

CITY OF ELLIOT LAKE WATER TREATMENT PLANT 2025 ANNUAL REPORT

Drinking-Water System Number:	220002789
Drinking-Water System Name:	Elliot Lake Water Treatment Plant
Drinking-Water System Owner:	Corporation of the City of Elliot Lake
Drinking-Water System Category:	Water Treatment Subsystem Class 2
Period being reported:	January 01, 2025 - December 31, 2025

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [☒] No [☐]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [☒] No [☐]

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

The summary report is available at City Hall, the Water Treatment Plant and is posted on the City's website at:
<http://elliotlake.ca/en/our-community/water-and-wastewater.aspx>

Complete for all other Categories.

Number of Designated Facilities served:

Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [☐] No [☐]

Number of Interested Authorities you report to:

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [☐] No [☐]

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
Not applicable	

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 [☐] not applicable [☒]

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 City of Elliot Lake Water Treatment Plant is classified as a Class 2 direct filtration plant.

Water is drawn from the lake through an intake structure, located in approximately 12.2 m (40 ft.) of water and is gravity fed through a 295 m long marine pipeline to the low lift pumping station wet well. The water is then pumped to the main facility at 200 Spine Road.

The raw water then passes through a raw water flow meter and into reactor/mixing tanks. At this point Polyaluminum Chloride (PAC) is added to the process to aid in the production of floc (particulate matter of sufficient size to be removed by the filters).

The water then continues into the hydraulic spiral flow flocculation tanks and afterwards passes through three rectangular filters with dual media (anthracite/sand). The filtered water is collected in an underdrain system and enters a 2,300 m³ Clearwell (storage reservoir) on site.

Chlorine is added to the treated water as it leaves the filters to achieve required disinfection.

Fluoride is also added at this point. Fluoride does not play a role in the treatment process but rather acts as an agent in the prevention of tooth decay in young children.

High Lift pumps now pump the treated water from the Clearwell through a flow meter and into the distribution system. This treated water makes its way to consumers' homes, either directly or from the standpipe storage facilities.

Lime is added to the water as it leaves the plant to aid in the prevention of corrosion in the distribution system. The lime is also used for pH and alkalinity adjustment.

List all water treatment chemicals used over this reporting period

Chlorine, Polyaluminum Chloride (PAC), Hydrated Lime & Hydrofluorosilicic Acid

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

Annual Diesel Load Test - \$3,294
 Repairing Chlorine Outlet Valves - \$1,298
 Fluoride Spill Disposal - \$15,000
 Annual Calibrations of Analyzers - \$6,429
 Crane and Hoist Inspections - \$2,485
 DWQMS Surveillance Audit - \$2,938
 Annual Calibrations of Flow Meters - \$3,667
 Backflow Preventers Inspection & Maintenance - \$4,200
 Maintaining the Distribution System Infrastructure (ie: Flushing & Repairs) - \$50,000
 pH Analyzer Replacement- \$3,187
 Sludge Tank Mixer Motor Replacement - \$4,303

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

INCIDENT DATE	PARAMETER	RESULTS	UNIT OF MEASURE	CORRECTIVE ACTION	CORRECTIVE ACTION DATE
January 24 th , 2025	Watermain Repair	Pressure Loss	PSI	Boil Water Advisory – Flush and Two Sets of Samples	January 31 st , 2025
January 26 th , 2025	Watermain Repair	Pressure Loss	PSI	Boil Water Advisory – Flush and Two Sets of Samples	January 31 st , 2025
March 3 rd , 2025	Watermain Repair	Pressure Loss	PSI	Boil Water Advisory – Flush and Two Sets of Samples	March 7 th , 2025
April 1 st , 2025	Watermain Repair	Pressure Loss	PSI	Boil Water Advisory – Flush and Two Sets of Samples	April 7 th , 2025

April 8th, 2025	Deviation from Critical Control Limit	High Fluoride reading	mg/L	Analyzer Repaired and fluoride reintroduced	October 7th, 2025
May 23rd, 2025	Sample Result Microbiological	Total Coliform 1	CFU/100mL	Boil Water Advisory – Two Sets of Samples	May 30th, 2025
June 11th, 2025	Sample Result Microbiological	Total Coliform 1	CFU/100mL	Boil Water Advisory – Two Sets of Samples	June 16th, 2025
June 26th, 2025	Sample Result Microbiological	Total Coliform 21	CFU/100mL	Boil Water Advisory - Two Sets of Samples	July 7th, 2025
June 28th, 2025	Resample Result Microbiological	Total Coliform 8	CFU/100mL	Boil Water Advisory – Two Sets of Samples	July 7th, 2025
July 29th, 2025	Watermain Repair	Pressure Loss	PSI	Boil Water Advisory – Flush and Two Sets of Samples	August 8th, 2025
August 18th, 2025	Watermain Repair	Pressure Loss	PSI	Boil Water Advisory – Flush and Two Sets of Samples	August 22nd, 2025
August 28th, 2025	Sample Result Microbiological	Total Coliform 1	CFU/100mL	Boil Water Advisory – Two Sets of Samples	September 5th, 2025
October 21st, 2025	Auto Flusher Installation	Pressure Loss	PSI	Boil Water Advisory – Flush and Two Sets of Samples	October 30th, 2025

Microbiological testing done under Schedule 10, 11 or 12 of the 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	52	0-3	0 – 19	N/A	N/A
Treated	52	N/D	N/D	52	0 – 5
Distribution	312	N/D	0 – 21	109	0 – 67

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 #)	Unit of Measure
Turbidity	8760	0.17 – 3.00	NTU
Chlorine	8760	0.77 – 2.35	mg/L
Fluoride	8760	0.00 – 1.86	mg/L

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

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
Municipal Drinking Water License 208-101 March 25 th , 2022	Clarifier Discharge Suspended Solids	January 25 th , 2025	13	mg/L
		February 11 th , 2025	11	mg/L
		March 2 nd , 2025	15	mg/L
		April 18 th , 2025	13	mg/L
		May 25 th , 2025	12	mg/L
		June 22 nd , 2025	15	mg/L
		July 26 th , 2025	11	mg/L
		August 31 st , 2025	12	mg/L
		September 11 th , 2025	12	mg/L
		October 25 th , 2025	17	mg/L
		November 21 st , 2025	12	mg/L
		December 19 th , 2025	20	mg/L

The Annual Clarifier Discharge Suspended Solids average for 2025 is 13.6 mg/L

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
Municipal Drinking Water License 208-101 March 25 th , 2022	Clarifier Discharge Total Chlorine Residual	January 25 th , 2025	0.00	mg/L
		February 11 th , 2025	0.00	mg/L
		March 2 nd , 2025	0.00	mg/L
		April 18 th , 2025	0.01	mg/L
		May 25 th , 2025	0.01	mg/L
		June 22 nd , 2025	0.02	mg/L
		July 25 th , 2025	0.00	mg/L
		August 31 st , 2025	0.02	mg/L
		September 11 th , 2025	0.01	mg/L
		October 25 th , 2025	0.04	mg/L
		November 21 st , 2025	0.00	mg/L
		December 20 th , 2025	0.01	mg/L

The Annual Clarifier Discharge Total Chlorine Residual average for 2025 is 0.01 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	January 6 th , 2025	0.6 <MDL	µg/L	no
Arsenic	January 6 th , 2025	0.2 <MDL	µg/L	no
Barium	January 6 th , 2025	9.43	µg/L	no
Boron	January 6 th , 2025	5	µg/L	no
Cadmium	January 6 th , 2025	0.005	µg/L	no
Chromium	January 6 th , 2025	0.16	µg/L	no
*Lead	not applicable for this reporting period			
Mercury	January 6 th , 2025	0.01 <MDL	µg/L	no
Selenium	January 6 th , 2025	0.04 <MDL	µg/L	no
Sodium	January 6 th , 2025	9.88	mg/L	no
Uranium	January 6 th , 2025	0.074	µg/L	no
Fluoride	January 6 th , 2025	0.06 <MDL	mg/L	no
Nitrite	Annual Average	0.003 <MDL	mg/L	no
Nitrate	Annual Average	0.101	mg/L	no

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Plumbing	not applicable for this reporting period			
Distribution	8	0.01 – 2.05	µg/L	None

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	January 6 th , 2025	0.02 <MDL	µg/L	no
Atrazine	January 6 th , 2025	0.01 <MDL	µg/L	no
Atrazine + N-dealkylated metabolites	January 6 th , 2025	0.01 <MDL	µg/L	no
Azinphos-methyl	January 6 th , 2025	0.05 <MDL	µg/L	no
Benzene	January 6 th , 2025	0.32 <MDL	µg/L	no
Benzo(a)pyrene	January 6 th , 2025	0.004 <MDL	µg/L	no
Bromoxynil	January 6 th , 2025	0.33 <MDL	µg/L	no
Carbaryl	January 6 th , 2025	0.05 <MDL	µg/L	no
Carbofuran	January 6 th , 2025	0.01 <MDL	µg/L	no
Carbon Tetrachloride	January 6 th , 2025	0.17 <MDL	µg/L	no
Chlorpyrifos	January 6 th , 2025	0.02 <MDL	µg/L	no
Diazinon	January 6 th , 2025	0.02 <MDL	µg/L	no
Dicamba	January 6 th , 2025	0.20 <MDL	µg/L	no
1,2-Dichlorobenzene	January 6 th , 2025	0.41 <MDL	µg/L	no
1,4-Dichlorobenzene	January 6 th , 2025	0.36 <MDL	µg/L	no
1,2-Dichloroethane	January 6 th , 2025	0.35 <MDL	µg/L	no
1,1-Dichloroethylene (vinylidene chloride)	January 6 th , 2025	0.33 <MDL	µg/L	no
Dichloromethane	January 6 th , 2025	0.35 <MDL	µg/L	no
2,4 Dichlorophenol	January 6 th , 2025	0.15 <MDL	µg/L	no
2,4-Dichlorophenoxyacetic acid (2,4-D)	January 6 th , 2025	0.19 <MDL	µg/L	no
Diclofop-methyl	January 6 th , 2025	0.40 <MDL	µg/L	no
Dimethoate	January 6 th , 2025	0.06 <MDL	µg/L	no
Desethyl atrazine	January 6 th , 2025	0.01 <MDL	µg/L	no
Diquat	January 6 th , 2025	1 <MDL	µg/L	no
Diuron	January 6 th , 2025	0.03 <MDL	µg/L	no
Glyphosate	January 6 th , 2025	1 <MDL	µg/L	no
Malathion	January 6 th , 2025	0.02 <MDL	µg/L	no
Metolachlor	January 6 th , 2025	0.01 <MDL	µg/L	no
Metribuzin	January 6 th , 2025	0.02 <MDL	µg/L	no
Monochlorobenzene	January 6 th , 2025	0.3 <MDL	µg/L	no
Paraquat	January 6 th , 2025	1 <MDL	µg/L	no
Pentachlorophenol	January 6 th , 2025	0.15 <MDL	µg/L	no
Phorate	January 6 th , 2025	0.01 <MDL	µg/L	no
Picloram	January 6 th , 2025	1 <MDL	µg/L	no
Polychlorinated Biphenyls (PCB)	January 6 th , 2025	0.04 <MDL	µg/L	no
Prometryne	January 6 th , 2025	0.03 <MDL	µg/L	no
Simazine	January 6 th , 2025	0.01 <MDL	µg/L	no
THM (Annual Average)	Annual Average	41.5	µg/L	no
Total Haloacetic Acids (HAA5)	Annual Average	30.4	µg/L	no
MCPA	January 6 th , 2025	0.00012 <MDL	µg/L	no
Terbufos	January 6 th , 2025	0.01 <MDL	µg/L	no
Tetrachloroethylene	January 6 th , 2025	0.35 <MDL	µg/L	no
2,3,4,6-Tetrachlorophenol	January 6 th , 2025	0.20 <MDL	µg/L	no

Triallate	January 6 th , 2025	0.01 <MDL	µg/L	no
Trichloroethylene	January 6 th , 2025	0.44 <MDL	µg/L	no
2,4,6-Trichlorophenol	January 6 th , 2025	0.25 <MDL	µg/L	no
Trifluralin	January 6 th , 2025	0.02 <MDL	µg/L	no
Vinyl Chloride	January 6 th , 2025	0.17 <MDL	µg/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	N/A	N/A	N/A