Century Heights Drinking Water System
2025 Operation and Maintenance
Annual Report

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1.0 INTRODUCTION AND BACKGROUND

The purpose of the 2025 Annual Report is to document the operation and maintenance data for the Century Heights Drinking Water System for review by the Ministry of Environment, Conservation and Parks (MECP) in accordance with O. Reg. 170/03. This report covers January 1, 2025 to December 31, 2025. A copy of this report will be submitted to the owner to be uploaded to the township's website and can be provided to interested parties upon request.

2.0 DESCRIPTION OF WATER SYSTEM

The Century Heights Drinking Water System (DWS **#220008499**), is classified as a small municipal residential system. Studies to establish the security of these wells from surrounding water proved inconclusive in 2007 and they are now considered to be GUDI (Ground Under the Direct Influence of surface water) sources. The system consists of two wells with a rated capacity of (#1 at 4.2 L/s and #2 at 4.3 L/s) 734 m3/day, with ultraviolet and sodium hypochlorite disinfection treatment.

The Well #1 and Well #2 systems are located on Concession 1, Lot 1, Western Division, of Ashfield-Colborne-Wawanosh Township.
The distribution system serves the community of Century Heights, Maitland View Subdivision, and parts of the Community of Saltford, with a population of approximately 250 residents, with approximately 85 customer services and approximately 2.1 Km of distribution watermains.

The system consists of a Class 1 Distribution and Supply, and Class 1 Treatment which is owned by the Township of Ashfield-Colborne-Wawanosh and operated by Veolia Water Canada, the Operating Authority.

Well # 1 is a 150 mm diameter drilled well, 66 metres deep, equipped with a submersible pump with a rated capacity of 4.2 Litres /second, with instrumentation and control equipment, and 50 mm diameter discharge line connected to the pump house.

Well # 2 is a 150 mm diameter drilled well, 66 metres deep equipped with a submersible pump with a rated capacity of 4.3 Litres /second, with instrumentation and control equipment and 100 mm diameter discharge line connected to the pump house. Well # 1 was constructed in 1979, located within the well house and # 2 was constructed in 2005, approximately 10 meters north of the well house.

Well #3 is located at 36604 Maitland Avenue

Well # 3 is a 200 mm diameter, 76.2 m deep equipped with a Submersible pump, rated at 8.5 L/s at 100 m TDH, with electrical, mechanical, instrumentation, controls and SCADA. A 100mm diameter raw watermain to the treatment building and an outdoor emergency generator rated 30 kw, or higher as concluded in the detail design. With a 245 L subbase fuel tank complete with secondary containment and leak detection sensing.
Well #3 was constructed in 2024 and is not yet in service. Well #3 is designed to run on its own servicing the Maitland View Subdivision and the new Subdivision to give better water pressure to all concerned.

The pump house for well #1 and #2 is equipped with well pumps, back-up diesel generator, chlorination system, a chlorine contact main, cartridge filter trains, UV disinfection system, hydropneumatic pressure vessels, on-line monitoring and alarm generation. The system is controlled by an onsite control.

The well house and its equipment have a daily combined (well #1 at a 363 m^3 maximum/day) and (well #2 at a 363 m^3 maximum/day) maximum capacity to deliver 734 m^3 of potable water per day to the Century Heights community. The current water sources are two deep bedrock wells. Both wells are located on the well house site with dedicated raw water mains feeding the well house.When Well #3 (has a 1,224 m^3 maximum/day) is put into service the daily combined (well #1,well #2 and well #3) will have a maximum capacity to deliver 1,958 cubic metres of potable water per day to the Century Heights community (Well #3 having a 122 m^3 maximum).

The water from each well is pumped to a common chlorine contact pipeline consisting of 4 m x 100 mm diameter, 37.9 m x 150 mm diameter, and 12.2 m x 600 mm diameter sections) to provide adequate chlorine contact time at maximum flow and before the first consumer, complete with a sampling / service water connection feed back to the pump house.

The well house and equipment are monitored and controlled by an alarm dialer and data recorder.

The attached distribution system is constructed with a combination of polyethylene and PVC piping with polyethylene services. There is no elevated storage to maintain pressure as the system pressure is maintained using pressure tanks and the well pumps.

The system has 3 fire hydrants but lacks the capacity to provide fire flows. Hydrants and blow-offs are used for flushing purposes.

Primary Disinfection at well #1 and well #2 is achieved with a UV Disinfection System consisting of two (2) disinfection reactors, one duty and one standby, rated at 40 mJ/cm2 throughout the lamp lifetime, complete with a UV intensity monitor.

Disinfection is also achieved on the Century Heights well supply through chemical treatment with the use of 12% sodium hypochlorite. In the well house, this chemical is added prior to the water entering the chlorine contact reservoir at dosages high enough to achieve both primary and secondary disinfection objectives. The system consists of two (2) sodium hypochlorite feed pumps (duty and standby) rated at 0.8 L/hr complete with auto switchover controls, piping, valves and associated monitoring equipment and 12.2 meters of 600 mm diameter water main as a contact reservoir.

The chlorine dosages range varies with the chlorine demand of the raw water. The free chlorine residual is monitored at the point of entry to the distribution system, by an on-line chlorine analyzer, with a target residual of > 1.20 mg/l and < 1.40 mg/l.

Additional treatment consists of a filtration system consisting of 2 streams of 2 cartridge filter trains one duty and one standby for the removal of particles 5 micron and larger, rated at 8.5 L/s.

The limiting factor regarding flow is chlorine contact time in the chlorine contact main. In order to meet the regulatory CT requirements (CT value > 3.0) increased flows beyond 8.5 litres per second must have an adequate free chlorine residual to counter the decreased retention time in the chlorine contact main. BM Ross and Associates have updated this calculation to meet MECP standards.

The treated water is monitored by an on-line chlorine analyzer.

Distribution piping typically ranges in size from 50 mm to 100 mm diameter, and consists of a combination of polyethylene and PVC piping, with polyethylene service connections.

Typical system pressure ranges from 40 P.S.I to 60 P.S.I.

3.0 SUMMARY OF WATER QUALITY MONITORING

3.1 Water Treatment Equipment Operation and Monitoring as per Schedule 7, O. Reg. 170/03

3.1.1 Point of Entry Chlorine Residual

Chlorine residuals are continuously measured using a HACH CL17 online chlorine analyzer, and verified for accuracy using a hand-held HACH pocket colorimeter 364 handheld samples were taken.

Table 1 shows the monthly average of free chlorine residual values on the treated water at the point of entry.

3.1.2 Distribution Chlorine Residual

Chlorine residuals in the distribution system are checked daily using a HACH pocket colorimeter. A total of 364 handheld distribution chlorine residuals were recorded.

Table 1. – Treated and Distribution Chlorine Residuals for Century Heights Drinking Water System

Date	Average Treated Chlorine Residual (mg/L)	Average Distribution Chlorine Residual (mg/L)
Jan	1.45	1.13
*Feb	1.54	1.25
Mar	1.65	1.63
Apr	1.67	1.22
May	1.65	1.30
Jun	1.67	1.35
Jul	1.58	1.31
Aug	1.34	1.34
Sep	1.70	1.37
Oct	1.58	1.20
Nov	1.65	1.31
Dec	1.78	1.57
Average	**1.61**	**1.35**
Min	**0.40**	**0.28**
Max	**1.90**	**1.94**
# Samples	**364**	**364**

*February 17th the roads were closed, Operators could not visit the sites for daily checks

3.1.3 Turbidity

The Treated Turbidity and Raw Turbidity is recorded at least once a month using a pocket turbidimeter.
The maximum turbidity measured in the treated water was 0.30 NTU. The maximum turbidity measured on the raw water at well #1 was 0.40 NTU and 1.78 NTU in the raw water well #2.

Table 2 provides a summary of raw and treated turbidity results.

Table 2. – Raw and Treated Water Turbidities for Century Heights Drinking Water System

Date	Average Raw Turbidity (NTU)#1	Average Raw Turbidity (NTU)#2	Average Treated Turbidity (NTU)
Jan	0.32	0.45	0.19
Feb	0.17	0.17	0.28
Mar	0.28	0.29	0.23
Apr	0.18	0.15	0.20
May	0.28	0.30	0.23
Jun	0.30	0.31	0.24
Jul	0.40	0.34	0.30
Aug	0.36	0.20	0.22
Sep	0.23	1.78	0.24
Oct	0.25	0.28	0.21
Nov	0.20	0.17	0.18
Dec	0.22	0.22	0.22
Average	**0.27**	**0.39**	**0.23**
Min	**0.17**	**0.15**	**0.18**
Max	**0.40**	**1.78**	**0.30**
# Samples	**45**	**40**	**155**

3.2 Microbiological Sampling as per Schedule 10, O. Reg. 170/03

3.2.1 Raw Water Samples

Raw water samples are taken every week. A total of 52 samples were collected at well #1 and 51 samples were taken at well # 2 (well was shut down for a month)and analyzed for E. Coli and Total Coliforms. Each E. Coli and Total Coliform sample results obtained at well #1 were 0 cfu/100 ml. One sample at well #2 had a Non Determined Overgrowth (NDOG) on Total Coliform
Table 3a & 3b. provides a summary of bacteriological results performed on the raw water.

Table 3a. – Microbiological Results for Raw Water at Century Heights Drinking Water System for

Well #1

	E. Coli			Total Coliform		
Date	**# Samples**	**# Samples 0**	**# Samples ≥1**	**# Samples**	**# Samples 0**	**# Samples ≥1**
Jan	4	4	0	4	4	0
Feb	4	4	0	4	4	0
Mar	4	4	0	4	4	0
Apr	5	5	0	5	5	0
May	4	4	0	4	4	0
Jun	4	4	0	4	4	0
Jul	5	5	0	5	5	0
Aug	4	4	0	4	4	0
Sep	4	4	0	4	4	0
Oct	5	5	0	5	5	0
Nov	4	4	0	4	4	0
Dec	5	5	0	5	5	0
Total	**52**	**52**	**0**	**52**	**52**	**0**

Table 3b. – Microbiological Results for Raw Water at Century Heights Drinking Water System for

Well #2

Date	E. Coli			Total Coliform		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1
Jan	4	4	0	*6	*6	0
Feb	4	4	0	4	4	0
Mar	4	4	0	4	4	0
Apr	5	5	0	5	5	0
May	4	4	0	4	4	0
Jun	4	4	0	4	4	0
Jul	5	5	0	5	5	0
Aug	4	4	0	4	4	0
Sep	4	3	1**	4	3	1**
Oct	2	2	0	2***	2***	0
Nov	4	4	0	4	4	0
Dec	5	5	0	5	5	0
Total	**51**	**51**	**0**	**51**	**50**	**1**

*extra samples take for well pump replacement
**Sample was Non Determined Overgrowth (NDG)*
***Well #2 was out of service from Aug to Oct.

3.2.2 Treated Water (Point of Entry) Samples

One treated water sample from the point of entry is taken every week and analyzed for E.Coli, Total Coliforms and for Heterotrophic Plate Count (HPC). A total of 52 treated water samples were collected and analyzed for E. Coli, Total Coliforms and HPCs. All samples were found to be safe. Each E. Coli and Total Coliform result from the treated water was 0 cfu/100 ml. The range of HPC results were 0 - 710 cfu/100 ml.

Table 4 provides a summary of all bacteriological results performed on treated water.

Table 4. – Microbiological Results for Point of Entry at Century Heights Drinking Water System

Date	E. Coli			Total Coliform			HPC		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1	# Samples	Safe	Deteriorating
Jan	4	4	0	4	4	0	4	4	0
Feb	4	4	0	4	4	0	4	4	0
Mar	4	4	0	4	4	0	4	4	0
Apr	5	5	0	5	5	0	5	5	0
May	4	4	0	4	4	0	4	4	0
Jun	4	4	0	4	4	0	4	4	0
Jul	5	5	0	5	5	0	5	5	0
Aug	4	4	0	4	4	0	4	4	0
Sep	4	4	0	4	4	0	4	4	0
Oct	5	5	0	5	5	0	5	5	0
Nov	4	4	0	4	4	0	4	4	0
Dec	5	5	0	5	5	0	5	5	0
Total	**52**	**52**	**0**	**52**	**52**	**0**	**52**	**52**	**0**

3.2.3 Distribution Samples

Distribution samples are collected every week and tested for E.Coli, Total Coliform and for Heterotrophic Plate Count (HPC). A Total of 52 distribution samples were collected and analyzed for E. Coli, Total Coliforms and HPCs. All E. Coli and total coliform results from the treated water were 0 cfu/100 ml. The range of HPC results were 0 - 70 cfu/100 ml.

Table 5 provides a summary of all bacteriological samples taken in the distribution system.

Table 5. – Microbiological Results for Century Heights Distribution System

Date	E. Coli			Total Coliforı			HPC		
	# Samples	# Samples 0	# Samples ≥1	# Samples	# Samples 0	# Samples ≥1	# Samples	Safe	Deteriorating
Jan	4	4	0	4	4	0	4	4	0
Feb	4	4	0	4	4	0	4	4	0
Mar	4	4	0	4	4	0	4	4	0
Apr	5	5	0	5	5	0	5	5	0
May	4	4	0	4	4	0	4	4	0
Jun	4	4	0	4	4	0	4	4	0
Jul	5	5	0	5	5	0	5	5	0
Aug	4	4	0	4	4	0	4	3	1
Sep	4	4	0	4	4	0	4	4	0
Oct	5	5	0	5	5	0	5	5	0
Nov	4	4	0	4	4	0	4	4	0
Dec	5	5	0	5	5	0	5	5	0
Total	**52**	**52**	**0**	**52**	**52**	**0**	52	**51**	**1**

3.3 Chemical Sampling & Testing as per Schedule 13, O. Reg. 170/03

3.3.1 Inorganics

One treated water sample is taken every 60 months and tested for inorganics. The most recent samples for the Century Heights Drinking Water System were collected on December 8, 2025 and submitted to the laboratory for analysis of inorganics as listed in Schedule 23. All parameters were found to be within compliance. Inorganics will be sampled and analyzed again in December, 2030.

Results from 2020 can be found in **Table 6.**

Table 6. – Schedule 23 Results for Century Heights Drinking Water System

Parameter	Result (µg/L)	Maximum Allowable Concentration (µg/L)
Antimony	<0.6	6
Arsenic	3	10
Barium	61.5	1000
Boron	93	5000
Cadmium	0.003	5
Chromium	<0.08	50
Mercury	<0.01	1
Selenium	<0.04	10
Uranium	0.993	20

3.3.2 Lead

Schedule 15.1 of Ontario Regulation 170/03 requires that samples be taken during two seasons: once between December 15 and April 15 and once between June 15 and October 15. The Maximum Allowable Concentration for Lead is 10 µg/L. In the two previous lead sampling seasons, pH, lead and alkalinity samples were taken on March 5, and again on June 24, 2025. The next Lead sample is due in the spring and winter seasons of 2026.

2024 results can be found in **Table 7.**

Table 7. – Lead Sampling Program Results for Century Heights Drinking Water System

	Lead (µg/L)	pH	Alkalinity (mg/L)
Dec-Apr	0.07	8.20	195
Jun-Oct	0.23	7.93	200

3.3.3 Organics

One treated water sample is taken every 60 months and tested for Schedule 24 organic parameters. The most recent samples were collected on December 8, 2025. All parameters were found to be within compliance. Organics will be sampled and analyzed in **December, 2030.**

2025 sample results can be found in **Table 8.**

Table 8. – Schedule 24 Results for Century Heights Drinking Water System

Parameter	Result (µg/L)	Maximum Allowable Concentration (µg/L)
Benzene	<0.32	1
Carbon Tetrachloride	<0.17	2
1,2-Dichlorobenzene	<0.41	200
1,4-Dichlorobenzene	<0.36	5
1,1-Dichloroethylene	<0.33	14
1,2-Dichloroethane	<0.35	5
Dichloromethane	<0.35	50
Monochlorobenzene	<0.30	80
Tetrachloroethylene	<0.35	30
Trichloroethylene	<0.44	50
Vinyl Chloride	<0.17	1
Diquat	<1	70
Paraquat	<1	10
Glyphosate	<1	280
Polychlorinated Biphenyls (PCBs)	<0.04	3
Alachlor	<0.02	5
Atrazine+N-dealkylated metabolites	<0.01	5
Atrazine	<0.01	5
Azinphos-methyl	<0.05	20
Benzo(a)pyrene	<0.004	0.01
Carbaryl	<0.05	90
Carbofuran	<0.01	90
Chlorpyrifos	<0.02	90
Desethyl atrazine	<0.01	--

Table 8 Con't

Parameter	Result (µg/L)	Maximum Allowable Concentration (µg/L)
Diazinon	<0.02	20
Dimethoate	<0.06	20
Diuron	<0.03	150
Malathion	<0.02	190
Metolachlor	<0.01	50
Metribuzin	<0.02	80
Phorate	<0.01	2
Prometryne	<0.03	1
Simazine	<0.01	10
Terbufos	<0.01	1
Triallate	<0.01	230
Trifluralin	<0.02	45
2,4-dichlorophenoxyacetic acid	<0.19	100
Bromoxynil	<0.33	5
Dicamba	<0.20	120
Diclofop-methyl	<0.40	9
MCPA	<0.00012	0.1
Picloram	<1	190
2,4-dichlorophenol	<0.15	90
2,4,6-trichlorophenol	<0.25	50
2,3,4,6-tetrachlorophenol	<0.20	100
Pentachlorophenol	<0.15	60

3.3.4 Trihalomethanes and Haloacetic Acids

One distribution sample is taken every three months from a point in the distribution system and tested for Trihalomethanes (THMs) and Haloacetic Acids (HAAs). Samples were collected during the months of February, May, August and November. The Ontario Drinking Water Quality Standard (ODWQS) has set a Maximum Allowable Concentration (MAC) of 100 µg/L for THMs and it is expressed as a running annual average. The RAA for THMs was found to be 11.5 µg/L. The MAC for HAAs is 80µg/L. All samples were within compliance.

Refer to **Table 9.** for the summary of haloacetic acid results (HAAs) and Trihalomethanes (THMs).

3.3.5 Nitrate & Nitrite

One treated water sample is taken every three months and tested for nitrate and nitrite. Samples were collected during the months of February, May, August and November. The Ontario Drinking Water Quality Standard (ODWQS) has set a Maximum Allowable Concentration (MAC) of 1 mg/L for nitrites and 10 mg/L for nitrates. The results were found to be within compliance.

Refer to **Table 9.**

Table 9. – Nitrate, Nitrite, THM and HAA Results at Century Heights Drinking Water System

	Nitrite		Nitrate		THMs		HAAs	
Date	**# Samples**	**Result (mg/L)**	**# Samples**	**Result (mg/L)**	**# Samples**	**Result (µg/L)**	**# Samples**	**Result (µg/L)**
March 5	1	<0.003	1	<0.006	1	7.2	1	<5.3
June 10	1	<0.003	1	<0.006	1	9.4	1	<5.3
Sept 15	1	<0.003	1	<0.006	1	23	1	<5.3
Dec	1	<0.003	1	<0.006	1	6.4	1	<5.3
Total	4		4		4		4	
Average		0.005		<0.006		RAA 11.5		<5.3
Maximum		0.005		<0.006				<5.3

3.3.6 Sodium

One water sample is collected every 60 months and tested for Sodium. O. Reg 170/03 has set a Maximum Acceptable concentration (MAC) of 20 mg/L for Sodium which requires the Medical Office of Health be notified if the concentration exceeds the MAC. These samples were last collected on June 15, 2021 and June 30, 2021 and were found to be 21.6 mg/L and 22.2 mg/L respectively, which is *over the MAC* and requires notice to the Health Unit. Huron Perth Public Health has prepared a notice regarding high sodium levels in drinking water.
For more information see: http://www.acwtownship.ca/wordpress/wp-content/uploads/2013/09/Century-Heights.pdf.
The next water sample for Sodium will be collected and analyzed on or before ***June 30, 2026***.

3.3.7 Fluoride

One water sample is collected at least once every 60 months and tested for Fluoride. The Ontario Drinking Water Quality Standards (ODWQS) have set a MAC of 1.5 mg/L. On August 23, 2022 and August 30, 2022 a sample was collected for this analysis. The first sample was found to have a concentration of 2.21 mg/L, which is greater than the MAC. The second sample again came back higher than the MAC at 2.10 mg/L. This is due to high levels of naturally occurring fluoride in the aquifer.
For more information see: http://www.acwtownship.ca/wordpress/wp-content/uploads/2013/09/CenturyHeights.pdf.
The next water sample for Fluoride will be collected and analyzed in August 2027.

4.0 WATER AND CHEMICAL USAGE

4.1 Chemical Usage

A total of 157.75 kg sodium hypochlorite was used to ensure proper disinfection in the distribution system with an average dosage of 4.56 mg/L.

Refer to **Table 10.**

Table 10. – Chemical Usage at Century Heights Drinking Water System

Date	Sodium Hypochlorite	
	Usage (kg)	Average Dosage (mg/L)
Jan	9.66	5.34
Feb	9.11	4.43
Mar	9.25	4.42
Apr	8.97	4.30
May	11.87	4.40
Jun	15.46	4.37
Jul	21.53	4.26
Aug	24.84	5.05
Sep	13.11	1.57
Oct	10.76	4.50
Nov	11.32	4.65
Dec	11.87	4.39
Total	**157.75**	**–**
Average	**–**	**4.56**

4.2 Annual Flows

A summary of the water supplied to the distribution system is provided in **Table 11.** This Table provides a breakdown of the monthly flow provided to the distribution system.

Flow meters were calibrated July 2025

Table 11. – Treated Water Flows for Century Heights Drinking Water System

Date	Average Daily Flow (m^3)	Maximum Daily Flow (m^3)	Total Monthly Flow (m^3)
Jan	71	90	2,200
Feb	78	108	2,176
Mar	69	92	2,136
Apr	71	107	2,116
May	89	153	2,754
Jun	119	237	3,575
Jul	168	250	5,193
Aug	177	367	5,498
Sep	97	176	2,910
Oct	78	160	2,426
Nov	83	126	2,496
Dec	87	125	2,696
Average	**98.87**	**–**	–
Max	**–**	**367**	**–**
Total	**–**	**–**	**36,176**

5.0 IMPROVEMENTS TO SYSTEM AND ROUTINE AND PREVENTATIVE MAINTENANCE

- Annual generator checks completed by Sommers Generator Systems
- Fergusons inspected the backflow preventers
- Cleartech completed annual calibrations for the analyzer
- Monthly maintenance was completed
- The UV was serviced
- Well #2 had a new pump and motor installed
- New pressure switch for the wells was installed
- Well #3 was super chlorinated, flushed and sampled (samples met the parameters)
- New Cl2 analyzer was installed
- Well #2 could not keep up to the high flow demands in August and had to be shut down
- New UV sensor is needed

6.0 MINISTRY OF THE ENVIRONMENT INSPECTIONS AND REGULATORY ISSUES

The Century Heights Drinking Water System was inspected by The Ministry of Environment , Conservation and Parks (July 31, 2025) and received a 100% rating.

Reaccreditation was granted by Intertek (SAI)

There were 1 instance of adverse water quality:

- AWQI # 167949 - Loss of pressure in the system

There was 0 Precautionary Boil Water Notice.

There were 0 instances of nonconformance.

Report Date: February 13, 2026

Century Heights Subdivision Drinking Water System – 2025 Compliance Summary

This document is a compliance summary for the Century Heights water supply for the year 2025 as per O Reg. 170/03 Schedule 22. A full summary of the water system's test results, flows and significant activities was submitted in the Annual report.

System Description

The Century Heights water system is characterized as a "GUDI" (ground water under the direct influence of surface water) system and is classified as a small municipally owned water system. The well house and its equipment have a daily maximum capacity to deliver ***734.4*** cubic meters of potable water per day to Century Heights subdivision, Maitlandview subdivision and parts of the Saltford community.

The Well 1 and 2 sources are two deep bedrock wells. Studies to establish the security of these wells from surrounding surface water proved inconclusive in 2007 and they are now considered to be GUDI sources. BM Ross is currently investigating the new well designations established by the Ministry of the Environment.

Well #1, constructed in 1979, is located within the well house

Well #2, constructed in 2005, is located approximately 10 meters north of the well house.

Well #3 was constructed in 2024 and is not yet in service. Well #3 is designed to run on its own servicing the Maitland View Subdivision and the new Subdivision to give better water pressure to all concerned.

Well # 3 is a 200 mm diameter, 76.2 m deep equipped with a Submersible pump, rated at 8.5 L/s at 100 m TDH, with electrical, mechanical, instrumentation, controls and SCADA. A 100mm diameter raw watermain to the treatment building and an outdoor emergency generator rated 30 kw, or higher as concluded in the detail design. With a 245 L subbase fuel tank complete with secondary containment and leak detection sensing.

The well house is equipped with well pumps, backup diesel generator set, chlorinators, a chlorine contact main, UV disinfection, online monitoring and alarm generation to an Autodialer.

The attached distribution system is constructed of a combination of polyethylene and PVC piping with polyethylene services.

There is no elevated storage to maintain pressure and the system pressure is maintained by using pressure tanks and the two well pumps.

The system has hydrants, but lacks the capacity to provide fire flows.

Chemicals Fed

Disinfectant

Disinfection is achieved on the Century Heights well supply through the use of 12% sodium hypochlorite.

In the well house this chemical was added prior to the water entering the chlorine contact main at dosages high enough to achieve both primary and secondary disinfection objectives.

The chlorine dosages average ranged from 4.26 mg/L to 5.34 mg/L, this varies with the chlorine demand of the raw water.

The free chlorine residual was monitored at the point of entry to the distribution system with an average residual of 1.35 mg/L.

Flows

The Century Heights well supply has 1 PTTW (permit to take water) #P-300-8227155599 which permits 734.4 cubic metres of water per day to be pumped from the wells. This limit was not exceeded in 2025, the average flows were 98.87 m^3 per day. This permit was issued on March 6, 2024 and the PTTW expires on November 30, 2033. A full summary of the 2025 flows can be found in the Annual Report.

The Drinking Water Works Permit (DWWP) #080-205 Issue #4 for the Century Heights Subdivision Drinking Water System was issued on June 19, 2020. The maximum total daily flow is ***734.4*** cubic meters per day and the maximum instantaneous flow is 8.5 litres per second.

The limiting factor regarding flow is the chlorine contact time in the chlorine contact main. In order to meet the regulatory CT requirements, increased flows beyond 8.5 litres per second must have an adequate free chlorine residual of 0.64 mg/L to counter the decreased retention time in the chlorine contact main. The combination of maximum flows through the chlorine contact main and minimum free chlorine residuals exiting the contact main did not go below the limitations in 2025 as recorded by the flow meter and online chlorine analyzer.

The maximum daily flow in 2025 was 367 cubic meters or 49.97% of capacity.

The 2025 average daily flow was 99 cubic meters or 13.48%.

Precautionary Boil Water Notices

There were no Precautionary Boil Water Notice in 2025.

Boil Water Advisory

There were no Boil Water Advisories issued by the Huron Perth Public Health (HPPH) on the Century Heights water system in 2025.

Annual Ontario Ministry of the Environment Inspection

The Century Heights Drinking Water System was inspected by The Ministry of the Environment, Conservation and Parks on June 11, 2025 and received a rating of 100%. There were no non compliances noted.

Non conformance:

There were (0) non conformances

Adverse Water Quality Indicators

There were no instances of adverse water quality.

Exceedances

There were no exceedances for 2025

Infrastructure Assessment

Regular contact is maintained with ACW's representative. The JobsPlus program is continually updated with preventative and corrective maintenance issues. A complete summary can be forwarded to the client upon their request. Through regular communication between the operating authority and the client, capital items are discussed. A list of capital items and concerns was forwarded to ACW's representative in 2025

The annual Management Review was conducted by the operating authority on November 5, 2025 as per the DWQMS requirement in Element 14. Regular discussions between the client and the operating authority for this water system are continued throughout the year by emails, phone calls, and meetings as per the requirements of Element 15 of the DWQMS.

The Internal Audit was last completed on October 7, 2025, there were no non conformances noted. The last Risk Assessment was completed in October 2025. An Emergency Response Exercise was not conducted by Veolia in 2025.

An External System (Stage 1) Surveillance Audit was conducted by SAI Global on May 6, 2025. Certificate # 0225715 was issued on September 23, 2025.

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