

# Monthly Operations Report

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for the Municipality of Casselman's Water and  
Wastewater Systems

March 2023



**Ontario Clean Water Agency**  
**Agence Ontarienne Des Eaux**

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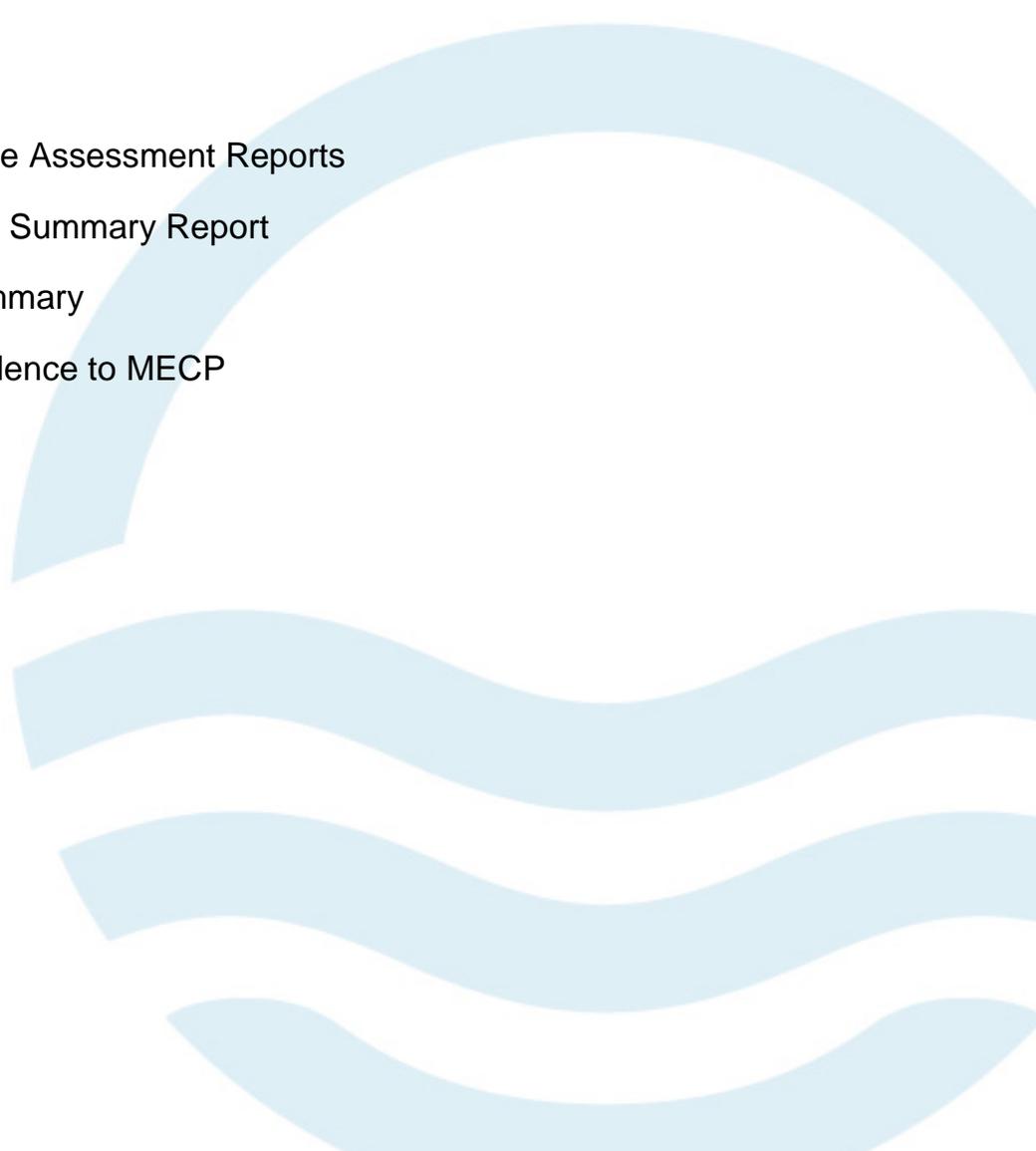
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## SECTION 1 – MONTHLY OPERATIONS REPORT CARD

### Operations and Compliance Reliability Indices

Legend					
✓	●	▲	✗	Y/N	N/A
Achieved	On Target	Caution	Not Achieved	Yes/No	Not Applicable

	Target	March 2023	Comments
<b>Health &amp; Safety</b>			
Number of Incidents	0	●	
<i>Actual Result</i>		0	
<b>Drinking Water</b>			
Inspection Ratings (YTD)	100 %	●	
<i>Actual Result</i>		100 %	
AWQI's	0	●	
<i>Actual Result</i>		0	
Number of Non-Compliances	0	●	
<i>Actual Result</i>		0	
Number of Water Main Breaks	0	●	
<i>Actual Result</i>		0	
Number of Complaints	0	●	
<i>Actual Result</i>		0	
Water Main Flushing	0	●	
<i>Target Achieved</i>		0	
<b>Wastewater</b>			
Number of Non-Compliances	0	✗	
<i>Actual Result</i>		1	
Number of Bypasses	0	●	
<i>Actual Result</i>		0	
Number of Sanitary Sewer Back-ups	0	●	
<i>Actual Result</i>		0	
Sanitary Collection System Flushing	0	●	
<i>Target Achieved</i>		Y	
<b>Preventive Maintenance</b>			
Work Orders Completed	>95%	●	
<i>Target Achieved</i>		Y	

## SECTION 2 – FACILITY LISTING

### Water Treatment & Distribution

Facility	Type
5971 - Casselman Water Treatment Plant	1 WTP (Actiflo Process)
1553 - Casselman Water Distribution System	1 Water Storage Tower + Water Distribution System

### Wastewater Treatment & Collection

Facility	Type
1501 - Casselman Wastewater Treatment Plant	3 Facultative Lagoon Cells 1 MBBR (Moving Bed Biofilm Reactor)
5976 - Casselman Wastewater Collection System	6 Sewage Pumping Stations + Wastewater Collection System

## SECTION 3 – COMPLIANCE

There were no compliance issues to report for Casselman’s drinking water system.

One non-compliance was reported for Casselman’s wastewater treatment facility due to an exceedance of the total volume of effluent discharged during the fall discharge period in 2022. Please see the correspondence to MECP attached in Appendix D.

The most recent MECP inspections are listed below:

Location	Inspector	Inspection Rating (%)	Date
Casselman Water	Jean-Francois Durocher	100	February 9, 2023
Casselman Sewage	<i>*OCWA has no recent sewage system inspections on file.</i>		

There are no outstanding actions required from any recent MECP inspections.

## **SECTION 4 – FACILITY PERFORMANCE**

Please see the Water & Wastewater Performance Assessment Reports attached in Appendix A.

## **SECTION 5 – DRINKING WATER QUALITY MANAGEMENT SYSTEM (DWQMS)**

OCWA was re-accredited as the Operating Authority for Casselman’s Drinking Water System on January 24, 2023.

## **SECTION 6 - MAINTENANCE / CAPITAL / ADDED VALUE**

### Water Treatment & Distribution

- Responded to twelve after-hours call-in alarms
- Repaired water service at 766 Principale Street.
- Completed installation of new turbidity analyzer on Actiflo #1

### Wastewater Treatment & Collection

- Responded to three after-hours call-in alarms
- Lagoon discharge continued throughout the month of March
- Completed the annual wastewater report for 2022 and submitted to the Municipality

### Preventive Maintenance Plan (PMP) Work Order Summary

All required work orders were completed. Please refer to the summary reports attached in Appendix B.

## **SECTION 7 – COMPLAINTS**

<b>Facility</b>	<b>Date</b>	<b>Description</b>
None to report		

## **SECTION 8 – RECOMMENDATIONS / GENERAL COMMENTS**

### General

- 12 locates were completed in March.

### Water Treatment & Distribution

- Capital/Major Maintenance projects approved for 2023 are underway.

### Wastewater Treatment & Collection

- Capital/Major Maintenance projects approved for 2023 are underway.
- Wastewater sampling as part of Queen’s University’s Covid sampling program ended on March 31st.

# Appendix A

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## Performance Assessment Reports



**ONTARIO CLEAN WATER AGENCY  
PERFORMANCE ASSESSMENT REPORT**

**MUNICIPALITY:** MUNICIPALITY OF CASSELMAN  
**PROJECT:** CASSELMAN DRINKING WATER SYSTEM  
**DESCRIPTION:** SURFACE WATER TREATMENT PLANT  
CHEMICALLY ASSISTED FILTRATION

**YEAR:** 2023  
**WATER SOURCE:** NATION RIVER  
**DESIGN CAPACITY:** 3182 m3/d  
**WORKS NUM.:** 210001219

MONTH	SYSTEM FLOWS (TREATED)			TREATED		DISTRIBUTION		RAW					TREATED					DISTRIBUTION				
	Total Flow (m <sup>3</sup> )	Avg. Flow (m <sup>3</sup> )	Max Day Flow (m <sup>3</sup> )	Min. Free Cl <sub>2</sub> Resid. (mg/L)	Max Free Cl <sub>2</sub> Resid. (mg/L)	Min Combined Cl <sub>2</sub> Resid. (mg/L)	Max Combined Cl <sub>2</sub> Resid. (mg/L)	Dissolved Organic Carbon (mg/L)	Total Organic Carbon (mg/L)	Total Hardness (mg/L)	Average Manganese (mg/L)	Max Manganese (mg/L)	IH Avg. Turbidity (NTU)	IH Max. Turbidity (NTU)	Dissolved Organic Carbon (mg/L)	Total Organic Carbon (mg/L)	Total Hardness (mg/L)	Average Manganese (mg/L)	Max Manganese (mg/L)	THM (µg/L) quarterly	HAA (µg/L) quarterly	NDMA (µg/L) quarterly
JAN	30573	986	1259	1.10	2.49	1.00	2.26	8.30	8.40	242	0.12	0.20	0.22	0.33	3.00	3.20	224	0.07	0.18	53.75	32.13	< 0.0009
FEB	28511	1018	1342	1.33	2.55	0.70	2.02	4.00	4.00	372	0.12	0.18	0.27	0.42	1.40	1.70	361	0.12	0.34	-	-	-
MAR	29920	965	1223	1.38	2.37	1.01	2.00	4.60	4.60	330	0.16	0.19	0.26	0.35	2.00	2.00	329	0.06	0.09	-	-	-
APR																						
MAY																						
JUN																						
JUL																						
AUG																						
SEP																						
OCT																						
NOV																						
DEC																						
TOTAL	89,004																					
AVG		990						5.63	5.67	314.67	0.13		0.25		2.13	2.30	304.67	0.08		53.75	32.13	0.0009
MAX			1,342		2.55		2.26												0.34			
MIN				1.10		0.70																
CRITERIA			<b>3,182</b>	<b>CT</b>		<b>0.25</b>	<b>3.00</b>													<b>&lt;100</b>	<b>&lt;80</b>	<b>&lt;0.009</b>

MONTH	SYSTEM FLOWS (RAW)				ACTIFLO FILTER #1		ACTIFLO FILTER #2		Efficiency	TANK		TREATED				<i>E. coli</i> / Total Coliform / HPC (Number of Samples Collected)				RAW WATER	
	Total Flow (m <sup>3</sup> )	Avg. Day Flow (m <sup>3</sup> )	Max. Flow (m <sup>3</sup> )	Max. Flow Rate (L/min)	Avg. Turbidity (NTU)	Max. Turbidity (NTU)	Avg. Turbidity (NTU)	Max. Turbidity (NTU)	Turbidity % < 0.3 NTU Filter #2	Backwash TSS (mg/L)	Supernatant TSS (mg/L)	OL Avg. Turbidity (NTU)	OL Max. Turbidity (NTU)	Min UV Intensity (mJ/cm <sup>2</sup> )	Min UVT (%)	Safe		Adverse		Max. Count	Max. <i>E. coli</i> Count
																Treated	Distribution	Treated	Distribution		
JAN	38963	1257	1790	2195	0.14	0.56	0.08	0.84	99.71	11	3	0.44	0.90	70	81	5	15	0	0	16200	66
FEB	38499	1375	1666	2149	0.15	0.34	0.10	0.29	99.97	3	6	-	-	65	87	4	12	0	0	1860	85
MAR	38816	1252	1606	2016	0.16	0.72	0.11	0.38	98.93	3	5	-	-	82	86	4	12	0	0	780	76
APR																					
MAY																					
JUN																					
JUL																					
AUG																					
SEP																					
OCT																					
NOV																					
DEC																					
TOTAL	116,278															13	39	0	0		
AVG		1,295			0.15		0.10		99.54	5.7	4.7	0.44									
MAX			1,790	2,195		0.72		0.84		11	6		0.90							16200	85
MIN														65.00	81.26						
CRITERIA			<b>3,182</b>	<b>2,205</b>		<b>&lt;1</b>		<b>&lt;1</b>	<b>&gt;95%</b>				<b>&lt;5</b>	<b>&gt;40</b>							

**COMMENTS:** \*Treated Water OL Turbidity - No reliable readings trended on SCADA from January 20th - 31th, February, March 2023

**ONTARIO CLEAN WATER AGENCY  
PERFORMANCE ASSESSMENT REPORT**

**OWNER:** MUNICIPALITY OF CASSELMAN  
**PROJECT:** CASSELMAN WASTEWATER TREATMENT SYSTEM  
**ECA NUM.:** 8160-BAHPRF  
**DESCRIPTION:** MOVING BED BIOLOGICAL REACTOR (MBBR) TREATMENT LAGOON

**YEAR:** 2023  
**WATER COURSE:** NATION RIVER  
**DESIGN CAPACITY:** 2,110 m<sup>3</sup>/d  
**FACILITY WORKS#:** 110002201

MONTH	RAW								EFFLUENT										
	Total Flow m <sup>3</sup>	Avg Day Flow m <sup>3</sup>	Max Day Flow m <sup>3</sup> /d	Avg Alum Dosage (mg/L)	Avg Raw BOD5 (mg/L)	Avg Raw TSS (mg/L)	Avg. Raw TKN (mg/L)	Avg Raw TP (mg/L)	Effluent Flow m <sup>3</sup>	Effluent Avg Flow m <sup>3</sup>	Effluent Max Flow m <sup>3</sup> /d	Avg CBOD5 (mg/L)	Avg TSS (mg/L)	Avg TAN (mg/L)	Avg TP (mg/L)	Avg TKN (mg/L)	Avg Nitrate (mg/L)	Avg Nitrite (mg/L)	E. coli (cfu/100 mL)
JAN	48,260	1,557	2,167	175	167	240	36.8	4.10	131,702	4,248	4,906	7.6	12.0	15.80	0.36	19.54	7.06	0.09	2717
FEB	45,524	1,626	1,948	192	500	660	82.0	9.14	56,404	2,014	2,344	4.3	10.3	11.14	0.47	14.20	18.52	0.12	738
MAR	61,249	1,976	2,888	188	294	480	52.0	6.29	60,153	1,940	3,458	4.0	8.0	0.91	0.36	2.62	29.05	0.07	598
APR																			
MAY																			
JUN																			
JUL																			
AUG																			
SEPT																			
OCT																			
NOV																			
DEC																			
TOTAL	155,033								248,259										
AVG		1,719		185	320	460	57	6.51		2,734		5.3	10.1	9.3	0.4	12.12	18.21	0.09	1,351
MAX			2,888		500	660	82	9.14			4,906	7.6	12.0	15.8	0.5	19.54	29.05	0.12	2,717
CRITERIA							Fall Discharge			267,650	2,909								
A							Winter/Spring Dircharge			502,500	3,722	5,000							

<b>COMPLIANCE</b>																				
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MONTH	UPSTREAM*				DOWNSTREAM**			
	Avg CBOD5 (mg/L)	Avg TSS (mg/L)	Avg TAN (mg/L)	Avg PHOS. (mg/L)	Avg CBOD5 (mg/L)	Avg TSS (mg/L)	Avg TAN (mg/L)	Avg PHOS. (mg/L)
JAN	3.0	17.0	0.10	0.08	-	-	-	-
FEB	-	-	-	-	-	-	-	-
MAR	-	-	-	-	-	-	-	-
APR								
MAY								
JUN								
JUL								
AUG								
SEPT								
OCT								
NOV								
DEC								
TOTAL								
AVG	3	17	0	0.1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
MAX	3	17	0.1	0.08	0	0	0	0
CRITERIA								

<b>COMPLIANCE</b>																				
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**Comments:**

\*No Upstream Samples required to be collected when downstream sampling is not feasible (January 31, February, March)

\*\*No Downstream samples were taken due to ice cover on the Nation River (January, February, March)

# Appendix B

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## Work Order Summary Reports



## Monthly Work Order Summary – March 2023

### Casselman Drinking Water System

Description	Status	Work Type
Client Reports (1m) - Casselman 5971	COMP	PM
Monthly H&S Equipment Check (1m) - 5971	COMP	PM
Pump Diaphragm Coagulant Route Inspection/Service (1m) 5971	COMP	PM
Pump Diaphragm Polymer Route Inspection/Service (1m) 5971	COMP	PM
Pump Diaphragm Sodium Hydroxide Route Inspection/Service (1m) 5971	COMP	PM
Pump Diaphragm Ammonium Sulphate Route Inspection/Service (1m) 5971	COMP	PM
Pump Diaphragm Potassium Permanganate Route Inspection/Service (1m) 5971	COMP	PM
Analyzer Chlorine Portable Verification Caroline (1m) 1555	COMP	PM
WISKI Monthly Review(1m) 5971	COMP	PM
Blower Centrifugal Inspection/Service (1m) 5971	COMP	PM
Air Compressor Inspection/Service (1m) 5971	COMP	PM
Dryer Air Service (1m) - 5971	COMP	PM
Generator Inspection (1m) 5971	COMP	PM
Drive VFD Inspection (6m) 5971	APPR	PM
Analyzer Total Chlorine Inspection/Service (1m) 5971	COMP	PM
Analyzer pH Inspection/Service (1m) 5971	COMP	PM
Analyzer Turbidity Inspection/Service (1m) 5971	COMP	PM
Mixer Chemical Inspection (3m) 5971	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 5971	COMP	PM
UV Light Bank Insp/Service (1m) - 5971	COMP	PM
UVT Sensor Checks/Calibration (1m) - 5971	COMP	PM
UV Sensor Reference Check/Calibration (1m) - 5971	COMP	PM
Workplace Inspection (1m) - 5971	COMP	OPER
Relief Valve UV Room Inspection (3m) 5971	APPR	OPER
Call Back - Casselman - 5971 - WTP - High turbidity and back to back backwashes	COMP	CALL
Call Back - Casselman - 5971 - WTP - Back to back backwashes for filters	COMP	CALL
Call Back - Casselman - 5971 - WTP - Overfill in backwash tank due to back to back backwashes	COMP	CALL
Call Out - Casselman - WT - 5971 - Actiflo Alarm-Backwash Issue	COMP	CALL
Call Back - Casselman - 5971 - WTP - Back to back backwashes for filters and overfill backwash tank	COMP	CALL
Call Back - Casselman - 5971 - WTP - Filter 1 shutdown due to high-high turbidity	COMP	CALL
Call Back - Casselman - 5971 - WTP - Back to back backwashes for filters and high turbidity filter 1	COMP	CALL
Call Back - Casselman - 5971 - WTP - High turbidity and pressure differential issues	COMP	CALL
Call Back - Casselman - 1501 - WWT - Foaming issues at SPS 6 causing pumping issues and SCADA issues	COMP	CALL
Casselman WTP 5971 High Turb effluent	COMP	CALL
Casselman WTP 5971 High Turb effluent	COMP	CALL
Casselman WTP 5971 Backwash tank high level	COMP	CALL

**Monthly Work Order Summary – March 2023**  
**Casselman Wastewater Treatment & Collection System**

Description	Status	Work Type
Generator Inspection (1m) SPS #1 1501	COMP	PM
Generator Inspection (1m) SPS #2 1501	COMP	PM
Generator Inspection (1m) SPS #3 1501	COMP	PM
Generator Inspection (1m) SPS #5 1501	COMP	PM
Generator Inspection (1m) SPS #6 1501	COMP	PM
Generator Inspection (1m) 1501	COMP	PM
Analyzer Turbidity Inspection/Service (1m) 1501	COMP	PM
PANEL ALARM/DIALER TEST (1m) 5976	COMP	PM
Monthly H&S Equipment Check (1m) - 1501	COMP	PM
Blower Inspection/Service (1m/1y) 1501	COMP	PM
Blower Inspection/Service (1m/1y) 1501	COMP	PM
Blower Inspection/Service (1m/1y) 1501	COMP	PM
Blower Inspection/Service (1m/1y) 1501	COMP	PM
Blower Inspection/Service (1m/1y) 1501	COMP	PM
Blower Inspection/Service (1m/1y) 1501	COMP	PM
Bar Screen Inspection (1m) 1501	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 1501	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 1501	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 1501	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 1501	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 1501	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 1501	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 1501	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 1501	COMP	PM
Workplace Inspection (1m) - 1501	COMP	OPER
WISKI Monthly Review(1m) 1501	COMP	PM
Call Back - Casselman - 1501 - WWT - Emergency locate fro SPS6 and Principale bridge	COMP	CALL
Call Back - Casselman - 1501 - WWT - Foaming issues at SPS 6 causing pumping issues	COMP	CALL
Call Out - Casselman - WWT - 1501 - Comm problems with Lagoon	COMP	CALL
CM01 Non-Compliance Casselman Fall 2022 Discharge Volume - 1501	COMP	ADMIN

# Appendix C

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## Locate Summary



## Casselman Monthly Locate Summary – March 2023

Description	Status	Work Type
Locate Casselman WDS 1553 - 2023086020 - Brission St	COMP	OPER
Locate Casselman WDS 1553 - 20230712569 - 817 Principale St	COMP	OPER
Locate Casselman WDS 1553 - 20230911551 - Dore St and Argile St	COMP	OPER
Locate Casselman WDS 1553 - 2023094044 - 35 Faucher	COMP	OPER
Locate Casselman WDS 1553 - 2023105498 - 823 Principale St	COMP	OPER
Locate Casselman WDS 1553 - 2023119744 - 142 Laurier	COMP	OPER
Locate Casselman WDS 1553 - 20231213200 - Maria and Francess	COMP	OPER
Locate Casselman WDS 1553 - 20231215207 - 672 + 676 Principale St	COMP	OPER
Locate Casselman WDS 1553 - 20231010355 - St Isidore and Principale	COMP	OPER
Locate Casselman WDS 1553 - 2023133646 - 626 Principale St	COMP	OPER
Locate Casselman WDS 1553 - 20231211603 - 541 Barrage St	COMP	OPER
Locate Casselman WDS 1553 - 20231315474 - Boileau St	COMP	OPER
Total		12

# Appendix D

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## Correspondence to MECP



March 30, 2023

Ms. Tracy Hart  
District Manager, Ministry of the Environment, Conservation and Parks  
Ottawa District Office  
[tracy.hart@ontario.ca](mailto:tracy.hart@ontario.ca)

**Subject: Casselman Lagoon – Notification of Non-Compliance**

This letter provides written notification of non-compliance with the seasonal flow volume exceedance specified in Section 6(1) of ECA #8160-BAHPRF. This written notice confirms the verbal notification of non-compliance provided by OCWA to the Ontario Ministry of the Environment, Conservation and Park's Spills Action Centre on March 29, 2023 (Reference #1-33YBOC).

The following effluent parameter was exceeded:

Parameter	Season	Result (m <sup>3</sup> )	Limit (m <sup>3</sup> )
Seasonal Flow Volume	Fall	288,874	267,650

The total allowable discharge volume for fall (October, November and December) in the ECA is 267,650 m<sup>3</sup>. The total volume discharged from the treatment facility during the fall discharge window in 2022 was 288,874 m<sup>3</sup>. The seasonal flow volume exceeded the ECA limit in the fall although none of the daily maximum discharge rates were exceeded over the course of the discharge period. Moving forward, additional tracking mechanisms have been put into use to ensure the total flow volume for each of the seasonal windows specified in the ECA is not exceeded.

A complete listing of the effluent flows can be found in the PAR, attached.

If you have any questions or concerns, please do not hesitate to contact me at (613) 448-3098.

Sincerely,



Caroline Lamarche  
Process & Compliance Technician  
OCWA, Nation Valley Cluster

Cc: Pierre-Paul Beauchamp, Director of Public Works, Municipality of Casselman  
Dawn Crump, Senior Operations Manager, OCWA  
Vanessa Greatrix, Safety, Process and Compliance Manager, OCWA  
Jean-François Durocher, Provincial Officer, MECP

Effluent Flow m <sup>3</sup>	Effluent Avg Flow m <sup>3</sup>	Effluent Max Flow m <sup>3</sup> /d
76,800	2,477	3,120
40,171	1,435	1,440
34,836	1,124	3,944
112,967	3,766	4,998
69,662	4,644	4,998
61,260	2,112	2,630
102,364	3,412	3,930
125,250	4,040	4,766
623,309		
	2,876	
		4,998