Town of Prescott
Drinking Water System

Waterworks # 220001245
System Category – Large Municipal Residential

Annual Water Report

Prepared For: Town of Prescott

Reporting Period of January 1st – December 31st 2024

Issued: February 26, 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 and Schedule 22

Table of Contents

Revision History

Date	Revision #	Revision Notes
February 26, 2025	0	Annual report issued

Report Availability

This system does not serve more than 10,000 residence and the annual reports will be available to residents at the Town Hall located at 360 Dibble Street West, Prescott, Ontario, as well as on the Town website. (www.prescott.ca) Copies are provided free of charge if requested.

Compliance Report Card

Compliance Event	# of Events
Ministry of Environment Inspections	- 1 Ministry Inspection on January 10, 2024 - Final Inspection Rating: 96.88%
Ministry of Labour Inspections	- No Ministry of Labour inspections in 2024
QEMS External Audit	- 1 QEMS Audit on September 18, 2024 - 1 Opportunity for Improvement
AWQI's/BWA	- No AWQI/BWA in 2024
Non-Compliance	- No Non-compliance in 2024
Community Complaints	- 4 community complaints referenced in report
Spills	- No spills in 2024
Watermain Breaks	- 2 water main breaks repaired in 2024

System Process Description

Raw Source

Water is drawn from the St. Lawrence River into the plant via a 600 mm diameter steel intake pipe equipped with a sodium hypochlorite feed system for zebra mussel control. Raw water passes through a travelling screen unit located in the low lift building. The unit consists of wire mesh screens on a rotating belt. From there it is pumped to the plant for treatment.

Treatment

Once water enters the plant, an aluminum based coagulant is added and flash mixed. The water then travels to flocculation tanks where the coagulant is allowed time to attract fine particles from the water. From there, the water passes through one of three dual media rapid sand filters. Sodium hypochlorite and hydrofluosilicic acid are added as water enters the clearwell. To maximize contact time, the treated water is diverted to two baffled reservoirs, each with a capacity of 800 m^3. Four vertical turbine pumps are available for supplying the distribution demand as needed.

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Aluminum Sulphate	Coagulant	Kemira
Hydrofluosilicic Acid	Fluoridation	Brenntag
Sodium Hypochlorite	Disinfection	LAVO

Distribution

Watermains in the distribution system are composed of PVC, cast iron and ductile iron. An elevated storage tank is located on Sophia Street and has a storage capacity of 4200 m^3. The storage facility provides for peak hour demands and fire flows.

Summary of Non-Compliance

Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
There were no adverse Water Quality incidents reported during the reporting period.						

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 incidents reported during the reporting period.				

Non-Compliance Identified in a Ministry Inspection:

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
There were no actions identified in the received inspection report.				

Community Complaints

Date yyyy/mm/dd	Location	Details of Complaint	Corrective Action Taken
2024/01/19	242 Park East	Milky water colour	Air in lines.
2024/08/19	698 Dibble West	High usage	Valve open to unknown source in basement.
2024/08/27	186 Wood East	Inquired if water was safe to drink	No issues at time of inspection.
2024/11/11	507 Churchill East	Water Odour	River Turnover

*Community complaints were received by the Town Staff

Flows

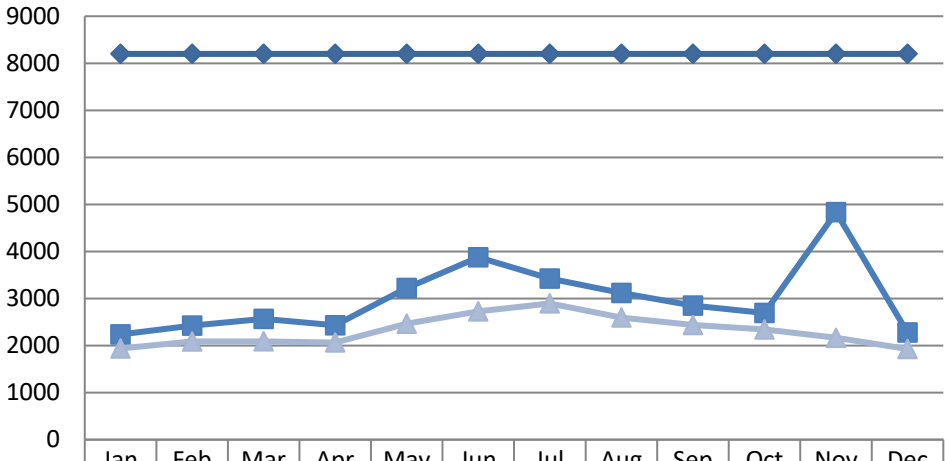
Prescott's drinking water system is operating on average under half the rated capacity.

Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water. 2024 Raw Flow Data was submitted to the Ministry electronically under permit #5506-9RMLKE. The confirmation and a copy of the data that was submitted are attached in Appendix A.

Total Monthly Flows (m3/d)

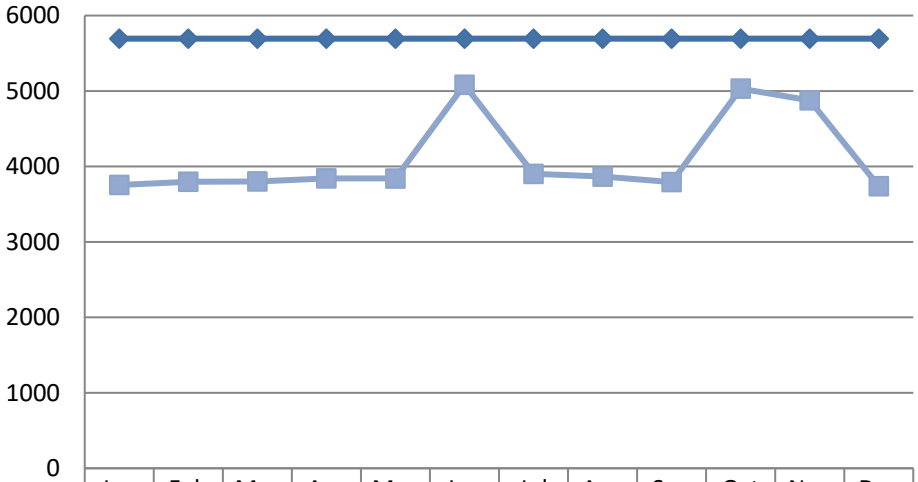
Max Allowable PTTW



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable (m3/d)	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200
Max Flow (m3/d)	2236	2424	2566	2431	3223	3876	3423	3118	2849	2693	4834	2275
Avg (m3/d)	1938	2087	2089	2064	2465	2726	2895	2595	2438	2342	2165	1927

Monthly Rated Flows (L/min)

Max allowable rate - PTTW



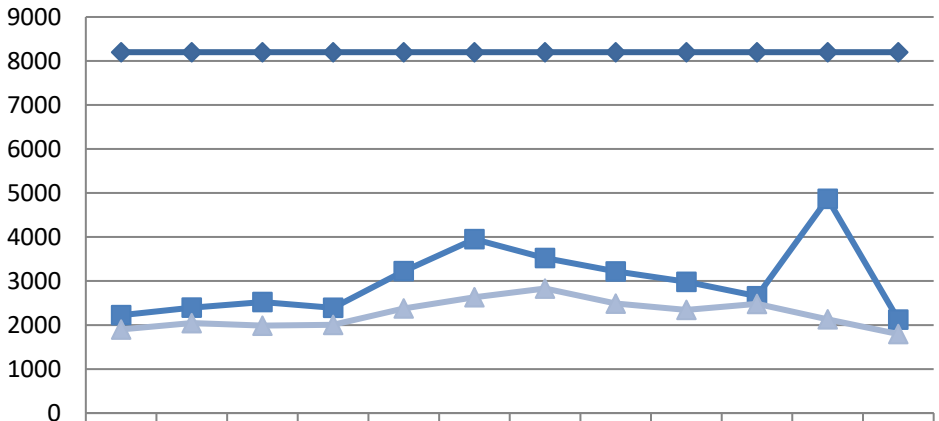
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Allowable Rate (L/min)	5694	5694	5694	5694	5694	5694	5694	5694	5694	5694	5694	5694
Max Rate (L/min)	3755	3797	3801	3842	3841	5083	3902	3866	3793	5031	4877	3739

Treated Water Flows

The Treated Water flows are regulated under the Municipal Licence.

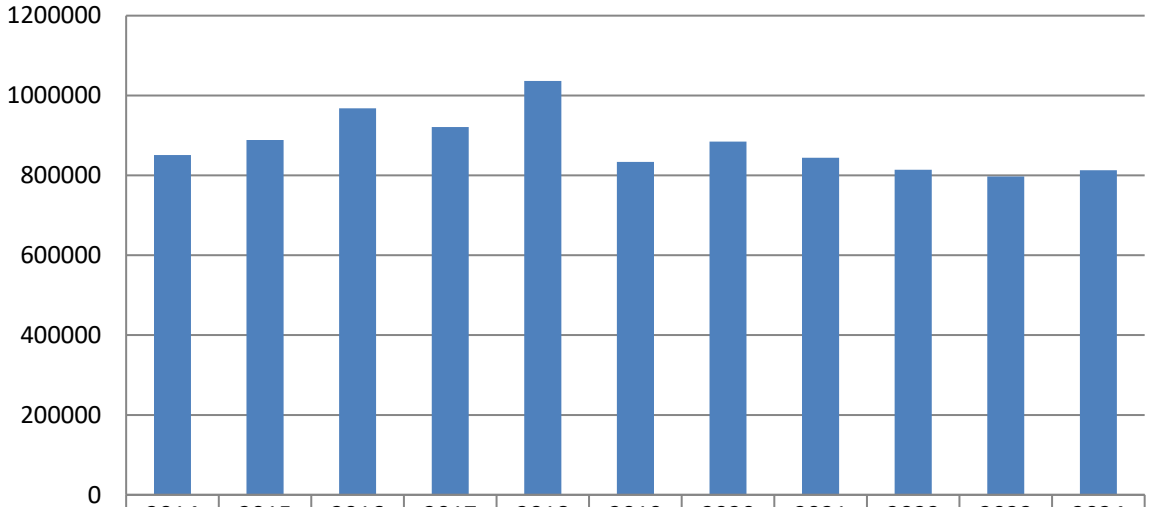
Monthly Rated Flows

Rated Capacity - MDWL



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rated Capacity (m3/d)	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200
Max Daily Flow (m3/d)	2224	2396	2523	2392	3224	3952	3522	3219	2983	2656	4870	2124
Avg (m3/d)	1899	2044	1986	2005	2377	2631	2830	2489	2344	2481	2131	1795

Annual Total Flow Comparison



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
WTP (m3)	851068	888660	968039	921213	1036288	833833	884789	844284	813899	797101	812734

Regulatory Sample Results Summary

Microbiological Testing

	# of Samples Collected	Range of E.Coli Results		Range of Total Coliform Results		# of HPC Samples	Range of HPC Results	
		Minimum #	Maximum #	Minimum #	Maximum #		Minimum #	Maximum #
Raw Water	52	0	20	0	69	0		
Treated Water	53	0	0	0	0	53	10	10
Distribution Water	212	0	0	0	0	53	10	160

Operational Testing

Parameter & Sample Type	No. of Samples Collected	Range of Results		
		Minimum	Average	Maximum
Turbidity; On-Line (NTU)- Filt1	8760	N/A	0.07	0.33
Turbidity; On-Line (NTU)- Filt2	8760	N/A	0.03	0.22
Turbidity; On-Line (NTU)- Filt3	8760	N/A	0.09	0.22
Turbidity; On-Line (NTU)- RW	8760	N/A	1.22	4.40
Turbidity; On-Line (NTU)- TW	8760	N/A	0.05	3.19
Fluoride Residual On-line (mg/L)- TW	8760	0.03	0.61	1.21
Free Chlorine Residual; In-House (mg/L)- TW	53	0.78	1.79	1.76
Free Chlorine Residual; On-Line (mg/L)- TW	8760	1.10	1.70	4.16
Free Chlorine Residual; In-House (mg/L)- DW	212	0.31	1.42	1.88
Free Chlorine Residual; On-Line (mg/L)- DW	8760	0.39	1.39	2.32

NOTE: spikes recorded by on-line instrumentation were a result of air bubbles and various maintenance/calibration activities. All spikes are reviewed for compliance with O.Reg 170/03

Inorganic Parameters

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

- MAC = Maximum Allowable Concentration as per O.Reg 169/03
- MDL = Method Detection Limit

Treated Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	2024/01/02	0.1	6	No	No
Arsenic: As (ug/L) - TW	2024/01/02	0.3	10	No	No
Barium: Ba (ug/L) - TW	2024/01/02	22	1000	No	No
Boron: B (ug/L) - TW	2024/01/02	18	5000	No	No
Cadmium: Cd (ug/L) - TW	2024/01/02	<MDL 0.015	5	No	No
Chromium: Cr (ug/L) - TW	2024/01/02	<MDL 1	50	No	No
Mercury: Hg (ug/L) - TW	2024/01/02	<MDL 0.02	1	No	No
Selenium: Se (ug/L) - TW	2024/01/02	<MDL 1	50	No	No
Uranium: U (ug/L) - TW	2024/01/02	0.25	20	No	No
Additional Inorganics					
Fluoride (mg/L) - TW	2019/01/14	0.4	1.5	No	No
Nitrate : (mg/L) - TW	2024/01/02	0.28	10	No	No
Nitrate : (mg/L) - TW	2024/04/02	0.29	10	No	No
Nitrate : (mg/L) - TW	2024/07/02	0.2	10	No	No
Nitrate : (mg/L) - TW	2024/10/07	0.1	10	No	No
Nitrite : (mg/L) - TW	2024/01/02	0.05	1	No	No
Nitrite : (mg/L) - TW	2024/04/02	<MDL 0.05	1	No	No
Nitrite : (mg/L) - TW	2024/07/02	0.07	1	No	No
Nitrite : (mg/L) - TW	2024/10/07	<MDL 0.05	1	No	No
Sodium / Na (mg/L) - TW	2024/01/02	15.1	20*	No	Yes

*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 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.

Schedule 15 Sampling:

The Schedule 15 Sampling is required under O.Reg 170/03. This system is under reduced sampling. Lead last sampled January 2023 due to be sampled 2025.

Distribution System	Number of Sampling Points	Number of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
			Minimum	Maximum		
Alkalinity (mg/L)	6	6	90	100	N/A	N/A
pH	6	6	7.10	7.6	N/A	N/A
Lead (ug/l)	4	4	0.05	0.15	10	0

Organic Parameters

These parameters are tested annually 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.

Treated Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	# of Exceedances	
				MAC	1/2 MAC
1,1-Dichloroethylene (ug/L)-TW	2024/01/02	< MDL 0.5	14	No	No
1,1-Dichloroethylene (ug/L)-TW	2024/07/15	< MDL 0.5	14	No	No
1,2-Dichlorobenzene (ug/L)-TW	2024/01/02	< MDL 0.5	200	No	No
1,2-Dichlorobenzene (ug/L)-TW	2024/07/15	< MDL 0.5	200	No	No
1,2-Dichloroethane (ug/L)-TW	2024/01/02	< MDL 0.5	5	No	No
1,2-Dichloroethane (ug/L)-TW	2024/07/15	< MDL 0.5	5	No	No
1,4-Dichlorobenzene (ug/L)-TW	2024/01/02	< MDL 0.5	5	No	No
1,4-Dichlorobenzene (ug/L)-TW	2024/07/15	< MDL 0.5	5	No	No
2,3,4,6-Tetrachlorophenol (ug/L)-TW	2024/01/02	< MDL 0.2	100	No	No
2,4,6-Trichlorophenol (ug/L)-TW	2024/01/02	< MDL 0.2	5	No	No
2,4-Dichlorophenol (ug/L)-TW	2024/01/02	< MDL 0.2	900	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L)-TW	2024/01/02	< MDL 1	100	No	No
Alachlor (ug/L) -TW	2024/01/02	< MDL 0.3	5	No	No
Atrazine + N-dealkylated metabolites (ug/L)-TW	2024/01/02	< MDL 0.5	5	No	No
Azinphos-methyl (ug/L)-TW	2024/01/02	< MDL 1	20	No	No
Benzene (ug/L)-TW	2024/01/02	< MDL 0.5	1	No	No
Benzene (ug/L)-TW	2024/07/15	< MDL 0.5	1	No	No
Benzo(a)pyrene (ug/L)-TW	2024/01/02	< MDL 0.006	0.01	No	Yes
Bromoxynil (ug/L)-TW	2024/01/02	< MDL 0.5	5	No	No
Carbaryl (ug/L)-TW	2024/01/02	< MDL 3	90	No	No
Carbofuran (ug/L) -TW	2024/01/02	< MDL 1	90	No	No
Carbon Tetrachloride (ug/L) -TW	2024/01/02	< MDL 0.2	2	No	No
Carbon Tetrachloride (ug/L) -TW	2024/07/15	< MDL 0.2	2	No	No
Chlorpyrifos (ug/L) -TW	2024/01/02	< MDL 0.5	90	No	No
Diazinon (ug/L)-TW	2024/01/02	< MDL 1	20	No	No
Dicamba (ug/L)-TW	2024/01/02	< MDL 1	120	No	No
Dichloromethane (Methylene Chloride) (ug/L)-TW	2024/01/02	< MDL 5	50	No	No
Dichloromethane (Methylene Chloride) (ug/L)-TW	2024/07/15	< MDL 5	50	No	No
Diclofop-methyl (ug/L)-TW	2024/01/02	< MDL 0.9	9	No	No

Treated Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	# of Exceedances	
				MAC	1/2 MAC
Dimethoate (ug/L)-TW	2024/01/02	< MDL 1	20	No	No
Diquat (ug/L)-TW	2024/01/02	< MDL 5	70	No	No
Diuron (ug/L)-TW	2024/01/02	< MDL 5	150	No	No
Glyphosate (ug/L)-TW	2024/01/02	< MDL 25	280	No	No
Malathion (ug/L)-TW	2024/01/02	< MDL 5	190	No	No
Metolachlor (ug/L)-TW	2024/01/02	< MDL 3	50	No	No
Metribuzin (ug/L)-TW	2024/01/02	< MDL 3	80	No	No
Monochlorobenzene (Chlorobenzene) (ug/L)-TW	2024/07/15	< MDL 0.5	80	No	No
Paraquat (ug/L)-TW	2024/01/02	< MDL 1	10	No	No
PCB (ug/L)-TW	2024/01/02	< MDL 0.05	3	No	No
Pentachlorophenol (ug/L)-TW	2024/01/02	< MDL 0.2	60	No	No
Phorate (ug/L)-TW	2024/01/02	< MDL 0.3	2	No	No
Picloram (ug/L)-TW	2024/01/02	< MDL 5	190	No	No
Prometryne (ug/L)-TW	2024/01/02	< MDL 0.1	1	No	No
Simazine (ug/L)-TW	2024/01/02	< MDL 0.5	10	No	No
Terbufos (ug/L)-TW	2024/01/02	< MDL 0.5	1	No	No
Tetrachloroethylene (ug/L)-TW	2024/01/02	< MDL 0.5	10	No	No
Tetrachloroethylene (ug/L)-TW	2024/07/15	< MDL 0.5	10	No	No
Triallate (ug/L) -TW	2024/01/02	< MDL 10	230	No	No
Trichloroethylene (ug/L)-TW	2024/01/02	< MDL 0.5	5	No	No
Trichloroethylene (ug/L)-TW	2024/07/15	< MDL 0.5	5	No	No
Trifluralin (ug/L)-TW	2024/01/02	< MDL 0.5	45	No	No
Vinyl Chloride (ug/L)-TW	2024/01/02	< MDL 0.2	1	No	No
Vinyl Chloride (ug/L)-TW	2024/07/15	< MDL 0.2	1	No	No
HAA Total (ug/L) RAA -DW	2024	13.425	80	No	No
Trihalomethane: Total (ug/L) RAA-DW	2024	31.25	100	No	No

MAC = Maximum Allowable Concentration as per O.Reg 169/03
MDL = Method Detection Limit
RAA = Running Annual Average

Additional Legislated Samples

Document	Parameter	Limit (mg/L)	Result (mg/L)
MDWL # 161-101	Filter Backwash Supernatant Suspended Solids	Annual Average < 25	3.42

Major Maintenance Summary

Work order	Description
3761841	Generator Maintenance.
3761845	Filter media anthracite replacement purchase.
3761846	Control valve and actuator.
3761855	Floc tank mixer.
3761865	Replaced zebra mussel lines from low lift to raw intake.
4095911	Filter preparation for aeration backwash.
4234929	New water tower commissioning.
3761851	Window replacements.
3761862	Treated water discharge flow meter.
3761876	Filter 1 and 2 discharge actuator valves.

Distribution Maintenance

Date	Description
2024/01/23	Watermain break - Intersection of Henry & Centre St (Circumferential)
2024/01/26	New watermain and Hydrant at the Quality Inn Hotel
2024/11/12	New water tower
2024/12/16	Watermain break - Intersection of Henry & Centre St (Circumferential)

Appendix A

WTRS Data and Submission Confirmation