



## **Water Operations**

**Annual Summary Report**  
*~ Stroud Drinking Water System ~*  
**DWS #220006204**  
*~ Town of Innisfil ~*

Reporting Year - 2025

## InnServices Utilities Inc.

### Stroud DWS

## **Introduction**

Effective January 1, 2016, the Town of Innisfil transferred ownership of its municipal drinking water systems to InnServices Utilities Inc. (InnServices). InnServices is a municipal service corporation, wholly owned by the Town of Innisfil, charged with the responsibility to operate, maintain and expand the municipal drinking water systems that service the Town of Innisfil.

The Stroud Drinking Water System (DWS) services a population of approximately 1836, on 660 residential connections, with an additional 38 commercial connections. The system relies on 3 drilled wells located on the same property as the pump house. The distribution system is comprised of approximately 13.6 kilometers of PVC piping and cast-iron piping, 80 hydrants and 1120 gate valves and curb stop valves.

InnServices has prepared this Summary Report for the operations conducted during the 2025 calendar year.

This Annual Summary Report has been prepared to meet the following commitments:

- To provide InnServices Utilities Inc. Board of Directors, as “Owners” of the DWS, a summary of the operations and maintenance of the Stroud DWS that took place during the reporting period of January 1 to December 31, 2025.
- To provide a status update of the systems capabilities and capacities as of December 31, 2025.
- To satisfy the requirements of O. Reg 170/03 Section 11
- To satisfy the requirements of O. Reg.170/03 Schedule 22
- Submitted to the InnServices Board of Directors and publicly posted in accordance with the Safe Drinking Water Act, 2002

The Annual Summary Report identifies specific details regarding the overall quality of the drinking water submitted to the Ministry of the Environment Conservation and Parks (MECP) for the Stroud DWS and is available on the InnServices website (<https://innservices.co/regulatory>) and at InnServices Headquarters at 7251 Yonge St., Innisfil, Ontario.

This report provides information to the InnServices Board of Directors related to the operations, maintenance, drinking water quality, and system capacities of the Stroud DWS, which aids decision making related to system expansion needs, and assists the Board in meeting their Statutory Standard of Care requirements. This report is provided to the Board of Directors by March 31 annually.

## MECP Approvals

The Stroud DWS is classified as a Large Municipal Residential DWS, as defined by Ontario Regulation 170/03.

The **Safe Drinking Water Act, 2002** requires that the Owner of a municipal DWS have MECP approvals in the form of a Drinking Water Works Permit (DWWP) and a Municipal Drinking Water License (MDWL). The DWWP provides a description of the overall system and provides the authority to establish or alter the DWS. The MDWL provides the authority to use or operate the system.

The Stroud DWS operated under the following:

**DWWP # 120-204, Issue #4, issued December 15, 2020**

**MDWL # 120-104, Issue #4, issued December 15, 2020**

Upon expiry, new approvals were in effect:

**DWWP # 120-204, Issue #6, issued December 10, 2025**

**MDWL # 120-104, Issue #5, issued December 10, 2025**

For the reporting period covered by this report, InnServices Utilities Inc. was defined as the Operating Authority of the Stroud DWS.

InnServices Utilities Inc. has established and maintains accreditation to the Drinking Water Quality Management Standard Version 2-2017 (DWQMS) under Certificate of Accreditation # 0162550, issued December 13, 2023, by SAI Global.

## Drinking Water System

The Stroud DWS relies on three drilled wells as its source of groundwater.

Sodium hypochlorite is used for primary and secondary disinfection.

A Duplex Greensand Pressure Filter system reduces iron and manganese in the drinking water.

A 2-cell, grade level 1263 m<sup>3</sup> (cubic meter) capacity clearwell is designed to provide adequate contact time for disinfection purposes, also providing fire protection for the community.

A 125-kilowatt standby generator at the pump house ensures that the system is provided with water in the event of a power failure.

There were no significant expenses incurred in relation to installation, repair or replacement of required equipment during the reporting period beyond the routine maintenance requirements.

## Analytical Laboratory Water Quality Monitoring

### Bacteriological Analysis

Bacteriological testing is completed to verify that no microbiological contamination of the treated drinking water can be detected. Raw water is also analyzed to inform operations if there is microbiological contamination in the DWS. Bacteriological monitoring for the reporting period was conducted as required by Ontario Regulation 170/03.

SGS Environmental Services, Lakefield, Ontario, conducted the bacteriological analysis of the drinking water.

Zero (0) items of non-compliance with the Ontario Drinking Water Standards related to bacteriological analyses occurred during the reporting period.

Microbiological testing done under the Schedule 10 of Regulation 170/03, during this reporting period:

	<b>Number of Samples</b>	<b>Range of E. coli Results Min. – Max.</b>	<b>Range of Total Coliform Results Min.- Max</b>	<b>Range of HPC Results Min. – Max.</b>
<b>Raw</b>	156	0-0	0-0	N/A
<b>Treated</b>	52	0-0	0-0	0-3
<b>Distribution</b>	212	0-0	0-0	0-201

### **Chemical Analysis**

Chemical analysis of this water supply is conducted as required by Ontario Regulation 170/03.

SGS Environmental Services, Lakefield, Ontario, conducted the required chemical analyses for the DWS during the reporting period. This lab, as well as any laboratories to which they sub-contract certain types of analyses, are licensed by the MECP and accredited by the Canadian Association for Laboratory Accreditation (CALA) and/or Standard Council Canada (SCC).

Since the issuance of the Municipal Drinking Water License December 15, 2020, the Ministry has added a requirement to increase testing and monitoring of the health-related parameters for THM and HAAs from quarterly to monthly, beginning in January 2021. That requirement has been carried forward in the latest renewal effective December 10, 2025.

InnServices engaged the Walkerton Clean Water Centre (WCWC) again to undertake a study to investigate methods to reduce THM (Trihalomethanes) and HAA (Haloacetic Acids) formation in the Stroud DWS. Raw water quality was assessed in 2020, which identified a high level of naturally occurring ammonia in the raw water. Treatment options were very expensive when considering eventual plans to connect Stroud to the Innisfil-Lake Simcoe drinking water system, so there will be no changes to the filtration and disinfection process.

Operations have increased their frequency of monitoring chlorine levels and reservoir circulation time, as well their frequency of dead-end flushing. Uni-directional flushing (UDF) was completed throughout the distribution system. A cold weather auto-flusher was installed to prevent stagnation at the end of the distribution system located at Victoria Street East with additional locations being considered.

There were zero out-of-compliance events related to the THM or HAA levels during the reporting period.

Sodium in drinking water is tested every 60 months (latest test November 2021). Results were above the Maximum Allowable Concentration, but below the Aesthetic Objective. This is not a concern for most people. The Simcoe Muskoka District Health Unit was advised, and they share this information with physicians who may need to consider the potential impact on their patients. InnServices has posted this information on their website, in billing inserts, and will share the information from time to time on social media.

A summary of all analytical results for Organic and Inorganic testing is attached in Appendix A.

## Continuous Water Quality Monitoring

### Free Chlorine Residual

The Stroud DWS utilizes NSF® certified 12% sodium hypochlorite to meet primary disinfection requirements and provide an adequate chlorine residual for secondary disinfection requirements.

Free Chlorine residual is monitored for secondary disinfection requirements through the collection of grab samples throughout the distribution system, as required within O. Reg. 170/03. Additionally, grab samples are taken and analyzed for free chlorine residual when microbiological samples are taken throughout the distribution system. Ontario Regulation 170/03 requires that sufficient residual be available in the water to achieve a residual of greater than 0.05 mg/L at all points in the distribution system.

During the reporting period covered by this report, zero (0) incidents of non-compliance with these requirements were reported.

A summary of the chlorination monitoring that took place directly after primary disinfection is achieved is depicted below:

	Number of Grab Samples	Range of Results (min #)- (max #)	Unit of Measure
Chlorine	8760	0.00-5.00	mg/L

All instances where Free Chlorine Residual (FCR) was less than 0.50 mg/L were investigated and confirmed to be isolated instantaneous readings, or coincide with a power outage, calibration activities, and/or appropriate corrective actions were taken to remove non-compliant water from the system. During events when chlorine residual was less than 0.05mg/L water was not directed to the consumer.

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order, or other legal instrument:

*A Greensand Filtration System at the Stroud Well System removes manganese and iron from the distribution water and requires an order under the Municipal Drinking Water License to measure the total suspended solids (discharged outside the Well House) on a quarterly basis.				
Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
15-Dec-2020	Total Suspended Solids (NOTE: rolling annual average)	Nov 25,2025	7.75	mg/L

## Plant Flow Monitoring

### Raw Water Takings

The Stroud DWS utilizes groundwater wells as its raw water source. The raw water takings from groundwater wells are authorized by the MECP through a Permit to Take Water (PTTW). During the reporting period, the system took water under PTTW# 7607-BTCTQD, issued September 16, 2020.

Raw water takings are reported to the electronic Water Taking Recording System (WTRS).

There were zero (0) incidents of non-compliance related to water takings during the reporting period.

Table 1 below provides a summary of Stroud DWS's raw water takings during the reporting period.

*Table 1: Summary of Raw Water Takings*

	Units	PTTW# 7607-BTCTQD		
		Well #1	Well #2	Well #3
<b>PTTW Daily Maximum</b>	(m <sup>3</sup> /day)	984.96	397.44	1,637.28
<b>Maximum Day</b>	(m <sup>3</sup> /day)	302.00	457.00	503.00
<b>Average Day</b>	(m <sup>3</sup> /day)	4.83	99.46	434.63
<b>Total Annual Takings</b>	(m <sup>3</sup> )	1,761.01	36,352.99	158,979.00

### System Performance Summary

The volume of daily treated water delivered to the distribution system is authorized by the MECP through the designation of a Rated Capacity within the Municipal Drinking Water License (MDWL). The well system is operating at approximately 17.85% of the

rated capacity of 3020m<sup>3</sup>/day. At the maximum flow, treated water demand flow for the reporting period was 17.85% of the rated capacity.

The Treated Water Demand is summarized in Table 2 below. There were zero (0) incidents of non-compliance related to the rated capacity for the reporting period.

*Table 2: Summary of Treated Water Demand*

System Rated Capacity (m <sup>3</sup> /day)	3020
Maximum Day (m <sup>3</sup> /day)	1093.00
Average Day (m <sup>3</sup> /day)	538.92
Total Annual Demand (m <sup>3</sup> )	197,094.00
System Performance-rated capacity	17.85%
System Performance – at Maximum Flow	36.19%

## Distribution Flow Monitoring

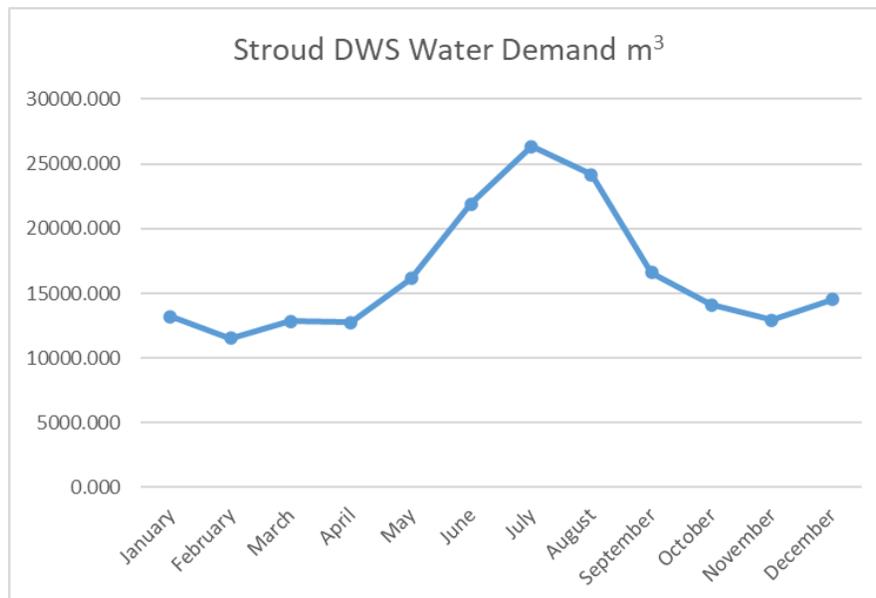
The Stroud DWS produces water for distribution to homes and businesses within the Town of Innisfil (TOI).

The following table and graph demonstrate the monthly water system demand.

Table 3 demonstrates the monthly volumes of drinking water directed toward the Stroud distribution system for the reporting period.

*Table 3: Monthly Water Production*

Month	Treated Water Produced (m <sup>3</sup> )
January	13,211
February	11,507
March	12,861
April	12,764
May	16,132
June	21,913
July	26,342
August	24,179
September	16,608
October	14,091
November	12,949
December	14,537
<b>Annual Total</b>	<b>197,094</b>



## **Distribution Sampling**

Section 7-2, Schedule 7 of O. Reg. 170/03 requires the owner of a large municipal residential system that provides secondary disinfection and the operating authority for the system shall ensure that at least seven distribution samples are taken each week with at least four distribution samples obtained at different locations on one day of the week and at least three of the samples obtained at different locations taken on a second day of the week, with at least 48 hours after from the first set.

Based on results of community lead sampling program conducted, Stroud DWS has qualified for reduced sampling protocol as per O. Reg. 170/03, Schedule 15.1. Under this protocol, only alkalinity and pH are required from 2 sampling points for each summer and winter period. Lead is tested every **third** 12-month period.

<b>Location Type</b>	<b>Number of Samples</b>	<b>Range of Alkalinity Results Minimum - maximum</b>	<b>Range of Lead Results</b>	<b>Number of Exceedances</b>
		Aesthetic Objective 30-500 Mg/L	Maximum Concentration 10.0 µg/L (2023)	
Distribution	4	191-198 Mg/L	0.04 – 0.11 µg/L	0

Trihalomethanes (THMs) and Haloacetic Acids (HAAs) were sampled on a monthly basis in accordance with our Municipal Drinking water License and O. Reg. 170/03 Schedule 13. The most recent sample results:

<b>Parameter</b>	<b>Sample Date</b>	<b>Result Value</b>	<b>Maximum Allowable Concentration</b>
THM (latest rolling annual average)	Dec 5,2025	91.44 µg/L	100 µg/L
HAA (latest rolling annual average)	Dec 5,2025	63.54 µg/L	80 µg/L

Lead, Haloacetic Acids or Trihalomethanes results that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards:

<b>Parameter</b>	<b>Result Value</b>	<b>Unit of Measure</b>
<b>THM</b> (running annual average)	Q1 – 92.11	µg/L
	Q2 – 90.56	µg/L
	Q3 – 90.64	µg/L
	Q4 – 91.44	µg/L

<b>HAA</b> (running annual average)	Q1 – 61.88	µg/L
	Q2 – 61.81	µg/L
	Q3 – 59.84	µg/L
	Q4 – 63.54	µg/L

## Service Disruptions

There were zero (0) service disruptions in 2025.

## MECP Annual Inspection

The primary focus of the inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management practices.

MECP inspection was conducted on December 2, 2025, which covered the period of January 10, 2025, to December 2, 2025

There were two (2) items of noncompliance identified during the inspection.

This year the Stroud drinking water system received an Inspection Risk Rating of 3.69%, resulting in a Compliance Rating of 96.31%.

No Provincial Officer's Orders were issued in the report as a result of the conducted inspection.

## Compliance Summary

During the reporting period, the Stroud Drinking Water System continued to operate reliably; however, two monitoring-related non-compliances were identified. Operators did not review continuous monitoring test results within the required 72-hour timeframe. Specifically, data and operational trending from April 17 to April 20, 2025, were examined by a certified operator on April 21, 2025, exceeding the mandated review window. No anomalies or operational concerns were identified in any of the data at the time of review. InnServices notified the Ministry of the delayed review on April 22, 2025, in accordance with regulatory requirements.

In addition, turbidity monitoring was not completed at the required frequency. Turbidity was not tested at least once every month from each well supplying water to the system, resulting in a lapse in monthly sampling compliance. All turbidity results that were collected during the year remained within acceptable limits, and no water quality issues were observed.

Despite these administrative and monitoring deficiencies, there were no impacts on treated water quality, and the system continued to supply safe drinking water throughout the reporting period.

## Appendix A – Chemical Analysis

Testing for both organic and inorganic parameters is required at least once every 36 months when the raw water supply is sourced from groundwater. The most recent sample was collected on November 04, 2024, and the next scheduled sampling will take place in November 2027.

### Stroud DWS Results

MDL: Method Detection Limit, or minimum measured concentration that can be reported with 99% confidence.

µg/L: micrograms per liter

All results were well below the maximum threshold with most being below the Method Detection Limit.

Inorganic Parameter	Result Value	Unit of Measure
Antimony	0.6 <MDL	µg/L
Arsenic	0.2 <MDL	µg/L
Barium	316	µg/L
Boron	86	µg/L
Cadmium	0.003 <MDL	µg/L
Chromium	0.19	µg/L
Mercury	0.01 <MDL	µg/L
Selenium	0.04 <MDL	µg/L
Uranium	0.002 <MDL	µg/L

Organic Parameter	Result Value	Unit of Measure
Alachlor	0.02 <MDL	µg/L
Atrazine + N-dealkylated metabolites	0.01 <MDL	µg/L
Azinphos-methyl	0.05 <MDL	µg/L
Benzene	0.32 <MDL	µg/L
Benzo(a)pyrene	0.004 <MDL	µg/L
Bromoxynil	0.33 <MDL	µg/L
Carbaryl	0.05 <MDL	µg/L
Carbofuran	0.01 <MDL	µg/L
Carbon Tetrachloride	0.17 <MDL	µg/L
Chlorpyrifos	0.02 <MDL	µg/L
Diazinon	0.02 <MDL	µg/L
Dicamba	0.20 <MDL	µg/L
1,2-Dichlorobenzene	0.41 <MDL	µg/L
1,4-Dichlorobenzene	0.36 <MDL	µg/L

1,2-Dichloroethane	0.35 <MDL	µg/L
1,1-Dichloroethylene (vinylidene chloride)	0.33 <MDL	µg/L
Dichloromethane	0.35 <MDL	µg/L
2-4 Dichlorophenol	0.15 <MDL	µg/L
2,4-Dichlorophenoxy acetic acid (2,4-D)	0.19 <MDL	µg/L
Diclofop-methyl	0.40 <MDL	µg/L
Dimethoate	0.06 <MDL	µg/L
Diquat	1 <MDL	µg/L
Diuron	0.03 <MDL	µg/L
Glyphosate	1 <MDL	µg/L
Malathion	0.02 <MDL	µg/L
2-Methyl-4- chlorophenoxyacetic acid (MCPA)	0.00012<MDL	mg/L
Metolachlor	0.01 <MDL	µg/L
Metribuzin	0.02 <MDL	µg/L
Monochlorobenzene	0.3 <MDL	µg/L
Paraquat	1 <MDL	µg/L
Pentachlorophenol	0.15 <MDL	µg/L
Phorate	0.01 <MDL	µg/L
Picloram	1 <MDL	µg/L
Polychlorinated Biphenyls(PCB)	0.04 <MDL	µg/L
Prometryne	0.03 <MDL	µg/L
<b>Organic Parameter</b>	<b>Result Value</b>	<b>Unit of Measure</b>
Simazine	0.01 <MDL	µg/L
Terbufos	0.01 <MDL	µg/L
Tetrachloroethylene	0.35 <MDL	µg/L
2,3,4,6-Tetrachlorophenol	0.20 <MDL	µg/L
Triallate	0.01 <MDL	µg/L
Trichloroethylene	0.44 <MDL	µg/L
2,4,6-Trichlorophenol	0.25 <MDL	µg/L
Trifluralin	0.02 <MDL	µg/L
Vinyl Chloride	0.17 <MDL	µg/L

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			

**One water sample is taken every 60 months to test for Sodium and Fluoride**

Parameter	Date of Sample	Result	Unit of Measure	Exceedance
Sodium*	25-Nov-2021	35.6	mg/L	Yes
Sodium re-sample	29-Nov-2021	36.4	mg/L	Yes
Fluoride	25-Nov-2021	0.29	mg/L	No

\*Sodium result was reported to both the MECP and the Simcoe Muskoka District Health Unit.

**One water sample is taken every 3 months and tested for nitrate and nitrite**

Parameter	Date of latest Sample	Result	Unit of Measure	Exceedance
Nitrite	Nov. 24, 2025	0.003	mg/L	No
Nitrate	Nov. 24, 2025	0.024	mg/L	No