

Monthly Operations Report

for the Municipality of Casselman's Water and
Wastewater Systems

February 2023



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	February 2023	Comments
Health & Safety			
Number of Incidents	0	●	
<i>Actual Result</i>		0	
Drinking Water			
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	
Wastewater			
Number of Non-Compliances	0	●	
<i>Actual Result</i>		0	
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	
Preventive Maintenance			
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 water or wastewater treatment system.

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
- Extreme cold weather on Feb. 3rd & 4th caused failure of the pressure sensor located at the water tower which provides level readings back to the WTP. Pressure sensor replaced.
- Completed installation of new pump and chlorine analyzer
- Completed installation of rebuilt low lift pump #1
- Replaced parts on leaking hydrant located at the corner of Principale St. & Sarah St. Hydrant still leaking. Excavation required to complete the hydrant repair.

Wastewater Treatment & Collection

- Responded to seven after-hours call-in alarms
- Extreme cold weather caused issues in screen room at SPS #1. Purchased space heaters. Parts needed to repair heating system. Completed in February.
- Miltronics level sensor working intermittently at SPS #4. Purchased new unit to be installed.
- Ongoing foaming issues on MBBR’s. Troubleshooting with with Veolia.

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

Facility	Date	Description
Casselman Distribution	Feb. 6	Low water pressure complaint on Faucher Street. Filtration system within the home was determined to be the cause.
Casselman Collection	Feb. 7	Sewer back up complaint on Martin Street. Flow in sewer main ok. Advised resident to contact plumber.

SECTION 8 – RECOMMENDATIONS / GENERAL COMMENTS

General

- 9 locates were completed in February.

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 continued in February.

Appendix A

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 ³)	Avg. Flow (m ³)	Max Day Flow (m ³)	Min. Free Cl ₂ Resid. (mg/L)	Max Free Cl ₂ Resid. (mg/L)	Min Combined Cl ₂ Resid. (mg/L)	Max Combined Cl ₂ 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)	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) quaterly	HAA (µg/L) quaterly	NDMA (µg/L) quaterly
JAN	30573	986	1259	1.10	2.49	1.00	2.26	8.30	8.40	242	0.12	0.20	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	1.40	1.70	361	0.12	0.34	-	-	-
MAR																				
APR																				
MAY																				
JUN																				
JUL																				
AUG																				
SEP																				
OCT																				
NOV																				
DEC																				
TOTAL	59,084																			
AVG		1,002						6.15	6.20	307.00	0.12		2.20	2.45	292.50	0.10		53.75	32.13	0.0009
MAX			1,342		2.55		2.26										0.34			
MIN				1.10		0.70														
CRITERIA			3,182	CT		0.25	3.00											<100	<80	<0.009

MONTH	SYSTEM FLOWS (RAW)				ACTIFLO FILTER #1		ACTIFLO FILTER #2		Efficiency	TANK		TREATED				E. coli / Total Coliform / HPC (Number of Samples Collected)				RAW WATER		
	Total Flow (m ³)	Avg. Day Flow (m ³)	Max. Flow (m ³)	Max. Flow Rate (L/min)	Avg. Turbidity (NTU)	Max. Turbidity (NTU)	Avg. Turbidity (NTU)	Max. Turbidity (NTU)	Turbidity % < 0.3 NTU	Backwash TSS (mg/L)	Supernatant TSS (mg/L)	Avg. Turbidity (NTU)	Max. Turbidity (NTU)	Min UV Intensity (mJ/cm ²)	Min UVVT (%)	Safe		Adverse		Max. Count	Max. 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																						
APR																						
MAY																						
JUN																						
JUL																						
AUG																						
SEP																						
OCT																						
NOV																						
DEC																						
TOTAL	77,462															9	27	0	0			
AVG		1,316			0.15		0.09		99.84	7.0	4.5	0.44										
MAX			1,790	2,195		0.56		0.84		11	6		0.90								16200	85
MIN														65.00	81.26							
CRITERIA			3,182	2,205		<1		<1	>95%				<5	>40								

COMMENTS: *Treated Water Turbidity - No reliable readings trended on SCADA from January 20th - 31th & February 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 m³/d
FACILITY WORKS#: 110002201

MONTH	RAW								EFFLUENT										
	Total Flow m ³	Avg Day Flow m ³	Max Day Flow m ³ /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 ³	Effluent Avg Flow m ³	Effluent Max Flow m ³ /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	15.8	0.36	19.5	7.1	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	11.1	0.5	14.2	18.5	0.12	738
MAR																			
APR																			
MAY																			
JUN																			
JUL																			
AUG																			
SEPT																			
OCT																			
NOV																			
DEC																			
TOTAL	93,784								188,106										
AVG		1,591		184	334	450	59	6.62		3,131		6	11	13	0.4	17	13	0.1	1,727
MAX			2,167		500	660	82	9			4,906	8	12	16	0	20	19	0	2,717
CRITERIA											5,000								
COMPLIANCE											YES								

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								
COMPLIANCE								

Comments:

*No Upstream Samples required to be collected when downstream sampling is not feasible (January 31, February)
 **No Downstream samples were taken due to ice cover on the Nation River (January, February)

Appendix B

Work Order Summary Reports



Monthly Work Order Summary – February 2023

Casselman Drinking Water System

Description	Status	Work Type
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
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
PANEL ALARM/DIALER TEST (1m) - 5971	COMP	PM
UV Light Bank Insp/Service (1m) - 5971	COMP	PM
Monthly H&S Equipment Check (1m) - 5971	COMP	PM
Client Reports (1m) - Casselman 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
Annual 170/03 Reports (1y) - Nation Valley Compliance	COMP	PM
Analyzer Turbidity Inspection/Service (1m) 1501	COMP	PM
Analyzer Chlorine Portable Verification Caroline (1m) 1555	COMP	PM
WISKI Monthly Review(1m) 5971	COMP	PM
UV Sensor Reference Check/Calibration (1m) - 5971	COMP	PM
Workplace Inspection (1m) - 5971	COMP	OPER
CM05 Casselman DWS MECP Inspection - 5971	COMP	OPER
Capital Frozen instrumentation at Tower Casselman 5971	COMP	CAP
Capital Turbidity Analyzer Replacement Casselman WTP 5971	APPR	CAP
Capital Clearwell camera inspection Casselman WTP 5971	COMP	CAP
Casselman 5971 WTP - High filtered water turbidity in filter 1	COMP	CALL
Casselman - 5971 - WTP - Scada issues with zone 1 (please read log)	COMP	CALL
Casselman - 5971 - WTP - Filter 1 prefiltration timeout and back to back backwashes	COMP	CALL
Casselman - 5971 - WTP - Tower level and SCADA issues. Broken pressure differential	COMP	CALL
Call Out - Casselman WT - 5971 - Actiflo Alarm-Backwash Issue	COMP	CALL
Call Out - Casselman - WT - 5971 - Actiflo Alarm-Backwash Issue	COMP	CALL
Call Back - Casselman - WT - 5971 - Disinfection alarm - High chloramines	COMP	CALL
Call Out - Casselman WT - 5971 - Raw water valve filter 2 fault	COMP	CALL
CallBack/ChlorineSystemNoinAuto/Casselman/Waterplant/5971	COMP	CALL
Casselman WTP Disinfection Alarm - 5971	COMP	CALL
Casselman - 5971 - WTP - Issues with tower and tower level on SCADA	COMP	CALL
Callback/HydrantLeak/Casselman/Distribution/1553	COMP	CALL

Monthly Work Order Summary – February 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
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
WISKI Monthly Review(1m) 1501	COMP	PM
O&M Gas Detector for Confined Space Casselman WWCA 1501	APPR	PM
Workplace Inspection (1m) - 1501	COMP	OPER
Capital Heater fan not working Casselman SPS 1 WWCA 1501	APPR	CAP
Capital Parts for Blowers Casselman WWTP 1501	APPR	CAP
Capital Outfall Cleaning and Inspection Casselman Sewage 1501	COMP	CAP
Capital SPS 1 Boiler Heater in screen room Casselman WWCA 1501	APPR	CAP
Capital - Parts for Kaeser Blowers Casselman WWCA - 1501	APPR	CAP
Casselman - WC - 1501 - SPS #4 pump #2 fault and heater issues	COMP	CALL
Casselman - 1501 - WWT - Issues at SPS 1 screen room low heat	COMP	CALL
Call Out - Casselman WWT - 1501 - Issues at SPS 4 - Low level and Milltronic issues	COMP	CALL
Call Out - Casselman - WWT - 1501 - SPS#1- low flow for pump1 and 2	COMP	CALL
CallBack/Pump1FailedToStart/Cassleman/SPS4/1501	COMP	CALL
Casselman WC SPS4 Pump1 Fail to Start - 1501	COMP	CALL
Casselman WC SPS1 High Level Float Alarm - 1501	COMP	CALL

Appendix C

Locate Summary



Casselman Monthly Locate Summary – February 2023

Description	Status	Work Type
Locate Casselman WDS 1553 - 2023054585 - Dore and Nature	COMP	OPER
Locate Casselman WDS 1553 - 2023044787 - 619 + 621 St Isidore	COMP	OPER
Locate Casselman WDS 1553 - 20230410175 - 284 + 280 Nature St	COMP	OPER
Locate Casselman WDS 1553 - 2023049895 - Principale and Aurele	COMP	OPER
Locate Casselman WDS 1553 - 2023050776 - Principale	COMP	OPER
Locate Casselman WDS 1553 - 2023050194 - 626 Principale	COMP	OPER
Locate Casselman WDS 1553 - 2023075547 - 656 Dollard St	COMP	OPER
Locate Casselman WDS 1553 - 2023077854 - 52 + 54 Racine St	COMP	OPER
Locate Casselman WDS 1553 - 2023078175 - 766 Principale St	COMP	OPER
Total		9