Stirling
Drinking Water System

Annual Water Report

Reporting Period of January 1, 2025- December 31, 2025

This report has been prepared to satisfy the annual reporting requirements of the Provincial Regulations and Guidelines established by the Ministry of Environment and Climate Change including the section 11 and Schedule 22 reports identified in O.Reg 170/03, Drinking Water Systems Regulation and the Permit to Take Water Reports identified in O.Reg 387/04, Water taking and Transfer Regulation.

Report Availability

Population Served	< 10,000
Website where the annual report can be viewed by the public	www.stirling-rawdon.com
Alternate location where annual report is available free of charge.	Stirling-Rawdon Municipal Office
How the system users are notified that the annual report is available and is free of charge?	Public access/ notice via the website
Number of Designated Facilities Served	None
Has a copy of this report been provided to all Designated Facilities?	N/A
Number of Interested Parties reported to	3
Has a copy of this report been provided to all interested Parties?	Yes
The following Drinking Water Systems receive drinking water from this system	N/A
Has a copy of this report been provided to connected users?	N/A

Compliance Report Card

Drinking Water System Number	**220001566**
System Owner:	**The Corporation of The Township of Stirling-Rawdon**
Operating Authority	**The Township of Stirling-Rawdon**
Drinking Water System Category	**Large Municipal Residential**
Reporting Period	**January 1, 2025 – December 31, 2025**

Event Summary	# of Events	Date	Details
Ministry of Environment Conservation and Parks Inspections	**1**	**January 12, 2026**	**Unannounced Inspection**
Ministry of Labour Inspections	**0**		
DWQMS Audits	**2**	**(1)December 12, 2025** **(2) January 17, 2025**	**(1)Internal Audit** **(2)Surveillance System Audit**
AWQI's	**0**		
Non-Compliance	**1**	**Feb 20, 2026**	**The owner did not ensure that equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit. (Related to Well # 5 Decommissioning)**
Community Complaints	13		**Each complaint was investigated and documented. The majority of the complaints dealt with plumbing issues or water quality concerns that were investigated and determined to be caused by internal plumbing issues.**
Spills	**0**		

Quality Control Measures

The Township of Stirling-Rawdon Drinking Water and Wastewater Facilities are operated by Township of Stirling-Rawdon Staff. Each facility has comprehensive manuals that detail operations, maintenance, instrumentation and emergency procedures. All procedures are kept current and accurate through an annual review process detailed in the Municipalities Drinking Water Quality Management System (DWQMS). Additional quality control measures are exercised by:

- Tracking and implementing maintenance activities through a work order tracking system.
- Use of sampling schedules for external laboratory sampling
- Active member of the Ontario Water/Wastewater Agency Response Network
- Increased calibration frequencies to ensure equipment accuracy.

System Process Description

Raw Source

Raw water sources for the Stirling Drinking Water System are from five separate groundwater wells; Well 1,3,4,5 and 6. The groundwater wells are considered Ground Water Under The Direct Influence of Surface Water (GUDI) with effective in-situ treatment. Well # 5 was decommissioned in the 2025 reporting year due to structural issues. A new well (Well #7) was drilled in the later portion of 2025 and will be placed into production in the near future.

Treatment

The Facility utilizes sodium hypochlorite, and two ultraviolet disinfection units (one duty, one standby) for a two stage primary disinfection treatment. Secondary treatment is provided from the sodium hypochlorite injection at the water treatment plant. The treatment system at the plant has on-line chlorine analyzers for pre and post chlorine residuals, an on-line turbidimeter for treated water turbidity and UV Dosage which is monitored on the individual reactor controls as well as the SCADA/PLC. The SCADA/PLC has alarming capabilities to lock the plant out during a failure of the disinfection system, analyzers or components.

Treatment Chemicals used in the reporting period:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Brenntag

Summary of Non-Compliance

Adverse Water Quality Incidents

Date	AWQI #	Cause			Corrective Action Taken
		Parameter	Result	Exceedance of	
None					

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**
SDWA	Schedule A and Schedule C of the Drinking Water Works Permit	Noted in February 20,2026 Inspection Report	Review condition 4.1 to 4.8 of Sch. B of the DWWP and the Ministry's Guide for Applying for Drinking Water Works Permit Amendments, Licence Amendments. Develop and implement standard operating procedures that describe pre authorized modifications approved under the DWWP and what further alterations to the system will need.	Developing standard operating procedure

Flows

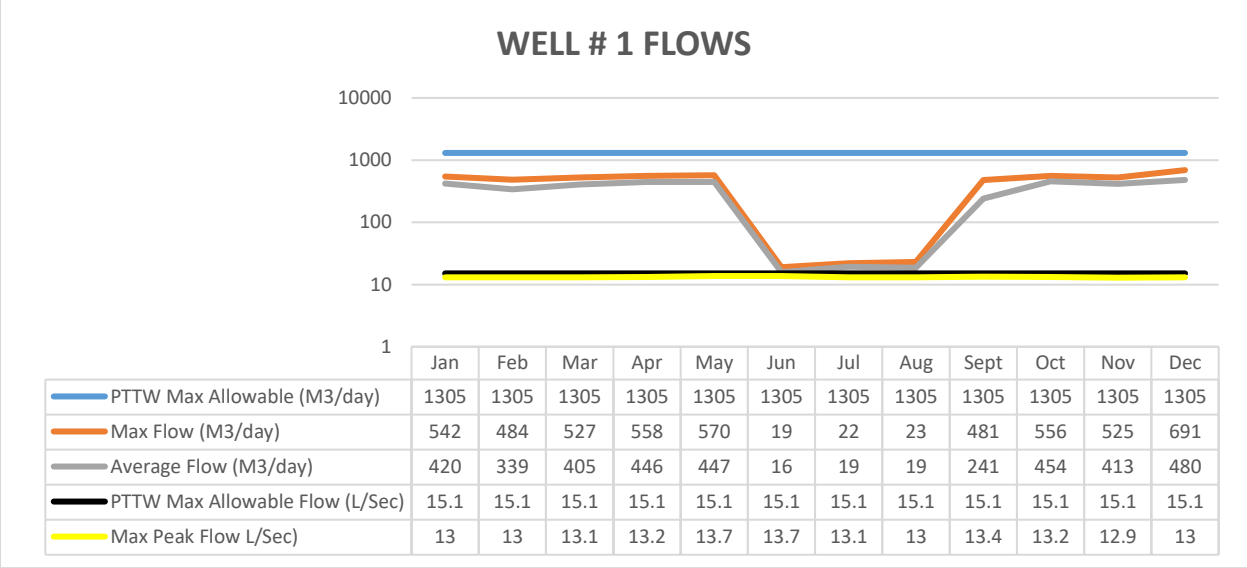
The Stirling Drinking Water System has a rated capacity of 2687 m³/day. Additional flow data can be found under the water taking and transfer data.

Raw Water Flows

The Raw Water flows are regulated under Permit to Take Water

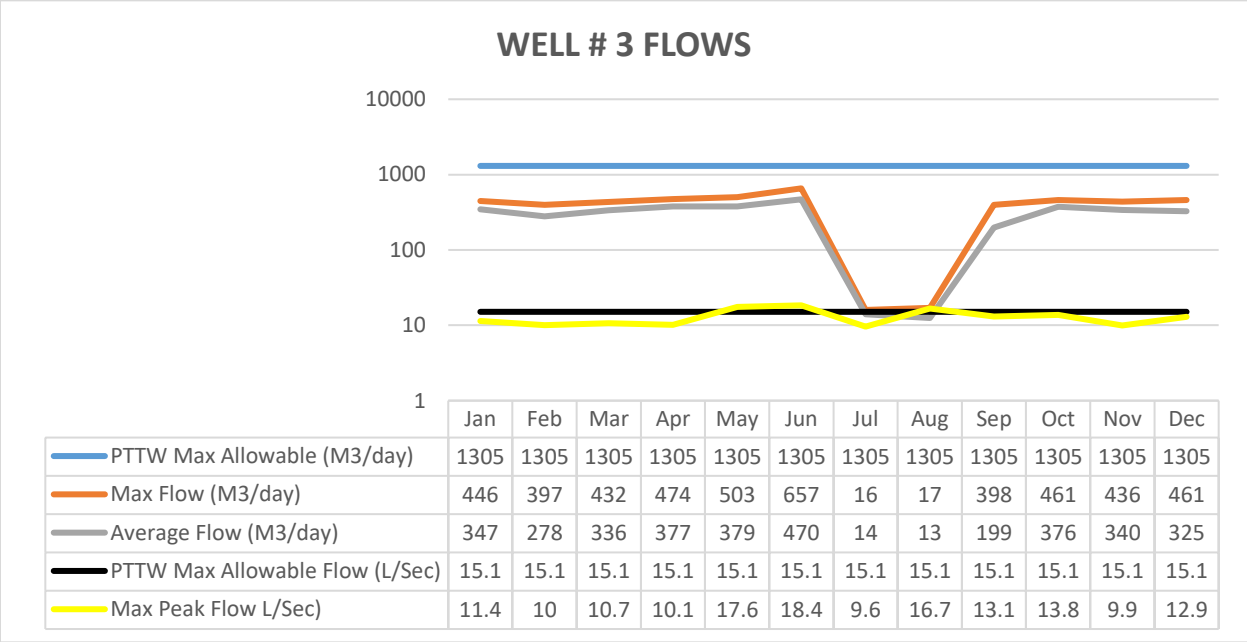
- RW1 = Raw Water Well 1
- RW3 = Raw Water Well 3
- RW4 = Raw Water Well 4
- RW5 = Raw Water Well 5
- RW6 = Raw Water Well 6
- TW = Treated Water
- DW = Distribution Water

Raw Water Daily Rate of Taking: RW 1



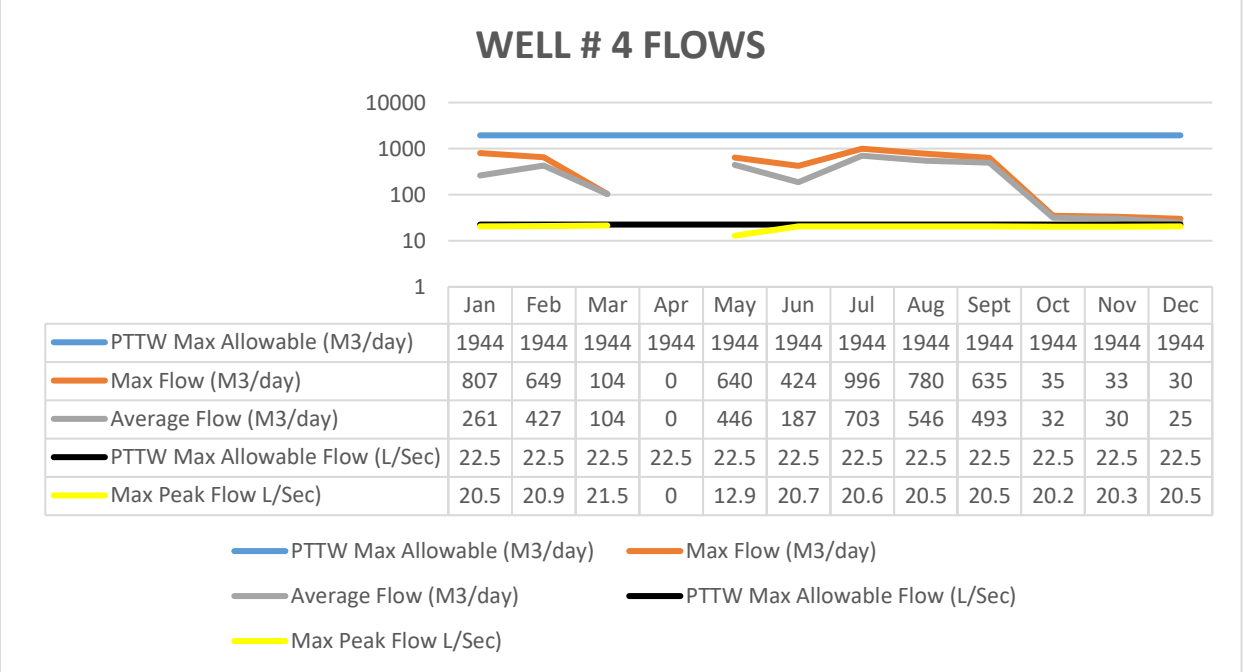
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
PTTW Max Allowable (M3/day)	1305	1305	1305	1305	1305	1305	1305	1305	1305	1305	1305	1305
Max Flow (M3/day)	542	484	527	558	570	19	22	23	481	556	525	691
Average Flow (M3/day)	420	339	405	446	447	16	19	19	241	454	413	480
PTTW Max Allowable Flow (L/Sec)	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1
Max Peak Flow L/Sec)	13	13	13.1	13.2	13.7	13.7	13.1	13	13.4	13.2	12.9	13

Raw Water Daily Rate of Taking: RW 3



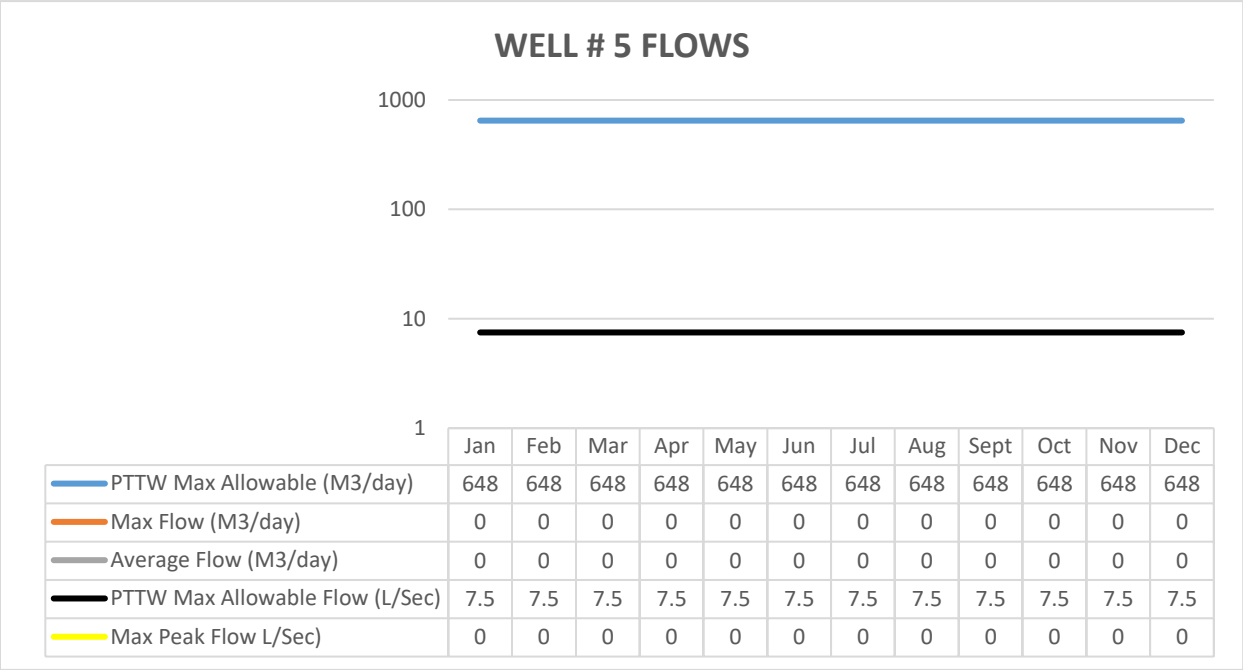
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PTTW Max Allowable (M3/day)	1305	1305	1305	1305	1305	1305	1305	1305	1305	1305	1305	1305
Max Flow (M3/day)	446	397	432	474	503	657	16	17	398	461	436	461
Average Flow (M3/day)	347	278	336	377	379	470	14	13	199	376	340	325
PTTW Max Allowable Flow (L/Sec)	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1
Max Peak Flow L/Sec)	11.4	10	10.7	10.1	17.6	18.4	9.6	16.7	13.1	13.8	9.9	12.9

Raw Water Daily Rate of Taking: RW 4



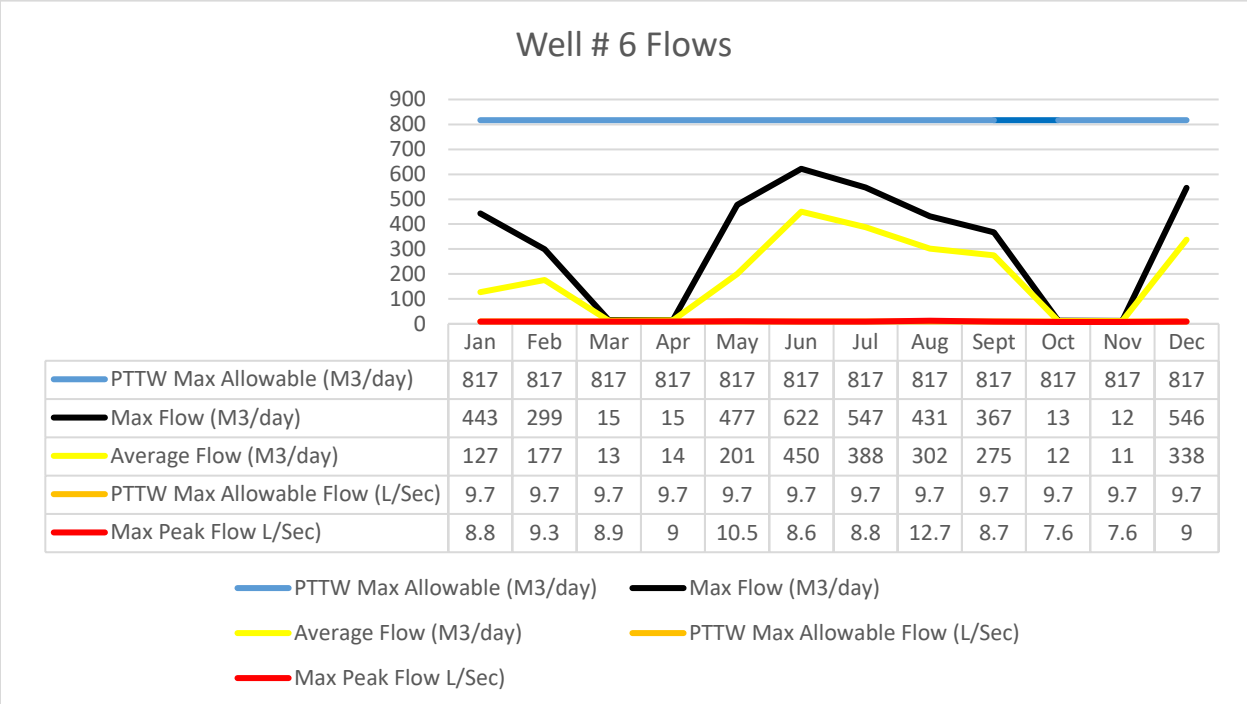
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
PTTW Max Allowable (M3/day)	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944
Max Flow (M3/day)	807	649	104	0	640	424	996	780	635	35	33	30
Average Flow (M3/day)	261	427	104	0	446	187	703	546	493	32	30	25
PTTW Max Allowable Flow (L/Sec)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Max Peak Flow L/Sec)	20.5	20.9	21.5	0	12.9	20.7	20.6	20.5	20.5	20.2	20.3	20.5

Raw Water Daily Rate of Taking: RW 5



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
PTTW Max Allowable (M3/day)	648	648	648	648	648	648	648	648	648	648	648	648
Max Flow (M3/day)	0	0	0	0	0	0	0	0	0	0	0	0
Average Flow (M3/day)	0	0	0	0	0	0	0	0	0	0	0	0
PTTW Max Allowable Flow (L/Sec)	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Peak Flow L/Sec)	0	0	0	0	0	0	0	0	0	0	0	0

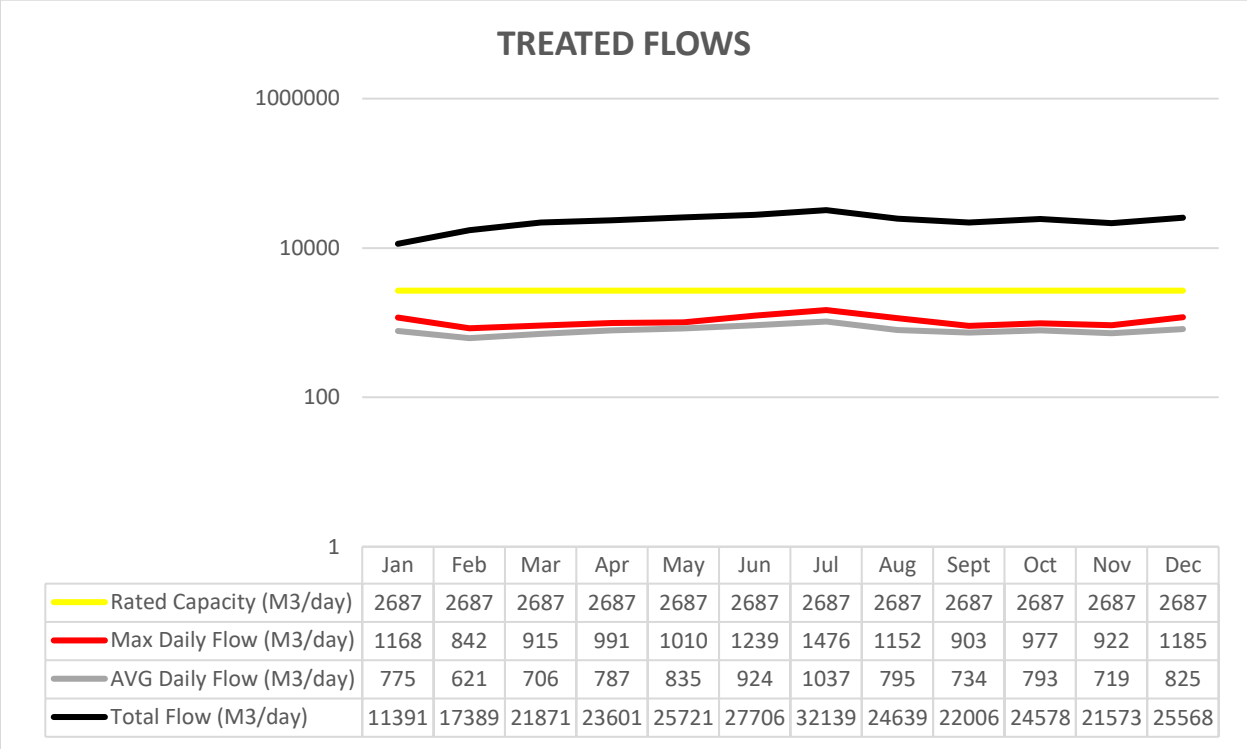
Raw Water Daily Rate of Taking: RW 6



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
PTTW Max Allowable (M3/day)	817	817	817	817	817	817	817	817	817	817	817	817
Max Flow (M3/day)	443	299	15	15	477	622	547	431	367	13	12	546
Average Flow (M3/day)	127	177	13	14	201	450	388	302	275	12	11	338
PTTW Max Allowable Flow (L/Sec)	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
Max Peak Flow L/Sec)	8.8	9.3	8.9	9	10.5	8.6	8.8	12.7	8.7	7.6	7.6	9

Treated Water Flows

Treated water flows are regulated under the Municipal Drinking Water Licence.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Rated Capacity (M3/day)	2687	2687	2687	2687	2687	2687	2687	2687	2687	2687	2687	2687
Max Daily Flow (M3/day)	1168	842	915	991	1010	1239	1476	1152	903	977	922	1185
AVG Daily Flow (M3/day)	775	621	706	787	835	924	1037	795	734	793	719	825
Total Flow (M3/day)	11391	17389	21871	23601	25721	27706	32139	24639	22006	24578	21573	25568

Regulatory Sample Results Summary

Microbiological Testing

Location	Number of Samples	E.Coli Results (min) – (max)	Total Coliform Results (min) – (max)	Number of HPC Samples	HPC Results (min) – (max)
Raw – RW1	*52*	*0-0*	*0-15*	-	-
Raw – RW3	*52*	*0-0*	*0-0*	-	-
Raw – RW4	*52*	*0-1*	*0-0*	-	-
Raw – RW5	*0*	*0-0*	*0-0*	-	-
Raw – RW6	*52*	*0-0*	*0-1*	-	-
Treated - TW	*52*	*0-0*	*0-0*	*52*	*0-9*
Distribution - DW	*156*	*0-0*	*0-0*	*156*	*0-122*

Continuous On-Line Monitoring

Parameter	Range of Results (Min-Max Value)
Turbidity, Treated	0.0265-1.74 NTU *
Treated, Free Chlorine	1.08-3.95 mg/L
Distribution, Free Chorine	0.57-2.32 mg/L*

*Instrument spikes and dips recorded by on-line instrumentation are result of various maintenance and calibration activities. Power interruptions may also cause instrument readings to provide inaccurate readings. All events are reviewed for compliance with O. Reg. 170/03 and if warranted, are reported to the Ministry of Environment Conservation and Parks as Adverse Water Quality Incidents.

In- House Testing

Parameter	# of grab samples taken	Range of Results (min # - max #)
Turbidity, Raw Well 1 (NTU)	52	0.14-0.70 NTU
Turbidity, Raw Well 3 (NTU)	52	0.11-0.64 NTU
Turbidity, Raw Well 4 (NTU)	52	0.13-0.66 NTU
Turbidity, Raw Well 5 (NTU)	0	
Turbidity, Raw Well 6 (NTU)	52	0.13-0.64 NTU
Treated Turbidity (NTU)	365	0.05-0.64 NTU
Treated, Free Chlorine (mg/L)	365	1.66-3.80 mg/L
Distribution, Free Chlorine (mg/L)	365	1.07-1.91 mg/L

Lead Sampling

The lead sampling program is required under 0.Reg 170/03. This system qualified for the plumbing exemption.

Location	Date	Lead	pH	Alkalinity (mg/L) as CaCO3
-	-	10 (MAC)	6.5-8.5	30-500
Hydrant # 85	Mar 13 2025	0.24	7.37	307
Hydrant # 18	Mar 13 2025	1.53	7.43	295
Hydrant # 85	Sept 18 2025	0.37	7.95	371
Hydrant # 18	Sept 18 2025	1.47	7.92	312

Inorganic Parameters							
Parameter	**Units**	**Sample Date**	**Sample Location**	**Result Value**	**MAC**	**Exceedance**	
						MAC	1/2 MAC
Antimony	ug/L	Oct 9 2025	TW	0.60	6	No	No
Arsenic	ug/L	Oct 9 2025	TW	0.40	10	No	No
Barium	ug/L	Oct 9 2025	TW	277	1000	No	No
Boron	ug/L	Oct 9 2025	TW	17	5000	No	No
Cadmium	ug/L	Oct 9 2025	TW	0.003	5	No	No
Chromium	ug/L	Oct 9 2025	TW	0.12	50	No	No
Mercury	ug/L	Oct 9 2025	TW	0.01	1	No	No
Selenium	ug/L	Oct 9 2025	TW	0.39	50	No	No
Uranium	ug/L	Oct 09 2025	TW	1.650	20	No	No
Fluoride	mg/L	Feb 28 2023	TW	0.13	1.5	No	No
Nitrite	mg/L	Jan 16 2025	TW	0.003	1.000	No	No
Nitrite	mg/L	Apr 2 2025	TW	0.003	1.000	No	No
Nitrite	mg/L	Jul 10 2025	TW	0.003	1.000	No	No
Nitrite	mg/L	Oct 9 2025	TW	0.003	1.000	No	No
Nitrate	mg/L	Jan 16 2025	TW	1.76	10.000	No	No
Nitrate	mg/L	Apr 2 2025	TW	1.56	10.000	No	No
Nitrate	mg/L	Jul 10 2025	TW	1.81	10.000	No	No
Nitrate	mg/L	Oct 9 2025	TW	2.06	10.000	No	No

Organic Parameters							
Parameter	**Units**	**Sample Date**	**Sample Location**	**Result Value**	**MAC**	**Exceedance**	
						MAC	1/2 MAC
Alachlor	ug/l	Oct 9 2025	TW	0.02	5	No	No
Atrazine + N-dealkylated metabolites	ug/l	Oct 9 2025	TW	0.01	5	No	No
Azinphos-Methyl	ug/l	Oct 9 2025	TW	0.05	20	No	No
Benzene	ug/l	Oct 9 2025	TW	0.32	1	No	No
Benzo (a) pyrene	ug/l	Oct 9 2025	TW	0.004	0.01	No	No
Bromoxynil	ug/l	Oct 9 2025	TW	0.33	5	No	No
Carbaryl	ug/l	Oct 9 2025	TW	0.05	90	No	No
Carbofuran	ug/l	Oct 9 2025	TW	0.01	90	No	No
Carbon Tetrachloride	ug/l	Oct 9 2025	TW	0.17	2	No	No
Chlorpyrifos	ug/l	Oct 9 2025	TW	0.02	90	No	No
Diazinon	ug/l	Oct 9 2025	TW	0.02	20	No	No
Dicamba	ug/l	Oct 9 2025	TW	0.2	120	No	No
1,2-Dichlorobenzene	ug/l	Oct 9 2025	TW	0.41	200	No	No
1,4 - Dichlorobenzene	ug/l	Oct 9 2025	TW	0.36	5	No	No
1,2- Dichloroethane	ug/l	Oct 9 2025	TW	0.35	5	No	No
1,1- Dichloroethylene	ug/l	Oct 9 2025	TW	0.33	14	No	No
Dichloromethane (methylene Chloride)	ug/l	Oct 9 2025	TW	0.35	50	No	No
2,4-Dichlorophenol	ug/l	Oct 9 2025	TW	0.15	900	No	No
2,4-Dichlorophenoxy acetic acid)2,4-D)	ug/l	Oct 9 2025	TW	0.19	100	No	No
Diclofop-methyl	ug/l	Oct 9 2025	TW	0.4	9	No	No
Dimethoate	ug/l	Oct 9 2025	TW	0.06	20	No	No
Diquat	ug/l	Oct 9 2025	TW	1	70	No	No
Diuron	ug/l	Oct 9 2025	TW	0.03	150	No	No
Glyphosate	ug/l	Oct 9 2025	TW	1	280	No	No
Malathion	ug/l	Oct 9 2025	TW	0.02	190	No	No
Metolachlor	ug/l	Oct 9 2025	TW	0.01	50	No	No
Metribuzin	ug/l	Oct 9 2025	TW	0.02	80	No	No
MCPA	ug/l	Oct 9 2025	TW	0.00012	0.1	No	No
Monochlorobenzene Chlorobenzene)	ug/l	Oct 9 2025	TW	0.3	80	No	No
Paraquat	ug/l	Oct 9 2025	TW	1	10	No	No

PCB	ug/l	Oct 9 2025	TW	0.04	3	No	No
Pentachlorophenol	ug/l	Oct 9 2025	TW	0.15	60	No	No
Phorate	ug/l	Oct 9 2025	TW	0.01	2	No	No
Picloram	ug/l	Oct 9 2025	TW	1	190	No	No
Prometryne	ug/l	Oct 9 2025	TW	0.03	1	No	No
Simazine	ug/l	Oct 9 2025	TW	0.01	10	No	No
Terbufos	ug/l	Oct 9 2025	TW	0.01	1	No	No
Tetrachloroethylene	ug/l	Oct 9 2025	TW	0.35	10	No	No
2,3,4,6- Tetrachlorophenol	ug/l	Oct 9 2025	TW	0.2	100	No	No
Triallate	ug/l	Oct 9 2025	TW	0.01	230	No	No
Trichloroethylene	ug/l	Oct 9 2025	TW	0.44	5	No	No
2,4,6-Trichlorophenol	ug/l	Oct 9 2025	TW	0.25	5	No	No
Trifluralin	ug/l	Oct 9 2025	TW	0.02	45	No	No
Vinyl Chloride	ug/l	Oct 9 2025	TW	0.17	1	No	No
Trihalomethane Total	ug/l	Jan 16 2025	DW	33	100	No	No
	ug/l	Apr 2 2025	DW	31	100	No	No
	ug/l	Jul 10 2025	DW	41	100	No	No
	ug/l	Oct 9 2025	DW	39	100	No	No
	ug/l		DW	RAA= 36	100	No	No
Total Haloacetic Acids	ug/l	Jan 16 2025	DW	5.3	80	No	No
	ug/l	Apr 2 2025	DW	5.3	80	No	No
	ug/l	Jul 10 2025	DW	5.3	80	No	No
	ug/l	Oct 9 2025	DW	5.3	80	No	No
				RAA= 5.3	80	No	No
60 months							
Sodium	mg/l	Feb 28 2024	TW	35.4	20	Yes	Yes
Fluoride	mg/l	Feb 28 2024	TW	0.13	1.5	No	No

- MAC= Maximum Allowable Concentration as per O.Reg 169/03
- Sodium and Fluoride were tested in 2024. Sodium exceeded and was reported to MOH,MECP as well as public notification.

Maintenance Summary Highlights:

Major expenses incurred to install, repair or replace required equipment

- **Annual flow meter calibrations**
- **Annual back flow prevention device inspection**
- **Annual lifting device inspections**

- **Annual Diesel Generator Inspection**
- **Semi-annual maintenance on UV disinfection equipment**
- **Drilled new production Well # 7**
- **Abandonment of well # 5**
- **Annual fire hydrant flushing and maintenance**
- **Annual distribution valve turning and maintenance**
- **Purchase and installation of two UV disinfection reactors and controls 2025-2026**
- **Purchase of a new on-line turbidimeter**

Maintenance Summary

The Township of Stirling-Rawdon uses a work order tracking system to ensure work orders are complete and equipment is maintained as per manufacturer's specifications. Work orders are issued on a weekly, monthly, annual or on an as needed basis to provide the required service to the drinking water system. Capital projects are listed each year in the annual capital budget and are ranked based on priority through the Municipalities Asset Management Plan.

Water Treatment and Distribution Operation/maintenance work orders completed	Number of complete work orders 205

Drinking Water Quality Management System

The Township of Stirling-Rawdon contracted Intertek-SAI Global Canada to conduct the DWQMS Audit for the Stirling Drinking Water System. On January 27, 2026 an off-site Surveillance System Audit was conducted.

Water Taking and Transfer Data

Data for the reporting period of January 1, 2025 – December 31, 2025 was submitted electronically to the Ministry of the Environment Conservation and Parks on January 21, 2026 under Permit to Take Water PTTW # 1760-C5UNBR.