

# Monthly Operations Report

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for the Municipality of Casselman's Water and  
Wastewater Systems

January 2022



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

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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	January 2022	Comments
<b>Health &amp; Safety</b>			
Number of Incidents	0	●	
<i>Actual Result</i>		0	
<b>Drinking Water</b>			
Inspection Ratings (YTD)	100 %	N/A	
<i>Actual Result</i>		N/A	
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	N/A	N/A	
<i>Target Achieved</i>		N/A	
<b>Wastewater</b>			
Number of Non-Compliances	0	✗	Effluent E. Coli non-compliance reported for January
<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	N/A	N/A	
<i>Target Achieved</i>		N/A	
<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 the wastewater treatment system:

Parameter	ECA Limit	Reporting Period	Corrective Action	Status
<i>E. coli</i> in effluent	200 cfu/100 mL (monthly geometric mean)	January 2022	Slowed flow through MBBR	Complete

*For details, please refer to the non-compliance notification submitted to MECP, attached in Appendix D.*

The most recent MECP inspections are listed below:

Location	Inspector	Inspection Rating (%)	Date
Casselman Water	Patrick Lalonde	94.62	January 21, 2021
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 received accreditation for Casselman’s Drinking Water System in August 2019.

The 2021 Surveillance Audit was conducted by SAI Global on July 23, 2021. There were no non-conformances identified. One Opportunity for Improvement (OFI) was noted in the report for Element 19 regarding the timing of the annual internal audit, suggesting that it be completed prior to the external audit in each year.

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

### Water Treatment & Distribution

- 10 locates completed in January
- Replaced broken water meter
- One emergency water shut off
- Replaced Low Lift Pump #101
- New modulating 6” valve for Actiflo #1 ordered
- Backflow preventer inspections completed
- Completed repair identified during the most recent ESA inspection

### Wastewater Treatment & Collection

- None to report

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

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

Equipment in the wastewater treatment and collection system needs to be tagged and work orders created in order to complete the PMP. This work is expected to be complete by the end of the summer.

## **SECTION 7 – COMPLAINTS**

Facility	Date	Description
None to Report		

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

### General

- OCWA submitted a proposal (dated February 10, 2022) to undertake a water and wastewater capacity assessment for the Municipality.

### Water Treatment & Distribution

- Due to Covid-19, staff practiced social distancing and took extra precautions disinfecting common areas on a daily basis and limited access to outside contractors.

### Wastewater Treatment & Collection

- Final performance test of the MBBR system by Veolia/J.L. Richards took place in January. Substantial completion for the system has not yet been reached.
- Wastewater sampling as part of Queen’s University’s Covid sampling program commenced in January. Results will be forwarded to the Municipality and EOHU.
- The sanitary system CLI ECA application by OCWA on behalf of the Municipality is in progress. The deadline for submission of the applications was extended from February 18, 2022 to March 4, 2022.

# Appendix A

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## Performance Assessment Reports



# Ontario Clean Water Agency - Performance Assessment Report

From 01/01/2022 to 01/31/2022

**Facility Org Number:** 5971  
**Facility Name:** Casselman Drinking Water System  
**Facility Owner:** The Village of Casselman

	01/2021	Total	Avg	Max	Min
<b>Raw Flow - m<sup>3</sup>/d</b>					
Maximum	1618			1618	
Mean	1230.71		1230.71		
Minimum	767				767
Total	38152	38152			
<b>Treated Flow - m<sup>3</sup>/d</b>					
Maximum	1389			1389	
Mean	988.13		988.13		
Minimum	642				642
Total	30632	30632			
<b>Raw Water / Manganese - mg/L</b>					
Maximum	0.125			0.125	
Mean	0.096		0.096		
Minimum	0.078				0.078
<b>Raw Water / E. Coli - cfu/100mL</b>					
Count	5	5			
Maximum	38			38	
Mean	16.8		16.8		
Minimum	2				2
<b>Raw Water / Total Coliform: TC - cfu/100mL</b>					
Count	5	5			
Maximum	140			140	
Mean	106.4				
Minimum	50				50
<b>Actiflo Filter #1 / Turbidity - NTU</b>					
Maximum	0.38			0.38	
Mean	0.073		0.07		
<b>Actiflo Filter #2 / Turbidity - NTU</b>					
Maximum	0.8			0.80	
Mean	0.345		0.35		
<b>Filter Efficiency / Turbidity - % &lt; 0.3 NTU</b>					
Mean	99.97		99.97		99.97
<b>Treated Water / Turbidity - NTU</b>					
Maximum	0.62			0.62	
Mean	0.39		0.39		



Treated Water / UV Intensity - mW/cm <sup>2</sup>							
Minimum	61						61
Treated Water / Manganese - mg/L							
Maximum	0.72				0.72		
Mean	0.089			0.09			
Minimum	0.021						0.021
Treated Water / Cl Residual: Free - mg/L (Online)							
Maximum	2.6				2.6		
Mean	1.79			1.79			
Minimum	0.96						0.96
Treated Water / E. Coli - cfu/100mL							
Count	5		5				
Maximum	0				0		
Mean	0						
Minimum	0						0
Treated Water / Total Coliform: TC - cfu/100mL							
Count	5		5				
Maximum	0				0		
Mean	0						
Minimum	0						0
Treated Water / HPC - cfu/mL							
Count	5		5				
Maximum	< 2				2		
Mean	< 2						
Minimum	< 2						< 2
Treated Water / Cl Residual: Free - mg/L (Grab)							
Count	13		13				
Maximum	2.34				2.34		
Mean	1.81			1.81			
Minimum	1.21						1.21
Distribution Water / Cl Residual: Combined - mg/L (Online)							
Maximum	2.48				2.48		
Mean	1.63			1.63			
Minimum	1.08						1.08
Disitrubution Water / E. Coli - cfu/100mL							
Count	15		15				
Maximum	0				0		
Mean	0						
Minimum	0						0
Disitrubution Water / Total Coliform: TC - cfu/100mL							
Count	15		15				
Maximum	0				0		
Mean	0			0.00			

Minimum		0						0
Distribution Water / HPC - cfu/mL								
Count		10		10				
Maximum	<	24					24	
Mean	<	6.4			6.40			
Minimum	<	2						< 2
Distribution Water / CI Residual: Combined - mg/L (Grab)								
Count		15		15				
Maximum		1.94					1.94	
Mean		1.53			1.53			
Minimum		1.26						1.26
Distribution Water / Quarterlies								
Trihalomethane: Total - µg/l		58			58.00			
Haloacetic Acids: Total - µg/l		41.3			41.30			
Dissolved Organic Carbon - mg/L								
Raw		6			6.00		6	6
Treated		3.3			3.30		3.3	3.3
Total Organic Carbon - mg/L								
Raw		6			6.00		6	6
Treated		3.3			3.30		3.3	3.3
Total Hardness - mg/L CaoCO3								
Raw		398			398			
Treated		401			401			

**Ontario Clean Water Agency  
Time Series Info Report**

**Facility Org Number:** 1501  
**Facility Works Number:** 110002201  
**Facility Name:** CASSELMAN WASTEWATER TREATMENT FACILITY

	01/2022	Total	Avg	Max	Min
<b>Raw Sewage / Raw Flow for PAR - m³/d</b>					
Count IH	31	31			
Max IH	1355			1355	
Mean IH	1048.61		1048.61		
Min IH	135				135
Total IH	32507	32507			
<b>Raw Sewage / Coagulant Dosage - mg/L</b>					
Max IH	153			153	
Mean IH	134.484		134.484		
Min IH	121				121
<b>Raw Sewage / Coagulant Used - kg</b>					
Max IH	208			208	
Mean IH	147.935		147.935		
Min IH	130				130
<b>Raw Sewage / Coagulant Volume - l</b>					
Max IH	169			169	
Mean IH	120.452		120.452		
Min IH	106				106
<b>Raw Sewage / Total Kjeldahl Nitrogen: TKN - mg/L</b>					
Count Lab	1	1			
Max Lab	79.3			79.3	
Mean Lab	79.3		79.3		
Min Lab	79.3				79.3
<b>Raw Sewage / Total Phosphorus: TP - mg/L</b>					
Count Lab	1	1			
Max Lab	8.86			8.86	
Mean Lab	8.86		8.86		
Min Lab	8.86				8.86
<b>Raw Sewage / Total Suspended Solids: TSS - mg/L</b>					
Count Lab	1	1			
Max Lab	300			300	
Mean Lab	300		300		
Min Lab	300				300
<b>Upstream / Carbonaceous Biochemical Oxygen Demand: CBOD5 - mg/L</b>					
Count Lab	5	5			
Max Lab	< 11			11	
Mean Lab	< 4.6		4.6		
Min Lab	< 3				3

Upstream / Total Ammonia Nitrogen: NH3 + NH4+ as N - mg/L							
Count Lab		5		5			
Max Lab		23.8				23.8	
Mean Lab		4.864			4.864		
Min Lab		0.09					0.09
Upstream / Total Phosphorus: TP - mg/L							
Count Lab		5		5			
Max Lab		0.57				0.57	
Mean Lab		0.224			0.224		
Min Lab		0.02					0.02
Upstream / Total Suspended Solids: TSS - mg/L							
Count Lab		5		5			
Max Lab		28				28	
Mean Lab	<	11.6			11.6		
Min Lab	<	3					3
Downstream / Carbonaceous Biochemical Oxygen Demand: CBOD5 - mg/L							
Count Lab				0			
Max Lab						0	
Mean Lab					#DIV/0!		
Min Lab							0
Downstream / Total Ammonia Nitrogen: NH3 + NH4+ as N - mg/L							
Count Lab				0			
Max Lab						0	
Mean Lab					#DIV/0!		
<b>Min Lab</b>							0
Downstream / Total Phosphorus: TP - mg/L							
Count Lab				0			
Max Lab						0	
Mean Lab					#DIV/0!		
Min Lab							0
Downstream / Total Suspended Solids: TSS - mg/L							
Count Lab				0			
Max Lab						0	
Mean Lab					#DIV/0!		
Min Lab							0
Final Effluent / Flow - m <sup>3</sup> /d							
Max IH		3120				3120	
Mean IH		2477.42			2477.42		
Min IH		1440					1440
Total IH		76800		76800			
Final Effluent / Flow Rate - l/s							
Max IH		36.1				36.1	
Mean IH		28.68			28.68		
Min IH		16.7					16.7
Final Effluent / Carbonaceous Biochemical Oxygen Demand: CBOD5 - mg/L							
Count Lab		7		7			
Max Lab		6				6	

Mean Lab	<	4.143			4.143			
Min Lab	<	3						3
Final Effluent / E. Coli: EC - cfu/100mL								
Count Lab		7		7				
Max Lab		2800				2800		
Mean Lab		1118.571			1118.571			
Min Lab		340						340
Final Effluent / Nitrate as N: NO3-N - mg/L								
Count Lab		7		7				
Max Lab		14.1				14.1		
Mean Lab		10.543			10.543			
Min Lab		7.4						7.4
Final Effluent / Nitrite as N: NO2-N - mg/L								
Count Lab		7		7				
Max Lab	<	1.7				1.7		
Mean Lab	<	1.314			1.314			
Min Lab	<	1						1
Final Effluent / Total Ammonia Nitrogen: NH3 + NH4+ as N - mg/L								
Count Lab		7		7				
Max Lab		14.6				14.6		
Mean Lab		8.996			8.996			
Min Lab		2.02						2.02
Final Effluent / Total Kjeldahl Nitrogen: TKN - mg/L								
Count Lab				0				
Max Lab						0		
Mean Lab					#DIV/0!			
Min Lab								0
Final Effluent / Total Phosphorus: TP - mg/L								
Max Lab		0.32				0.32		
Mean Lab		0.233			0.233			
Min Lab		0.04						0.04
Final Effluent / Total Suspended Solids: TSS - mg/L								
Count Lab		7		7				
Max Lab		52				52		
Mean Lab		15.857			15.857			
Min Lab		4						4

# Appendix B

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## Work Order Summary Reports



## Monthly Work Order Summary – January 2022 Casselman Drinking Water System

Description	Status	Work Type
FEP Program Review (1y) - 5971	APPR	PM
Analyzer Chlorine Inspection/Service (1m) 5971	COMP	PM
Analyzer Chlorine Free Insp/Service (1m) - 5971	COMP	PM
Analyzer pH Inspection/Service (1m) 5971	COMP	PM
Analyzer Turbidity Inspection/Service (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	APPR	PM
Meter Level Inspection/Service (3m) 5971	COMP	PM
Pump Submersible ACTIFLO Inspection (3m) 5971	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 5971	COMP	PM
UV Light Bank Insp/Service (1m) - 5971	COMP	PM
Workplace Inspection (1m) - 5971	COMP	PM
Monthly H&S Equipment Check (1m) - 5971	COMP	PM
Quarterly H&S Equipment Check (1m) - 5971	COMP	PM
UVT Sensor Checks/Calibration (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
CI @ 17:19 high filtered water turbidity Actiflo #2, 5971 CASS WTP	COMP	CALL
ci 17h30 for actiflow 1 high level due to effluent valve operation 5971	COMP	CALL
Casselman actiflow 1 final effluent valve failure, order new unit with DM VALVE 5971	COMP	EMER
Low lift pump # 101 Replace and install with SA Electric	COMP	CORR
ESA inspection in casselman, completed repair 5971	COMP	CORR
Actiflo high level 5971	COMP	CALL
UV Sensor Reference Check/Calibration (1m) - 5971	COMP	PM
new modulating 6 inch valve for actiflow one Casselman from DM VALVE 5971	APPR	CAP
Broken water meter at 701 Dollars	COMP	CALL
Miltronic loss of echo clearwell 2	COMP	CALL
CI 17:30-18:30 Emergency water shut off at 747 St-Jean 5971	COMP	CALL
CI 8:30-11:30 Filter #1 High NTU 5971	COMP	CALL
CI @ 18:17 transfer pump alarm, CASS WTP 5971	COMP	CALL
Client Reports (1m) – Casselman 5971	APPR	PM

**Monthly Work Order Summary – January 2022**  
**Casselman Wastewater Treatment & Collection System**

<b>Description</b>	<b>Status</b>	<b>Work Type</b>
High total ammonia on Effluent water	COMP	CALL
CI 00:30-7:00 SPS#5 Pump#1 Low Outflow alarm 1501	COMP	CALL
CI 22:45-3:00 SPS #1 Pump Room Low Temperature alarm 1501	COMP	CALL
CI 16:45-21:00 SPS #3 Low level/Communication Fault 1501	COMP	CALL
Bar screen compactor clog	COMP	OPER



# Appendix C

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## Locate Summary



## Casselman Monthly Locate Summary – January 2022

<i>Description</i>	<b>Status</b>	<b>Work Type</b>
Locate Casselman WDS 1553 -823 Principale 2022023715	COMP	OPER
Locate Casselman WDS 1553 -325 Doré 2022027499	COMP	OPER
Locate Casselman WDS 1553 -821 Principale 2022030829	COMP	OPER
Locate Casselman WDS 1553 -821 Principale 2022030829	COMP	OPER
Locate Casselman WDS 1553 -Aurele rd 2022032743	COMP	OPER
Locate Casselman WDS 1553 -626 Principale 2022032755	COMP	OPER
Locate Casselman WDS 1553 -823 Principale 20220310973	COMP	OPER
Locate Casselman WDS 1553 -95 Lafleche 2022034506	COMP	OPER
Locate Casselman WDS 1553 -204 Nature 2022044927	COMP	OPER
Locate Casselman WDS 1553 -340 Doré 2022044940	COMP	OPER
Total		10

# Appendix D

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## Non-Compliance Notification to MECP



February 16, 2022

**Jean-Francois Durocher**

Senior Environmental Officer  
 Ministry of the Environment, Conservation and Parks  
 Cornwall Area Office  
 (613) 363-5149  
[Jean-francois.durocher@ontario.ca](mailto:Jean-francois.durocher@ontario.ca)

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

This letter provides written notification of non-compliance with the effluent limit for *E. coli* outlined in Condition 6(1) of ECA #8160-BAHPRF. This letter 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 February 15, 2022 (Reference #6573-CBNQSW).

The following effluent parameter was exceeded:

Parameter	Date	Type of Limit	Type of Sample	Result (cfu/100mL)	ECA Limit (cfu/100mL)
<i>E. coli</i>	January 2022	Monthly Geometric Mean	Grab	897.14	200

Weekly samples collected during the month of January produced results of 340 cfu/100mL, 1060 cfu/100mL, 2800 cfu/100mL, 700 cfu/100mL, 1100 cfu/100mL, 430 cfu/100mL and 1400 cfu/100mL. Samples of influent to the MBBR were collected in January. The results demonstrate that *E. coli* is reduced as wastewater moves through the treatment process, however the effluent results still exceeded the limit prescribed in the ECA. It should be noted that the treatment system is undergoing performance testing at this time, and that the upgraded system has not reached substantial completion. In an attempt to remediate the issue, we have reduced the flow through the MBBR in order to increase the efficiency of the treatment and hopefully reduce the *E. coli* in the effluent.

All other effluent parameters analyzed in January were within compliance

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  
Stephane Barbarie, Safety, Process and Compliance Manager (A), OCWA