



Corporation of the Town of Perth  
Drinking Water System  
2025 Summary Report

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# 2025 DWS Summary Report

## DWS Summary Report Overview

A Summary Report, as per Ontario Regulation 170/03, Schedule 22 must be prepared for each drinking water system in the province of Ontario. The report must be provided no later than March 31 to members of Municipal Council.

Free copies are available on our website, and paper copies available upon request. Notices of availability on our website and/or through media releases.

The DWS Summary report will cover a period for the preceding calendar year, January 01 to December 31, 2025.

The completion and presentation of this report will also fulfill the requirement for a compliance report to be produced in accordance applicable regulations.

Section 1 contains,

- any failures during the reporting periods to achieve the requirements of the Safe Drinking Water Act, associated drinking water regulations and guidelines, any approvals, any operating licences or permits, or any orders applicable to the Perth DWS system;
- duration of the failure, and measures taken to correct the failure;
- any priority concerns that might lead to failures to meet the operating requirements.

Section 2 contains,

- summary of quantities and flow rates of water taken from the Tay River, in addition to water production and process wastewater generation.

Supplemental Perth DWS information sources would include, but not limited to,

- The Town of Perth Water Treatment Plant year end documentation,
- The Town of Perth Water Distribution year end documentation,
- The Town of Perth DWS Annual Report, Infrastructure Report, Water Taking report.

Supplemental government legislation sources would include, but limited to,

- Safe Drinking Water Act, 2002
- Ontario Regulation 170/03, Drinking Water Systems
- Ontario Regulation 169/03, Ontario Drinking Water Quality Standards
- Ontario Regulation 128/04, Certification of Drinking Water System Operators and Water Quality Analysts

It is noted to ensure currency, up to date documents can be reviewed at <http://www.e-laws.gov.on.ca>.

Supplemental government support documentation is available at the Ministry of the Environment and Climate Change's Drinking Water Ontario website, <https://www.ontario.ca/page/drinking-water>.

## **Ontario Regulation 170/03, Schedule 22 – Summary Reports for Municipalities**

### Section 22-1

- as a large municipal residential system, the Town of Perth is required to complete and submit a Summary Report.

### Section 22-2 (1)

- requires the Summary Report is prepared in accordance with the regulation by no later than March 31, covering a period for the preceding calendar year.
- as the drinking water system is owned by the municipality, the Summary Report is required to be given to the members of the municipal council by March 31 of each year

### Section 22-2 (2)

- *The report must,*
  - a) list the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report; and*
  - b) for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.*
- Please refer to Section 1 of the Summary Report for this information

### Section 22-2 (3)

- *The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:*
  - a) A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.*
  - b) A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water licence, or if the system is receiving all of its water from another system under an agreement pursuant to subsection 5 (4), to the flow rates specified in the written agreement.*
- Please refer to Section 2 of the Summary Report for this information

### Section 22-2 (4)

- *If a report is prepared for a system that supplies water to a municipality under the terms of a contract, the owner of the system shall give a copy of the report to the municipality by March 31*
- Some services of the Perth DWS are located in Tay Valley Township, and as such, the Perth DWS Summary Report is forwarded to the Municipality by March 31.

## **DWS Information**

Drinking-Water System Number	220001272
Drinking-Water System Name:	Perth Drinking Water System
Drinking-Water System Owner:	Perth, The Corporation of the Town of

Period being reported:	Jan 01, 2024 to Dec 31, 2025
Latest MECP Inspection	February 09, 2026
Previous MECP Inspection	Feb 2024 (on-site); Jan 2025 (on-site)

Drinking-Water System Category:	Large Municipal Residential System (LMRS)
Drinking Water System Facilities	<ul style="list-style-type: none"> <li>• Class III Water Treatment Subsystem,</li> <li>• Class I Water Distribution Subsystem</li> </ul>

Municipal Drinking Water Licence (MDWL)	160-101
Licence Issue Date	July 26, 2021
Licence Revision Date (most recent)	July 26, 2021 (issue #7)
Licence Expiry Date	July 25, 2026

Drinking Water Works Permit	160-201
DWWP Issue Date	July 26, 2021 (Issue #3)
DWWP Expiry Date	July 25, 2026

Permits to Take Water	7770-A8HKRH
PTTW Issue Date	March 29, 2016
PTTW Expiry Date	March 31, 2026
Water Taking Location	Tay River
Financial Plan Number (under O. Reg. 453/07)	160-301
Financial Plan Issue Date	January 12, 2026
Accredited Operating Authority	The Corporation of the Town of Perth
Operating Authority No.	160-OA1
Operational Plan No.	160-401

## **SECTION 1 – FAILURE TO MEET REQUIREMENTS**

### **1.1. Adverse Water Quality Incident reports (Drinking Water System)**

1.1.1 No AWQI's reported in 2025

### **1.2. Ministry Orders**

1.2.1 Drinking Water System

- No MOE orders issued.

1.2.2 Water Treatment Subsystem

- No MOE orders issued.

1.2.3 Water Distribution Subsystem

- No MOE orders issued.

### **1.3. Notifications to MECP regarding operational issues**

1.3.1 No reported MECP notifications made regarding operational issues

### **1.4. MECP Identified Known Failures to Meet Requirements**

1.4.1 January 15, 2025 MECP DWS Inspection

A MECP DWS on-site inspection was conducted on January 15, 2025, which covered a period from February 07 to December 31, 2024. This was a focused inspection, with the Inspector's report released March 04, 2025. The following were identified non-compliance/ non-conformance issues (known failures to meet requirements) contained in the inspection report,

- NC-1. The owner/operating authority was not in compliance with the requirement to ensure updates to the Water Distribution map were completed in accordance with DWWP requirements.
  - *WD mapping was updated and procedure put in place to review and ensure updates completed every 12 months*
- NC-2. The owner/operating authority did not have evidence that the required notifications from the Municipal Drinking Water Licence (MDWL) and Drinking Water Works Permit (DWWP) to legal owners associated with the drinking water system were made.
  - *Procedure put in place to ensure that all developers and contractors are aware of the MDWL and DWWP requirements.*

- NC-3. The non-compliance issue was Form 1 documents were not prepared as required. This was identified as a non-compliance during the previous inspection and corrective actions taken, however implementation of the procedure had not occurred.
  - *A consolidated procedure was created and to be followed.*
  - *On March 11, a training session has held by an external consultant for ES staff awareness regarding MDWL/DWWP/DWQMS Forms 1,2 and 3's*

#### 1.4.2 February 2026 MECP DWS Inspection

On February 09, 2026, an announced MECP DWS inspection was conducted covering operations from January 01, 2025 to February 06, 2026. The MECP has the opportunity to make the inspection announced (Inspector schedules a date ahead of arrival), or unannounced (where the Inspector may just arrive on-site without notice). As of February 25, 2026, the inspection report had not been received.

### **1.5. MECP identified areas for possible improvement**

In the 2024 MECP Inspection Report, received March 04, 2025, any identified areas for improvement and other recommendations were considered and implemented whenever possible.

The Drinking Water System Infrastructure Review Report outlines operational and infrastructure areas for possible improvement, with some identified by MECP. Any corrective actions taken, being done, or to be considered, is included in the report.

### **1.6. Additional concerns meeting potential compliance or operational requirements**

The Drinking Water System Infrastructure Review Report, to be presented to Town of Perth Municipal Council, highlights abilities to maintain operational abilities, along with immediate, short term, and long term DWS operational needs.

In the report, significant issues or areas of concern that might be viewed as potential impact items to operations were listed. These lists contained issues identified by operational staff and management which might,

- pose potential risk with inability to meet compliance and/or operational requirements,
- help prevent equipment failure or down time,
- assist with more efficient operations.

Section 2 of the Infrastructure Report provided detailed assessment of the drinking water system abilities, including

- water treatment ability,
- water pumping capacity,
- process wastewater residue management ability,
- process automation computer system capability,
- water storage ability, and
- drinking water system staffing requirements.

Section 3 of the Infrastructure Report outlined,

- work completed (large projects) in 2025,
- DWS administrative infrastructure issues and considerations,
- immediate and short-term needs, and
- long term (2 to 5 year) operational needs forecasting.

## **SECTION 2 – SUMMARY OF PLANT FLOWS**

### **2.1. Raw Water (Source water)**

Individual daily RW flow expressed in Liters/day (1000 L = 1 m<sup>3</sup>) can be found in the Town's 2025 Annual Record of Water Taking (Permit to Take Water) report.

The table below (RW-1) gives the monthly average RW flow, monthly single day max and min flows, and the monthly total RW intake flow volume. A comparison of the single day maximum of the month to the PTTW allowable volume of 9092 m<sup>3</sup> is shown.

Table RW-1

2025 Raw Water Volumes					
	Average Daily Flow (m <sup>3</sup> )	Minimum Daily Flow (m <sup>3</sup> )	Maximum Daily Flow (m <sup>3</sup> )	TOTAL FLOW (m <sup>3</sup> )	Daily Maximum % of PTTW Allowable Volume (9092 m <sup>3</sup> )
January	3512.5	3064	4020	108886	44.2%
February	3531.6	2980	3981	98886	43.8%
March	3433.7	3024	3822	106444	42.0%
April	3293.8	2725	4459	98813	49.0%
May	3415.0	2693	5091	105866	56.0%
June	3590.1	3047	4486	107704	49.3%
July	3643.4	3173	4438	112946	48.8%
August	3772.7	3210	4567	116953	50.2%
September	3547.8	3030	4657	106433	51.2%
October	3456.6	2931	4910	107154	54.0%
November	3442.5	3144	4025	103275	44.3%
December	3747.5	3412	4433	116172	48.8%
<b>ANNUAL TOTALS</b>	avg 3532.26	Min 2693	Max 5091	Total 1,289,532	

#### 2.1.1. Average Daily Raw Water Flow:

The monthly average of daily average raw water flow was 3532.3 m<sup>3</sup> in 2025, or approximately 38.9% of the PTTW. It was slightly lower in 2024 at 34.5%.

The daily average in 2022 was 2977 m<sup>3</sup>, followed by 2893 m<sup>3</sup> in 2023, and 3138 m<sup>3</sup> in 2024.

### 2.1.2 Maximum Raw Water Flow:

The maximum day flow for 2025 was on May 05 (5091 m<sup>3</sup>), during hydrant flushing. The next highest maximum flow days also occurred during hydrant flushing; 4910 m<sup>3</sup> (Oct 07), and 4900 m<sup>3</sup> (May 07). Hydrant flushing accounts typically of the higher intake (raw water) flow times during a typical year, as indicated by,

- Spring flushing (May 05-08) had an average day flow of 4858.0 m<sup>3</sup> (max 5091)
  - *Of note; flushing stopped on May 06 to deal with watermain break*
- Fall flushing (October 06-09) had an average day flow of 4425.0 m<sup>3</sup> (max 4910)

Excluding hydrant flushing times, some maximum day flow volumes were April 08 at 4459 m<sup>3</sup>; June 06 at 4486 m<sup>3</sup> (e.tank work); August 12 at 4567 m<sup>3</sup>; and Sept 18 at 4657 m<sup>3</sup>. Most higher intake flows can be attributed to maintenance, repair work, or spot hydrant flushing.

### 2.2. Service Water (Treated Discharged Water)

Below are the Treated Water monthly volumes, noting the high daily flow volume in May and October can be attributed to Hydrant Flushing week(s). Water main breaks can also be associated with high treated water flows.

2025 Treated Water Volumes Discharged to Town					
	Average Daily Flow (m <sup>3</sup> )	Minimum Daily Flow (m <sup>3</sup> )	Maximum Daily Flow (m <sup>3</sup> )	TOTAL FLOW (m <sup>3</sup> )	Daily Maximum % of Design flow (9090 m <sup>3</sup> )
January	3327.3	2900	3592	103147	39.5%
February	3322.7	2898	3825	93036	42.1%
March	3253.6	2986	3498	100862	38.5%
April	3080.7	2904	3285	92422	36.1%
May	3263.4	2758	4842	101164	53.3%
June	3411.3	2993	4543	102339	50.0%
July	3474.5	3123	3853	107710	42.4%
August	3538.6	3061	3907	109697	43.0%
September	3276.7	2978	4572	98302	50.3%
October	3183.3	2872	4515	98683	49.7%
November	3159.4	3024	3323	94782	36.6%
December	3457.3	3219	3717	107177	40.9%
ANNUAL TOTALS	avg 3312.41	Min 2758	Max 4842	Total 1,209,321	

Table TW-1

### 2.2.1. Average Daily Service Water Flow:

Annual service water daily average flow

Year	2020	2021	2022	2023	2024	2025
Annual avg flow m <sup>3</sup>	2896	2787	2872	2761	2995	3312

The service water daily average water flow was 3312.41 m<sup>3</sup> in 2025. Over 5 years (2020-2024), the average daily service water flow was 2862 m<sup>3</sup>, making 2025 service water volumes higher to recent years.

### 2.2.2. Service Water Discharge:

Annual service water total flow

Year	2020	2021	2022	2023	2024	2025
Annual avg flow m <sup>3</sup>	1,060,407	1,017,774	1,049,000	1,007,957	1,095,902	1,209,321

In 2025, the total discharge amount was 1,209,321 m<sup>3</sup> to the Town. Over 5 years (2020-2024), the average annual water discharged was 1,046,208 m<sup>3</sup>, making 2025 annual service water discharging higher to previous years.

The consistent annual service discharge amount is significant as it directly equates to revenue generation. As operating costs continue to rise, so will water rates in order to keep pace if volumes remain the same. The annual service water volume is relevant to doing future financial projections of future water service revenues.

## 2.3. Plant process water

The WTP Process Wastewater Residue Management involves two individual treatment processes, direct Geo Bag system deployment, and a separate pre-treatment Backwash Equalization Tank (BET) system.

Sludge from the settling tanks is typically dense enough for direct processing and sending to the Geotubes (solids collection geo membrane bags). The geo membrane captures the solids, and allows “cleaned” water to pass through. The water is discharged back to the Tay River.

Filter backwash wastewater is directed to a “geo membrane pre-treatment” system, or Backwash Equalization Tanks (BET). The backwash wastewater contains a higher percentage of water, opposed to solids. The BET system allows time for sludge separation through sedimentation, and supernatant removal. The BET supernatant is discharged to the Tay River, with sludge directed to the Geotubes for treatment. Backwash wastewater is dechlorinated prior to entering the BETs.

The accumulation of “clean wastewater” from non-process water sources (such as roof drains, work sinks, analyzer bypass flows, engine and pump coolant water) continues to fill BET(s) and use up residue processing time and resources. As mentioned in previous DWS Summary Reports, a feasibility study should be considered to explore options to divert this water away from the process residue management system and possibly to sanitary sewer discharges.

### 2.3.1. Waste Volumes

Annual total Geo-tube influent flow

Year	2020	2021	2022	2023	2024		2025
Annual total flow m <sup>3</sup>	12,867	15,244	15,124	15,148	15,745		16,362

In 2025, a total volume of 16,362 m<sup>3</sup> was directed to the Geo-tubes (solids collection membrane bags), up from previous years (2020-24 avg of 14,826 m<sup>3</sup>). It is noted the volume being generated annually can be influenced by many uncontrollable operational factors, such as raw water conditions and rainfall accumulation (overabundance or lack of).

Annual total filter backwash wastewater generation

Year	2019	2020	2021	2022	2023	2024	2025
Annual total flow m <sup>3</sup> (est)	10,934	10,377	15,936	9,906	9,569	10,219	10,116

Backwash wastewater generation for 2025 was estimated at 10,116 m<sup>3</sup>, similar to previous years. The higher volume in 2021 was attributed to GAC removal and replacement media “cleaning” through repeated backwashes, something that will likely be experienced in 2026 with scheduled GAC replacement. Of note, with no air scour in 2016, normal annual backwash volumes were significantly higher and estimated at 14,131 m<sup>3</sup>.

## Appendix

### 4.1 Appendix Table 1 – Summary of Flows January 1, 2025 to December 31, 2025

#### Perth Water Treatment Plant

PTTW maximum allowable flow rate: **9,092 m<sup>3</sup>/ day**

Month	Raw water (m <sup>3</sup> )		Discharge (Service) Water (m <sup>3</sup> )	
	Monthly Daily Average Flow	Monthly Total Flow	Monthly Daily Average Flow	Monthly Total Flow
January	3512.5	108886	3327.3	103147
February	3531.6	98886	3322.7	93036
March	3433.7	106444	3253.6	100862
April	3293.8	98813	3080.7	92422
May	3415.0	105866	3263.4	101164
June	3590.1	107704	3411.3	102339
July	3643.4	112946	3474.5	107710
August	3772.7	116953	3538.6	109697
September	3547.8	106433	3276.7	98302
October	3456.6	107154	3183.3	98683
November	3442.5	103275	3159.4	94782
December	3747.5	116172	3457.3	107177
<b>Year Average</b>	3532.26	107461.0	3312.41	100776.8
<b>Year Total</b>		1,289,532		1,209,321

**4.2 Appendix Table 2 – Historical Average Daily Treated Water Flow (m<sup>3</sup>)**

	<b>2025</b>	<b>2024</b>	<b>2023</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>
<b>JANUARY</b>	3327	2688	2603	2570	2491	2762	2972
<b>FEBRUARY</b>	3323	3062	2642	2773	2670	2750	3036
<b>MARCH</b>	3254	2911	2672	3008	2630	2704	3047
<b>APRIL</b>	3081	2875	2791	2835	2409	2555	3038
<b>MAY</b>	3263	3145	2814	3293	3030	2938	3049
<b>JUNE</b>	3411	3194	3114	3188	3154	3347	3062
<b>JULY</b>	3475	3101	3154	3191	2993	3635	3469
<b>AUGUST</b>	3539	3091	2789	3208	3498	3223	3228
<b>SEPTEMBER</b>	3277	3048	2852	2728	2890	2981	2902
<b>OCTOBER</b>	3183	3029	2771	2728	2774	2805	2912
<b>NOVEMBER</b>	3159	2811	2445	2455	2486	2513	2707
<b>DECEMBER</b>	3457	2980	2487	2491	2417	2534	2711
<b>MAXIMUM</b>	<b>3,539</b>	<b>3,194</b>	<b>3,154</b>	<b>3,293</b>	<b>3,498</b>	<b>3,635</b>	<b>3,469</b>
<b>MINIMUM</b>	<b>3,081</b>	<b>2,688</b>	<b>2,445</b>	<b>2,455</b>	<b>2,409</b>	<b>2,513</b>	<b>2,707</b>
<b>AVERAGE</b>	<b>3,312</b>	<b>2,995</b>	<b>2,761</b>	<b>2,872</b>	<b>2,787</b>	<b>2,896</b>	<b>3,011</b>