

Vankleek Hill Drinking Water System

Waterworks # 260002395
System Category – Large Municipal Residential

Annual Water Report

Prepared For: Champlain Township

Reporting Period of January 1st – December 31st 2024

Issued: February 25, 2025

Revision: 0

Operating Authority:



This report has been prepared to satisfy the annual reporting requirements in O.Reg 170/03 Section 11 and Schedule 22

Table of Contents

Report Availability	1
Compliance Report Card	1
System Process Description	1
Treatment & Distribution	1
Treatment Chemicals used during the reporting year:	2
Summary of Non-Compliance	2
Adverse Water Quality Incidents	2
Non-Compliance	2
Non-Compliance Identified in a Ministry Inspection:	2
Flows	3
Distribution Water Flows	3
Monthly Flows	3
Annual Total Flow Comparison (m ³)	3
Regulatory Sample Results Summary	4
Microbiological Testing	4
Operational Testing	4
Schedule 15 Sampling:	4
Organic Parameters	4
Additional Legislated Samples	5
Major Maintenance Summary	5
Distribution Maintenance	5

Report Availability

This system does not serve more than 10,000 residence and the annual reports will be available to residents on the Champlain Township website.

Compliance Report Card

Compliance Event	# of Events
Ministry of Environment Inspections	1 – Inspection completed on November 1, 2024
Ministry of Labour Inspections	0
QEMS External Audit	Off-Site Plan Audit – 2 OFIs
AWQI's/BWA	0
Non-Compliance	0
Community Complaints	0
Spills	0
Watermain Breaks	0

System Process Description

Treatment & Distribution

The Vankleek Hill Water Distribution System is a standalone distribution system, receiving treated water from the Hawkesbury Water Treatment Plant.

The system consists of the following:

- A booster station located at the junctions of Highways #34 and #17, housing two horizontal water pumps rated at 32.1 L/s (pumping water to Vankleek Hill), a dual chloramination system, online total and free analyzers with chart recorder, flow measurement and related electrical and instrumentation
- A booster station located at the standpipe in Vankleek Hill houses two vertical water pumps rated at 143 L/s (for fire protection), flow control and related electrical and instrumentation; a

10 km 400 mm transmission line with 16 valve chambers

- A 2,270 m³ standpipe
- Approximately 14.6 km of watermains, ranging from 150 mm to 300 mm and approximately 85 hydrants.
- Standby power is provided at the Highway 34 booster station, which maintains standpipe water level and town pressure.

This booster station, transmission line, and stand pipe operate under Drinking Water License Number 174-102 & Drinking Water Works Permit Number 174-202.

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Brenntag
Ammonium Sulphate	Disinfection	Brenntag

Summary of Non-Compliance

Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Legislation	Corrective Action Taken
There were no adverse water quality incidents issues 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 issues reported during the reporting period.				

Non-Compliance Identified in a Ministry Inspection:

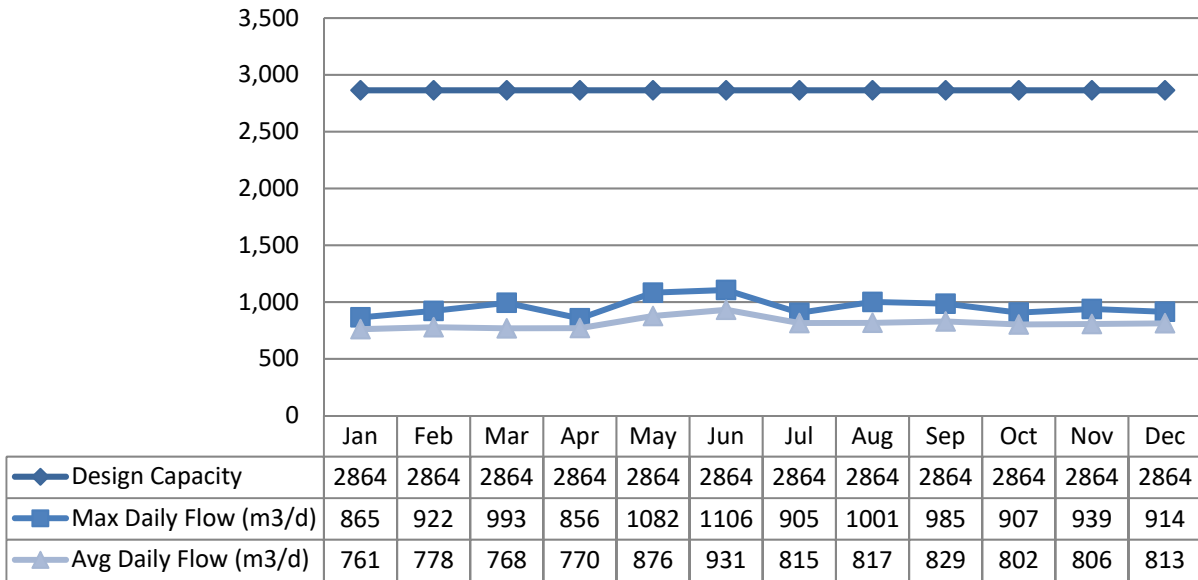
Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
There were no non-compliance issues reported during the reporting period.				

Flows

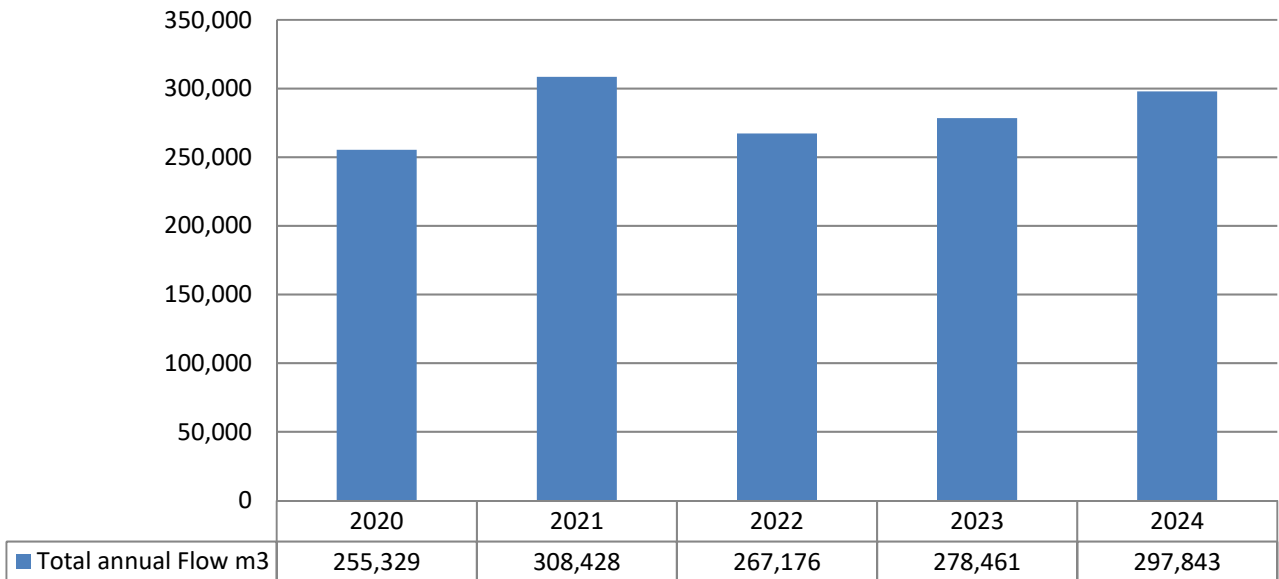
With a 2024 annual average day flow of 813.8 m³/d, the Vankleek Hill Water Distribution System is operating slightly above one quarter of its design capacity of 2864 m³/day.

Distribution Water Flows

Monthly Flows



Annual Total Flow Comparison (m³)



Regulatory Sample Results Summary

Microbiological Testing

	No. of Samples Collected	Range of E.Coli Results		Range of Total Coliform Results		No. of Samples Collected	Range of HPC Results	
		Min	Max	Min	Max		Min	Max
Distribution Water	159	0	0	0	1	53	<2	24

Operational Testing

	No. of Samples Collected	Range of Results	
		Minimum	Maximum
Combined Chlorine Residual, On-Line (mg/L) - DW	8760	0.65	2.60
Combined Chlorine Residual, DW Field (mg/L) Lab Upload - DW	159	1.13	2.23

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

Schedule 15 Sampling:

The Schedule 15 Sampling is required under O.Reg 170/03. This system is under reduced sampling. No plumbing samples were collected.

Distribution System	Number of Sampling Points	Number of Samples	Range of Results		MAC (mg/L)	Number of Exceedances
			Minimum	Maximum		
Alkalinity (mg/L)	2	4	29	50	N/A	N/A
pH	2	4	7.6	7.6	N/A	N/A
Lead (mg/L)	2	4	N/A	N/A	0.01	N/A

Organic Parameters

This parameter was tested quarterly as a requirement under O.Reg 170/03.

	Sample Date (yyyy/mm/dd)	Running Average	MAC	Number of Exceedances	
				MAC	1/2 MAC
Distribution Water					
Trihalomethane: Total (ug/L) Annual Running Average - DW	2024	52.75	100	No	No
Haloacetic Acids: Total (ug/L) Annual Running Average – DW	2024	39.15	80	No	No

MAC = Maximum Allowable Concentration as per O.Reg 169/03

BDL = Below the laboratory detection level

Additional Legislated Samples

There was no additional sampling required.

Major Maintenance Summary

Distribution Maintenance

Date	Location Reference	Details
2024	Booster Hwy 34	Small repairs to chemical pumps, fittings and lines throughout the year
Jan 31	Booster Station	Replace the alarm dialer at Hwy 34 Booster
April 5	Booster HWY 34	Inspect system since Hydro repair pole connection and replace cable connection
May 8	VKH Distribution	Replace standpost at 103 High St
June 13	VKH Distribution	Repair standpost at 105 Barton St
July 18	VKH Distribution	Hydrant emergency repairs at -144 HWY 34, Heber St, 255 Main E
Aug 21	VKH Distribution	Replace standpost at 69 Home Ave, 102 Fournier St, 103 Barton St, 95 Stanley St, 196 Mill St, 133 Bond St
Sept 9	Booster HWY 34	Annual Flow meter Calibrations
Sept 13	VKH Distribution	Repair hydrant Pendleton/ Mill st
Sept 26	VKH Distribution	Hydrant Inspection/Service
Sept 27	VKH distribution	Flushing of the distribution system
Dec 4	VKH Distribution	Replace 3 stand post at -110-112 Mill St and 46 Home St