulation for the reporting period of January 1, 2012 to December 31, 2012. The West Elgin Water Treatment Plant is categorized as a Large Municipal Residential Drinking Water System.

The West Elgin Water Treatment Plant is operated under waterworks number 260091117. The distribution system is operated under this waterworks number as well but is not covered off by this report. A separate report for the distribution system has been prepared by the operating authority for that system.

The West Elgin WTP operated according to the Municipal Drinking Water Licence 043-101 (Issue 2: June 4, 2010), Drinking Water Works Permit 043-201 (Issue 2: June 4, 2010) and Permit to Take Water 0515-8L9GX7 (Issued September 1, 2011).

This report was prepared by The Ontario Clean Water Agency on behalf of the Municipality of West Elgin and must be supplied to the West Elgin Municipal Council by March 31, 2013.

SECTION 2: Compliance

The West Elgin Water Treatment Plant was operated and maintained in such a manner that treated water supplied to the consumers serviced by the system satisfied Ontario Drinking Water Quality Standards. However, some of the regulatory requirements were not met as identified in the MOE inspection Report.

The routine inspection was conducted on February 1, 2012 by the MOE and no Ministry of the Environment Provincial Officer's Orders issued. There were three non-compliances with regulatory requirements identified in the inspection report. Two of the three were for the West Elgin Distribution system; the last one was for the West Elgin Water Treatment Plant and will be the only one discussed in this report. The overall inspection rating was 96.25% for the entire West Elgin Drinking Water System.

The non-compliance with regulatory requirements and actions required for the West Elgin Water Treatment Plant as appeared in the Inspection Report was:

During the 2011 inspection, it was identified that the emergency water intake off shore from the water treatment plant did not appear to be maintained or in a fit state of repair. An underwater intake pipe inspection was completed by Watech Services Inc. (London) on October 6 and 7, 2010.

The 2011 Ministry of the Environment required the owner/operating authority to develop a strategy and plan for the effective management of the emergency intake pipe. The strategy and plan shall include justification and timelines for its decommissioning or upgrade, renovation, etc. The owner/operating authority was required to submit a plan to the author of the report by October 31, 2011.

A plan was authored by the Ontario Clean Water Agency and submitted to the Tri-County Management Committee in late August, 2011. The Tri-County Management Committee passed a resolution to implement an option to rehabilitate the exiting intake structure and for the Ontario Clean Water Agency to stop work and report to the committee if the rehabilitation cannot proceed. The Ministry received the documentation pertaining to this matter on September 13, 2011.

According to the owner/operating authority, the intake was located and marked in early February 2012. An engineering consulting firm has been retained to evaluate options to rectify the issue and report to the Tri-County Management Committee in April 2012.

Since the issue outstanding and unresolved, it remains as a non-compliance under the Safe Drinking Water Act (2002) section 11(1)2.(ii). The owner/operating authority shall submit an updated strategy and plan that includes justification and timelines for the emergency intake pipe upgrade and renovation by June 30, 2012.

Action(s) Required:

The owner/operating authority shall submit an updated strategy and plan that includes justification and timelines for the emergency intake pipe upgrade and renovation by June 30, 2012.

There were three Adverse Drinking Water Quality Incidences (AWQI's) that were reported in 2012. These three AWQI's were all related to the poor raw water quality issue in Lake Erie with the fish die off. The plant was unable to remove dissolved manganese in the treated water. Once the manganese oxidized through the reaction with sodium hypochlorite it produced yellow water. This resulted in high turbidities on the filtration racks due to the use of the discoloured treated water in the membrane filtration process. There were two instances where the turbidities were above 1NTU on Rack 2 for longer than 15min which resulted in 2 of the 3 AWQI's. The third was for the overall filter performance for the month of September. The Procedure for Disinfection requires a membrane filtration plant to meet the filter performance of 99% of the readings on each filter to be below 0.1NTU. The West Elgin Water Treatment Plant was unable to meet this filter performance criterion due to the discoloured water, as such the third AWQI was reported.

SECTION 3: Corrective Action

The non-compliance identified in the MOE Inspection Report for the West Elgin Water Treatment Plant was addressed in the respected timeline in a letter to the Ministry of the Environment dated June 27, 2012. The rehabilitation of the stand by intake was completed in August 2012 and was tested for operation in September 2012. The intake is now functional and can be used when needed.

The AWQI's were all reported and given an AWQI number, all notifications to the Owner, MOE and Health Unit were met. During the event bacti samples were taken on a daily basis of the treated water, all samples showed zero e. coli and zero total coliform.

SECTION 4: Summary and Discussion of Quantity of Water Supplied

In accordance with Schedule 22-2(3) find a summary and discussion of the quantity of water supplied during the reporting period compared to the rated capacity specified in the MDWL, DWWP and Permit to Take Water, including monthly average and maximum daily flows.

Attached as Appendix A, find a summary of the raw flows including total, average, and maximum daily flows, and peak flow rates for the reporting period. As well, a comparison of flows to the Permit to Take Water limits. The Permit to Take Water specifies flow rates and total water takings permitted. For the West Elgin Water Treatment Plant the maximum flow rate limit is 9,400L/min. The total daily water taking is 13,500m³/day. There were no PTTW exceedances in 2012. The West Elgin Water Treatment Plant is at 31.7% capacity of the total water taking limit, which is up 3.5% from last year.

Attached as Appendix B, find a summary of treated water flows including total, average, and maximum daily flows for the reporting period. As well, a comparison of flows to the MDWL rated capacities. The rated capacity of the plant is 12,160m³/day of treated water as specified in the MDWL. The daily average flow for the reporting period was 3,962m³/day, which is a 9.4% increase from 2011. The maximum daily flow for the reporting period was 6,857m³/day which corresponds to a 0.3% decrease from 2011. The plant is operating at 32.6% of its rated capacity, up from 2011 by 2.8%.

Attached as Appendix C, find a summary of flows including total, average, and maximum daily flows for the reporting period for the Iona Interconnection. The Iona Interconnection rated capacity is 1,600m³/day as specified in the MDWL. The daily average flow for the reporting period was 401m³/day, which corresponds to a 5.8% increase from the previous year. The average daily flow has increased from 2011, due to more precision with the SCADA programming allowing for better control to meet the agreement with Southwold to take 400m³/day. In September, there was more flow taken from the interconnect due to discoloured water at the West Elgin Water Treatment Plant, this limited the impact to the Dutton Dunwich water system.

The West Elgin Water Treatment Plant is capable of meeting its current uses for the system. It is operating at well below the limits set out in the Permit to Take Water and the design capacity for the plant.

APPENDIX A

Raw Flows for the West Elgin Water Treatment Plant compared to the specified limits in the Permit to Take Water. The maximum flow rate specified is 9,400L/min (156.7L/s) with a total water taking of 13,500,000L/day.

Month	Total Flow (m ³)	Average Day Flow (m ³)	% of PTTW Limit	Max Day Flow (m ³)	% of PTTW Limit	Max Day Flow Rates (L/s)	% of PTTW Limit
January	105,944	3,418	25.3	4,212	31.2	142.9	91.2
February	100,514	3,466	25.7	4,112	30.5	143.6	91.6
March	103,709	3,345	24.8	4,011	29.7	140.3	89.5
April	106,915	3,564	26.4	4,446	32.9	100.2	63.9
May	149,934	4,837	35.8	6,276	46.5	148.7	94.9
June	155,163	5,172	38.3	7,515	55.7	146.1	93.2
July	158,831	5,124	38.0	6,527	48.3	143.3	91.4
August	147,968	4,773	35.4	6,522	48.3	150.5	96.0
September	155,109	5,170	38.3	7,759	57.5	155.0	98.9
October	133,548	4,308	31.9	6,114	45.3	139.7	89.2
November	123,500	4,117	30.5	6,942	51.4	152.1	97.1
December	123,289	3,977	29.5	5,330	39.5	155.9	99.5
Total	1,564,423						
Average		4,274	31.7			7,759	57.5
Maximum						155.9	99.5

APPENDIX B

Treated flows for the West Elgin Water Treatment Plant compared to the specified rated capacity of 12,160m³/day in the Municipal Drinking Water Licence.

Month	Total Flow (m ³)	Average Day Flow (m ³)	% of Rated Capacity	Max Day Flow (m ³)	% of Rated Capacity
January	101,230	3,265	26.9	4,277	35.2
February	95,226	3,284	27.0	3,992	32.8
March	98,632	3,182	26.2	4,074	33.5
April	102,302	3,410	28.0	4,320	35.5
May	137,336	4,430	36.4	5,953	49.0
June	143,284	4,776	39.3	6,122	50.3
July	151,052	4,873	40.1	5,986	49.2
August	139,407	4,497	37.0	5,489	45.1
September	129,124	4,304	35.4	6,857	56.4
October	125,732	4,056	33.4	5,267	43.3
November	111,623	3,721	30.6	4,868	40.0
December	115,036	3,711	30.5	4,773	39.3
Total	1,449,982				
Average		3,962	32.6		
Maximum				6,857	56.4

APPENDIX C

Iona Interconnection flows compared to the specified rated capacity of 1,600m³/day in the Municipal Drinking Water Licence. West Elgin has an agreement to purchase 400m³/day from the Southwold Distribution System.

Month	Total Flow (m ³)	Average Day Flow (m ³)	% of Rated Capacity	Max Day Flow (m ³)	% of Rated Capacity
January	11,203	361	22.6	400	25
February	11,666	402	25.1	440	27.5
March	12,869	415	25.9	441	27.6
April	11,804	393	24.6	440	27.5
May	12,241	395	24.7	440	27.5
June	12,176	406	25.4	440	27.5
July	12,316	397	24.8	440	27.5
August	12,223	394	24.6	474	29.6
September	22,865	762	47.6	1,374	85.9
October	12,706	410	25.6	650	40.6
November	11,478	383	23.9	440	27.5
December	3,367	109	6.8	350	21.9
Total	146,912				
Average		401	25.1		
Maximum				1,374	85.9