The Landing Drinking Water System

Waterworks # 260086476
System Category – Non Municipal Year Round Residential

Annual Water Report

Prepared For: Peterborough Standard Condo Corp. #75

Reporting Period of January 1st – December 31st 2024

Issued: February 20 2025

Revision: 0

Operating Authority:

OCWA
ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

This report has been prepared to satisfy the annual reporting requirements in O.Reg 170/03 Section 11

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Report Availability

This system does not serve more than 10,000 residents and the Annual Report will be available to residents and the Board at no cost through the Owner Representatives Bill Medland and Chris James, The Landing Website and Newsletter.

Compliance Report Card

Health & Safety	# of Events	Date	Details
Number of Incidents	0	N/A	N/A

Drinking Water	# of Events	Date	Details
MECP Inspections	0	N/A	N/A
AWQI's	8	See Summary of Non-Compliances	
Number of Non-Compliances	0	N/A	N/A
Number of Boil Water Advisories	0	N/A	N/A

System Process Description

Raw Source

Raw water source for the facility is Anstruther Lake. The water is drawn from the lake into an infiltration gallery and pumps to the treatment plant using a submersible pump controlled by a variable frequency drive.

Treatment

The treatment facility consists of the following:

- Infiltration gallery with submersible pump
- A polymer injection system (not in use and recommended to be removed) consisting of One metering pump sourcing from a polymer makeup tank and equipped with a flowmeter for flow paced operation and downstream static mixer
- Two parallel, 0.5 m (20 inch) cartridge filter housings each equipped with 5 micron nominal sediment cartridge filters.
- Two parallel tannin removal anion resin exchange units complete with Clack WS 1 control, Pentair Structural 102 L vessel.
- Two parallel, 0.5 m (20 inch) cartridge filter housings each equipped with NSF 53 certified 1 micron absolute cartridge filter.
- A chlorine injection system consisting of one chemical metering pump sourcing from a chlorine makeup tank and equipped with a flowmeter for flow paced operation.
- One below grade, precast concrete water storage tank 4.57m*2.13m (L*W) with a working capacity of 10,120 L equipped with a high/low operating float switch.
- A timer controlled recirculation line equipped with a 0.5 hp centrifugal pump drawing from one end of the water storage tank and conveying to the opposite end.
- One timer controlled chlorine injection system consisting of one chemical metering pump

sourcing from a chlorine makeup tank injecting into the storage tank recirculation line.
- One chlorine analyzer drawing from the recirculation line.
- One turbidity analyzer and controller drawing downstream of the 1-micron absolute cartridge filter
- One memograph recording and displaying data from the turbidity and chlorine analyzers
- A Supervisory Control and Data Acquisition (SCADA) system utilizing Wonderware software to monitor process data through a remote monitoring system.
- Two 1.5 hp submersible pumps in the water storage tank each controlled by a VFD. The VFD pressure sensors, and Jet Rite 2 booster tanks provides constant water pressure to the water treatment equipment.

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Jutzi
Polymer	Coagulant	Not In Use

Summary of Non-Compliance

Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
February 2, 2024	164441	Treated Water	Loss of Chlorine Analyzer	CT online chlorine analyzer lost flow after brief power outage caused pump providing flow to analyzer to lose prime.	O. Reg 170/03 SCHEDULE 16.3	Re-primed pump, tested treated chlorine and bacteriological sample. Disinfection equipment was not affected.
April 23, 2024	164878	Treated Water, Distribution Water	Loss of Power	Tree fell on hydro pole, breaking the pole and cutting power to the water treatment plant.	O. Reg 170/03 SCHEDULE 16.3	Once power restored to the facility: Treated water bacteriological sample and chlorine residual collected. The recirculating pump feeding the chlorine analyzer was re-primed and correction to the analyzer reading was completed.

						Distribution system was flushed and bacteriological sample and chlorine residual collected.
April 24, 2024	164878	Filter Effluent	High Filter Turbidity >1.0NTU for over 15 minutes	Turbidity NTU >1.0 NTU for 19 minutes.	O. Reg 170/03 SCHEDULE 16.3	Verified turbidity analyzer. Changed filters, facility check, tested spikes on start up with valve to clearwell closed. Treated water bacteriological sample and chlorine residual collected.
May 8, 2023	164928	Treated Water	Loss of Chlorine Analyzer	CT online chlorine analyzer lost flow after brief power outage caused pump providing flow to analyzer to lose prime.	O. Reg 170/03 SCHEDULE 16.3	Re-primed pump, tested treated and distribution chlorine and bacteriological samples collected. Flushed distribution system. Disinfection equipment was not affected.
July 30, 2024	165840	Treated Water and Filter Effluent	Loss of Chlorine Analyzer and High Filter Effluent Turbidity >1.0NTU for more than 15 minutes	CT online chlorine analyzer lost flow after power outage causing the pump providing flow to analyzer to lose prime. Turbidity NTU >1.0 NTU for 1 hour.	O. Reg 170/03 SCHEDULE 16.3	Power restored to facility. Treated water chlorine residual tested. Recirculating pump re-primed restoring chlorine analyzer reading and corrected to low chlorine reading. Treated and distribution chlorine residuals and bacteriological samples collected. Changed filters.
September 7, 2024	166235	Treated Water	Loss of Chlorine Analyzer	CT online chlorine analyzer lost	O. Reg 170/03 SCHEDULE	Re-primed pump, Corrected chlorine reading,

				flow after brief power outage caused pump providing flow to analyzer to lose prime.	16.3	tested distribution chlorine and bacteriological samples collected. Flushed distribution system. Disinfection equipment was not affected.
September 16, 2024	166327	Filter Effluent	Loss of Turbidity Analyzer	Turbidity analyzer error caused output to be frozen.	O. Reg 170/03 SCHEDULE 16.3	Cartridge filters changed. Distribution system flushed. Treated and distribution chlorine residual and bacteriological samples collected. While turbidity analyzer is offline (until repaired and restored) daily site visits with hand held turbidity reading must be completed.
October 22, 2024	166721	Treated Water	Loss of Chlorine Analyzer	CT online chlorine analyzer lost flow after brief power outage caused pump providing flow to analyzer to lose prime.	O. Reg 170/03 SCHEDULE 16.3	Re-primed pump, corrected chlorine reading, Tested treated and distribution water for chlorine and bacteriological samples collected. Flush distribution.

Non-Compliance

Legislation	Requirement(s) system failed to meet	Duration of the failure (i.e. date(s))	Corrective Action	Status
There were no non-compliance issues identified during this period.				

Regulatory Sample Results Summary

Microbiological Testing

	No. of Samples Collected	Range of E.Coli Results		Range of Total Coliform Results		Range of HPC Results	
		Min	Max	Min	Max	Min	Max
Raw Water	13	0	3	19	130		
Treated Water	9	0	0	0	0	0	0
Distribution Water	34	0	0	0	0	0	1

Note: There was 3 instances where we received an NDOGT on the raw water. (NDOGT-Overgrown with Target Bacteria)

Operational Testing

	No. of Samples Collected	Range of Results	
		Minimum	Maximum
Turbidity, In-House (NTU) - RW	14	0.16	0.50
Turbidity, On-Line (NTU) - FiltOL	8760	0.00	2.01
Free Chlorine Residual, On-Line (mg/L) - TW	8760	0.17	4.44
Free Chlorine Residual, In-House (mg/L) - TW	87	1.42	4.13

Note: For continuous monitors 8760 is used as the number of samples**.** Spikes recorded by on-line instrumentation were a result of air bubbles and various maintenance/calibration activities. All spikes and drops are reviewed for compliance with O.Reg 170/03

Inorganic Parameters

These parameters are tested as a requirement under 170/03. Sodium, Fluoride and Metals, are required to be tested every 5 years. Nitrate and Nitrite are tested quarterly. In the event any of the parameters exceed half of the maximum allowable concentration the parameter is required to be sampled quarterly.

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Treated Water					
Antimony: Sb (ug/L) - TW	2021/08/31	<MDL 0.6	6.0	No	No
Arsenic: As (ug/L) - TW	2021/08/31	<MDL 0.2	10.0	No	No
Barium: Ba (ug/L) - TW	2021/08/31	1.25	1000.0	No	No
Boron: B (ug/L) - TW	2021/08/31	1.2	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2021/08/31	0.004	5.0	No	No
Chromium: Cr (ug/L) - TW	2021/08/31	0.30	50.0	No	No
Mercury: Hg (ug/L) - TW	2021/08/31	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2021/08/31	<MDL0.04	50.0	No	No
Uranium: U (ug/L) - TW	2021/08/31	0.02	20.0	No	No
Additional Inorganics					
Fluoride (mg/L) - TW	2021/08/31	<MDL 0.06	1.5	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Nitrite (mg/L) - TW	2024/01/02	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2024/04/04	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2024/07/02	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2024/10/07	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2024/01/02	0.009	10.0	No	No
Nitrate (mg/L) - TW	2024/04/04	0.036	10.0	No	No
Nitrate (mg/L) - TW	2024/07/02	0.016	10.0	No	No
Nitrate (mg/L) - TW	2024/10/07	<MDL 0.006	10.0	No	No
Sodium: Na (mg/L) - TW	2021/08/31	21.0	20*	Yes	Yes

MAC = Maximum Allowable Concentration as per O.Reg 169/03
BDL = Below the laboratory detection level

*There is no "MAC" for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified mg/L when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets. Sodium for The Landing DWS was reported adverse in 2021.

Schedule 15 Sampling:

The Schedule 15 Sampling is required under O.Reg 170/03.

Distribution System	Number of Sampling Points	Number of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
			Minimum	Maximum		
Alkalinity (mg/L)	8	2	11	13	N/A	N/A
pH	8	2	6.50	7.20	N/A	N/A
Lead (ug/l)	8	2	2.70	3.10	10	0

Organic Parameters

These parameters are tested every five years as a requirement under O.Reg 170/03. In the event any of the parameters exceed half of the maximum allowable concentration the parameter is required to be sampled quarterly.

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Treated Water					
Alachlor (ug/L) - TW	2021/08/31	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2021/08/31	<MDL 0.01	5.0	No	No
Azinphos-methyl (ug/L) - TW	2021/08/31	<MDL 0.05	20.0	No	No
Benzene (ug/L) - TW	2021/08/31	<MDL 0.32	1.0	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Benzo(a)pyrene (ug/L) - TW	2021/08/31	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2021/08/31	<MDL 0.33	5.0	No	No
Carbaryl (ug/L) - TW	2021/08/31	<MDL 0.05	90.0	No	No
Carbofuran (ug/L) - TW	2021/08/31	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (ug/L) - TW	2021/08/31	<MDL 0.17	2.0	No	No
Chlorpyrifos (ug/L) - TW	2021/08/31	<MDL 0.02	90.0	No	No
Diazinon (ug/L) - TW	2021/08/31	<MDL 0.02	20.0	No	No
Dicamba (ug/L) - TW	2021/08/31	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (ug/L) - TW	2021/08/31	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (ug/L) - TW	2021/08/31	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (ug/L) - TW	2021/08/31	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (ug/L) - TW	2021/08/31	<MDL 0.33	14.0	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2021/08/31	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (ug/L) - TW	2021/08/31	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2021/08/31	<MDL 0.19	100.0	No	No
Diclofop-methyl (ug/L) - TW	2021/08/31	<MDL 0.4	9.0	No	No
Dimethoate (ug/L) - TW	2021/08/31	<MDL 0.06	20.0	No	No
Diquat (ug/L) - TW	2021/08/31	<MDL 1.0	70.0	No	No
Diuron (ug/L) - TW	2021/08/31	<MDL 0.03	150.0	No	No
Glyphosate (ug/L) - TW	2021/08/31	<MDL 1.0	280.0	No	No
Malathion (ug/L) - TW	2021/08/31	<MDL 0.02	190.0	No	No
2-Methyl-4chlorophenoxyacetic Acid (MCPA)	2021/08/31	<MDL 0.01	50.0	No	No
Metolachlor (ug/L) - TW	2021/08/31	<MDL 0.02	80.0	No	No
Metribuzin (ug/L) - TW	2021/08/31	<MDL 0.3	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2021/08/31	<MDL 1.0	10.0	No	No
Paraquat (ug/L) - TW	2021/08/31	<MDL 0.04	3.0	No	No
PCB (ug/L) - TW	2021/08/31	<MDL 0.15	60.0	No	No
Pentachlorophenol (ug/L) - TW	2021/08/31	<MDL 0.01	2.0	No	No
Phorate (ug/L) - TW	2021/08/31	<MDL 1.0	190.0	No	No
Picloram (ug/L) - TW	2021/08/31	<MDL 0.03	1.0	No	No
Prometryne (ug/L) - TW	2021/08/31	<MDL 0.01	10.0	No	No
Simazine (ug/L) - TW	2021/08/31	<MDL 0.01	1.0	No	No
Terbufos (ug/L) - TW	2021/08/31	<MDL 0.35	10.0	No	No
Tetrachloroethylene (ug/L) - TW	2021/08/31	<MDL 0.2	100.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2021/08/31	<MDL 0.01	230.0	No	No
Triallate (ug/L) - TW	2021/08/31	<MDL 0.44	5.0	No	No
Trichloroethylene (ug/L) - TW	2021/08/31	<MDL 0.25	5.0	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2021/08/31	<MDL 0.12	100.0	No	No
Trifluralin (ug/L) - TW	2021/08/31	<MDL 0.02	45.0	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Vinyl Chloride (ug/L) - TW	2021/08/31	<MDL 0.17	1.0	No	No
Distribution Water					
Trihalomethane: Total (ug/L) Annual Average - DW	2024	32.50	100	No	No
HAA Total (ug/L) Annual Average - DW	2024	36.78	80	No	No

MAC = Maximum Allowable Concentration as per O.Reg 169/03
BDL = Below the laboratory detection level

Additional Legislated Samples

There was no additional sampling required.

Major Maintenance Summary

WO #	Description
3835969	Check Valve for Recirculation Pump, Replacement
3903798	Outlet Cover with Waterproof Cover, Replace
4096621	Chlorine Pump, Install
4146055	Filter Turbidity Analyzer Desiccant Cartridge, Replace