

Monthly Operations Report

for the Municipality of Casselman's Water and
Wastewater Systems

March 2024



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Table of Contents

Section 1 - Monthly Operations Report Card

Section 2 - Facility Listing

Section 3 - Compliance

Section 4 - Facility Performance

Section 5 - Drinking Water Quality Management System (DWQMS)

Section 6 - Maintenance / Capital / Added Value

Section 7 - Complaints

Section 8 - Recommendations / General Comments

Appendices

Appendix A – Performance Assessment Reports

Appendix B – Work Order Summary Report

Appendix C – Locate Summary



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	Current Month	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>		Y	
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	Y	●	
<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 and wastewater treatment systems.

The most recent MECP inspections are listed below:

Location	Inspector	Inspection Rating (%)	Date
Casselman Water	Jean-Francois Durocher	100%	February 2, 2024
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 4 after-hours call-in alarms
- Filter #1 at the plant was taken offline on March 9th due to mechanical failure. OCWA retained Rose Mechanical to repair the bottom plate and Continental Carbon to install new nozzles and filter media. Filter was put back online by OCWA on April 8th.
- OCWA staff operated the plant remotely after hours during the time Filter #1 was offline.
- Installed VFD’s on High Lift Pumps #1 & #2
- Completed annual maintenance on chlorine gas system (Chlortech)
- Performed maintenance on chemical pumps at WTP

Wastewater Treatment & Collection

- Responded to 1 after-hours call-in alarm
- Sanitary sewer main flushing took place in March
- Lagoon discharge continued through March

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
		None to report

SECTION 8 – RECOMMENDATIONS / GENERAL COMMENTS

General

- 31 locates were completed in March.

Water Treatment & Distribution

- Capital/Major Maintenance projects approved for 2024 are underway.
- Operations staff continued to work with Dr. Dallala on behalf of the Municipality.

Wastewater Treatment & Collection

- Capital/Major Maintenance projects approved for 2024 are underway.
- During collection system flushing it was noted that construction debris was built up in the sewer mains in the area of Dore & Argyle and on Zacharie Street. Additional time was spent cleaning the mains in these areas as a result. This debris also makes its way to the pumping stations, resulting in wet wells that need to be cleaned more frequently and causing additional wear to sewage pumps.

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: 2024
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)	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	33,460	1079	1400	1.26	2.35	0.36	2.41	8.30	8.30	279	0.07	0.10	0.25	0.36	3.80	3.80	277	0.05	0.07	41.0	25.7	< 0.0009
FEB	31,549	1088	1356	1.25	2.00	1.11	2.28	6.30	6.30	339	0.09	0.12	0.26	0.36	3.30	3.30	327	0.05	0.07	-	-	-
MAR	33,671	1086	1269	1.20	1.92	1.15	2.26	7.10	8.10	243	0.11	0.21	0.33	0.97	4.00	4.10	226	0.05	0.09	-	-	-
APR																						
MAY																						
JUN																						
JUL																						
AUG																						
SEP																						
OCT																						
NOV																						
DEC																						
TOTAL	98,680																					
AVG		1,084						7.23	7.57	287	0.09		0.28		3.70	3.73	277	0.05		41.0	25.7	0.0009
MAX			1,400		2.35		2.41					0.21		0.97					0.09			
MIN				1.20		0.36																
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 Filter #1	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 ²)	Min UVT* (%)	Safe		Adverse		Max. Count	Max. Count
																	Treated	Distribution	Treated	Distribution		
JAN	41,605	1342	1659	1950.0	0.12	0.70	0.12	0.31	99.88	99.99	7	3	0.36	1.45	63	79	5	10	0	0	16,000	32
FEB	40,331	1391	1725	2204.6	0.18	0.65	0.11	0.26	99.63	100.00	33	6	0.47	2.00	53	80	4	8	0	0	19,800	88
MAR	40,408	1303	1910	2102.0	0.24	0.51	0.12	0.39	98.26	99.54	3	6	0.18	1.55	63	80	4	8	0	0	39,000	67
APR																						
MAY																						
JUN																						
JUL																						
AUG																						
SEP																						
OCT																						
NOV																						
DEC																						
TOTAL	122,344																13	26	0	0		
AVG		1,345			0.18		0.12		99.26	99.84	14	5	0.34									
MAX			1,910	2,205		0.70		0.39			33	6		2.00							39,000	88
MIN														53	79							
CRITERIA			3,182	2,205		<1	<1		>95%	>95%	<25	<25		<5	>40							

COMMENTS:

*UVT - No Flow to UVT analyzer from 11:35 pm on February 10th to 10:55 am on February 12th.

**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: 2024
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	45,794	1,477	1,923	128	347	360	55.4	6.21	59,408	1,916	1,966	3.4	7.0	1.85	0.10	3.5	5.5	0.12	6	
FEB	45,995	1,586	1,805	113	219	366	38.0	4.71	64,482	2,224	2,926	3.8	7.0	7.71	0.20	10.8	6.7	0.05	4	
MAR	60,051	1,937	2,293	87	361	650	43.8	5.45	110,786	3,574	3,904	3.8	9.0	4.78	0.21	7.5	13.1	0.30	6	
APR																				
MAY																				
JUN																				
JUL																				
AUG																				
SEPT																				
OCT																				
NOV																				
DEC																				
TOTAL	151,840								234,676											
AVG		1,667		109	309	459	45.7	5.46		2,571		3.6	7.7	4.8	0.17	7.2	8.5	0.16	5	
MAX			2,293		361	650	55.4	6.21			3,904	3.8	9.0	7.7	0.21	10.8	13.1	0.30	6	
CRITERIA					Fall Discharge				267,650	2,909										
A					Winter/Spring Dircharge				502,500	3,722	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	8.0	0.05	0.07	3.0	5.0	0.05	0.05
FEB	-	-	-	-	-	-	-	-
MAR	3.0	15.5	0.08	0.08	3.0	18.0	0.07	0.09
APR								
MAY								
JUN								
JUL								
AUG								
SEPT								
OCT								
NOV								
DEC								
TOTAL								
AVG	3.0	11.8	0.07	0.08	3.0	11.5	0.06	0.07
MAX	3.0	15.5	0.08	0.08	3.0	18.0	0.07	0.09
CRITERIA								

Comments:

*No Upstream/Downstream Samples required to be collected when downstream sampling is not feasible due to ice cover on the Nation River. (January 9, 16, 23, 30 & February 2024)

Appendix B

Work Order Summary Reports



Monthly Work Order Summary – March 2024

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 Spectrophotometer Insp/Service (1m) - 5971	COMP	PM
Analyzer Turbidity Inspection/Service (1m) 5971	COMP	PM
Drive VFD Inspection (6m) 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
Mixer Chemical Inspection (3m) 5971	APPR	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
WISKI Monthly Review(1m) 5971	COMP	PM
UV Sensor Reference Check/Calibration (1m) - 5971	COMP	PM
36 Month Risk Assessment (3y) - Casselman 5971	APPR	PM
Annual Risk Assessment (1y) - 5971	APPR	PM
Relief Valve UV Room Inspection (3m) 5971	COMP	OPER
Workplace Inspection (1m) - 5971	COMP	OPER
5971 - Casselman WTP - Filter #1 Failure - Repair	CLIENT	EMER
5971 - Casselman WTP - Filter Nozzles for Filter #1 and #2	CLIENT	CORR
5971-13 Casselman VFD's-CAP Electrical Install of VFD	COMP	CAP
5971-09 Casselman GAC Replacement in filters-MM Quoting and repairs	APPR	CAP
5971-09 Casselman WTP - Filter #1 & #2 Media Replacement - Sand & GAC	APPR	CAP
Capital Manganese Pilot Casselman 5971	APPR	CAP
5971-15 Valve Replacement Capital Replace Raw water valve on Actiflo 1 Casselman	COMP	CAP
5971-01 Casselman Emergency Repairs-MM- Hach Turbidity Meter Repair	APPR	CAP
5971-01 Casselman Emergency Repairs-MM - Scada programming for filter #2	COMP	CAP
5971-03 Casselman Chemical Systems-MM - Chlorine gas annual maintenace	COMP	CAP
Capital - Casselman - 1553 - WDS - Froze water service at 682 St Joseph St	COMP	CAP
1553-02 Casselman DIST. Distribution Maintenance (Valves)-MM Parts for valve repair	COMP	CAP
Call Back - Casselman - 5971 - WTP - High level for filter 1	COMP	CALL
Call Back - Casselman - 5971 - WTP - Turbidity meter issues and filter issues	COMP	CALL
Call Back - Casselman WTP - 5971 - Burglary Alarm	COMP	CALL
Call Back - Casselman WTP - 5971 - Clearwell low level	COMP	CALL

Monthly Work Order Summary – March 2024
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 SPS#4 (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 SPS#6 (1m) - 1501	COMP	PM
PANEL ALARM/DIALER TEST SPS#3 (1m) - 1501	COMP	PM
PANEL ALARM/DIALER TEST SPS#2 (1m) - 1501	COMP	PM
PANEL ALARM/DIALER TEST SPS#5 (1m) - 1501	COMP	PM
PANEL ALARM/DIALER TEST SPS#1 (1m) - 1501	COMP	PM
PANEL ALARM/DIALER TEST LAGOON (1m) - 1501	COMP	PM
WISKI Monthly Review(1m) 1501	COMP	PM
Workplace Inspection (1m) - 1501	COMP	OPER
1501 - Annual H&S Inspection Finding - Purchase hose reel SPS#6 & Replace burnt bulbs SPS#1 & Lagoon	APPR	CORR
1501-01 Casselman Sewage Emergency Repairs-MM GenXpert Tech SPS 5 Repair	COMP	CAP
Casselman WWT MBBR O&M Manual - 1501	APPR	CAP
1501-05 Casselman Sewage WWTP Blower Parts and Maintenance-MM MBBR air blowers filters	APPR	CAP
1501-06 Casselman Sewage Building and Grounds-MM -Alarm dialer and ups batteries	COMP	CAP
1501-06 Casselman Sewage Building and Grounds-MM -New locks for gates and hatches	COMP	CAP
Call Back - Casselman WWT - 1501 - Power outage	COMP	CALL

Appendix C

Locate Summary



Casselman Monthly Locate Summary – March 2024

Description	Status	Work Type
Locate Casselman WDS 1553 - 2024092699 - Route 650\Laurier St	COMP	OPER
Locate Casselman WDS 1553 - 2024093947 - Dore St	COMP	OPER
Locate Casselman WDS 1553 - 2024097983 - Zakari St	COMP	OPER
Locate Casselman WDS 1553 - 2024101091 - Zakari St	COMP	OPER
Locate Casselman WDS 1553 - 2024097298 - 52 Racine St	COMP	OPER
Locate Casselman WDS 1553 - 2024105712 - 45 Industriel St	COMP	OPER
Locate Casselman WDS 1553 - 20241015616 - 672 Duhamel St	COMP	OPER
Locate Casselman WDS 1553 - 2024111516 - HWY 417	COMP	OPER
Locate Casselman WDS 1553 - 2024119288 - 16 Sarah St	COMP	OPER
Locate Casselman WDS 1553 - 20241111538 - 45 Industriel St	COMP	OPER
Locate Casselman WDS 1553 - 20241113030 - Sarah St	COMP	OPER
Locate Casselman WDS 1553 - 20241121298 - 587 St Isidore	COMP	OPER
Locate Casselman WDS 1553 - 2024123838 - 633 Conservation St	COMP	OPER
Locate Casselman WDS 1553 - 2024124303 - Principale and HWY 417	COMP	OPER
Locate Casselman WDS 1553 - 2024125776 - St Isidore and Desnoyers	COMP	OPER
Locate Casselman WDS 1553 - 2024125783 - St Isidore and St Anne	COMP	OPER
Locate Casselman WDS 1553 - 2024125793 - St Joseph and Cartier	COMP	OPER
Locate Casselman WDS 1553 - 2024125805 - Laval and Cartier	COMP	OPER
Locate Casselman WDS 1553 - 2024125817 - 12 Albert St	COMP	OPER
Locate Casselman WDS 1553 - 2024125837 - St Isidore and Isabelle	COMP	OPER
Locate Casselman WDS 1553 - 2024125853 - 825 Principale St	COMP	CAP
Locate Casselman WDS 1553 - 2024125868 - St Isidore and St Anne	COMP	CAP
Locate Casselman WDS 1553 - 2024125878 - Station St	COMP	CAP
Locate Casselman WDS 1553 - 2024125896 - Desnoyers and Jean Marc	COMP	CAP
Locate Casselman WDS 1553 - 2024125907 - St Isidore	COMP	CAP
Locate Casselman WDS 1553 - 2024125938 - St Isidore and Principale St	COMP	CAP
Locate Casselman WDS 1553 - 2024127995 - 844 Laval St	COMP	CAP
Locate Casselman WDS 1553 - 20241211304 - 305 Zakari St	COMP	CAP
Locate Casselman WDS 1553 - 20241211265 - 300 + 302 Zakari St	COMP	CAP
Locate Casselman WDS 1553 - 2024131368 - Zakari St	COMP	CAP
Locate Casselman WDS 1553 - 2024132328 - 20 Brisson St	COMP	CAP
Total		31