

Monthly Operations Report

for the Municipality of Casselman's Water and
Wastewater Systems

September 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	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 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 5 after-hours call-in alarms
- Flushed dead ends throughout distribution system
- Observed live tap at 700 Principale
- Rebuilt Hydrants #124, 125, 128
- Replaced failed solenoid on coagulant tank piping
- Collaborated with L.W. Bray on the St. Isidore Water/Sewer Main replacement project

Wastewater Treatment & Collection

- Responded to 3 after-hours call-in alarms
- Cleaned MBBR disk filter in preparation for the upcoming lagoon discharge
- Gas sensor calibrated at SPS #1
- Flow meter calibrations completed at SPS #1, SPS #5, SPS #6, Lagoon, MBBR & municipal landfill

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 September.

Water Treatment & Distribution

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

Wastewater Treatment & Collection

- Capital/Major Maintenance projects approved for 2024 are underway.

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	1.93	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	33,539	1118	1458	1.25	2.10	1.27	2.39	6.50	6.50	304	0.15	0.27	0.40	0.65	4.60	4.60	294	0.06	0.08	74.0	40.0	0.001
MAY	37887	1222	1679	0.65	2.30	0.63	2.48	8.20	9.80	266	0.09	0.13	0.48	0.65	1.60	3.30	268	0.04	0.07	-	-	-
JUN	39161	1305	1607	0.76	2.18	0.93	2.20	7.70	7.80	296	0.08	0.16	0.46	0.62	3.60	3.60	292	0.03	0.04	-	-	-
JUL	41919	1352	1708	0.67	2.50	0.60	2.32	8.70	8.80	283	0.08	0.11	0.35	0.48	3.80	3.80	256	0.04	0.06	120.00	75.30	2.000
AUG	43772	1412	2046	0.60	2.65	0.58	2.11	8.60	8.60	319	0.17	0.40	0.38	0.51	4.00	4.10	315	0.04	0.05	-	-	-
SEP	40851	1362	1616	0.63	2.40	0.62	1.80	9.80	10.20	297	0.11	0.15	0.39	0.42	4.90	5.10	292	0.03	0.04	-	-	-
OCT																						
NOV																						
DEC																						
TOTAL	335,809																					
AVG		1,225						7.91	8.27	292	0.11		0.37		3.73	3.97	283	0.04		78.3	47.0	0.0010
MAX			2,046		2.65		2.48					0.40		0.97					0.09			
MIN				0.60		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		Coliform Max. Count	E. coli 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	15	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	12	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	12	0	0	39,000	67	
APR	40,854	1362	2006	2260.0	0.16	0.62	0.15	0.39	98.79	99.46	8	7	0.18	0.32	72	74	5	15	0	0	31,000	57	
MAY	44,572	1438	1889	2144	0.17	0.74	0.17	0.68	97.42	98.77	50	7	0.22	0.60	72	70	4	12	0	0	2,800	140	
JUN	44,971	1499	1939	2134	0.16	0.59	0.16	0.68	98.52	98.52	8	3	0.28	2.28	78	70	4	12	0	0	8,000	290	
JUL	47,034	1517	1809	1910	0.15	0.42	0.15	0.36	99.96	99.73	3	4	0.26	1.50	65	66	5	15	0	0	8,000	56	
AUG	50,633	1633	2443	1911	0.16	0.77	0.15	0.59	99.44	99.45	4	4	0.30	1.48	65	66	4	12	0	0	9,000	86	
SEP	47,620	1587	1910	1701	0.19	0.51	0.19	0.74	97.61	97.43	35	7	0.31	1.20	60	60	4	12	0	0	7,200	132	
OCT																							
NOV																							
DEC																							
TOTAL	398,028																39	117	0	0			
AVG		1,453			0.17		0.15		98.83	99.21	17	5	0.28										
MAX			2,443	2,260		0.77		0.74			50	7		2.28							39,000	290	
MIN															53	60							
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	128.14	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	112.90	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	86.81	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	58,249	1,942	2,235	70.3	292	516	49.0	6.52	132,579	4,419	4,752	4.2	11.4	0.14	0.18	2.1	13.8	0.06	6
MAY	51,003	1,645	1,860	57.16	180	420	58.7	7.40	59,851	4,604	4,752	3.0	3.5	0.10	0.40	1.6	9.8	0.05	4
JUN	47,282	1,576	1,805	53.23	213	225	57.1	5.86											
JUL	57,725	1,862	2,198	58.61	215	260	51.7	5.74											
AUG	55,615	1,794	2,085	64.94	187	355	48.2	5.65											
SEPT	39,841	1,328	1,510	77.10	153	220	51.2	6.34											
OCT																			
NOV																			
DEC																			
TOTAL	461,555								427,106										
AVG		1,683		79	241	375	50.3	5.99		3,347		3.6	7.6	2.9	0.22	5.1	9.8	0.12	5
MAX			2,293		361	650	58.7	7.40			4,752	4.2	11.4	7.7	0.40	10.8	13.8	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	3.0	17.3	0.10	0.07	3.00	20.3	0.08	0.07
MAY	3.0	6.0	0.05	0.06	3.0	49.5	0.12	0.14
JUN								
JUL								
AUG								
SEPT								
OCT								
NOV								
DEC								
TOTAL								
AVG	3.0	11.7	0.07	0.07	3.0	23.2	0.08	0.09
MAX	3.0	17.3	0.10	0.08	3.0	49.5	0.12	0.14
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 – September 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
Electric Heater Inspection (1y) 5971	APPR	PM
Natural Gas Heater Inspection (1y) 5971	APPR	OPER
Louvre (1y) Inspection 5971	COMP	PM
MCC Insp/Service (1y) - 5971	COMP	PM
Motor AC Service (3y) - 5971	APPR	PM
Tank Pressure Insp/Service (1y) 5971	COMP	PM
Mixer Chemical Inspection (3m) 5971	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 5971	COMP	PM
Panel Control Inspection/Service (1y) 5971	COMP	PM
Panel Control SCADA Inspection/Service (1y) 5971	COMP	PM
Relief Valve UV Room Inspection (3m) 5971	COMP	OPER
Tank Chemical Inspection (1y) 5971	COMP	PM
Tank Water Clearwell Inspection (1y) 5971	APPR	PM
Tank Hot Water Insp. (1y) - 5971	APPR	PM
Tank Process (1y) Inspection 5971	COMP	PM
UV Light Bank Insp/Service (1m) - 5971	COMP	PM
Workplace Inspection - DS Silica- 1m - 5971	COMP	OPER
Annual Facility Description Review (1y) - 5971	APPR	PM
Monthly H&S Equipment Check (1m) - 5971	COMP	PM
Client Reports (1m) - Casselman 5971	APPR	PM
UVT Sensor Checks/Calibration (1m) - 5971	COMP	PM

Monthly Work Order Summary – September 2024 Casselman Drinking Water System

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
Chemical Review/Expiry Verification (1y) 5971	COMP	PM
Chemical Review (1y) - 5971	APPR	PM
Low Cl2 alarm Casselman WTP	COMP	CALL
High Actiflow water level alarm Casselman WTP	COMP	CALL
UV Sensor Reference Check/Calibration (1m) - 5971	COMP	PM
Chemical feed fault alarm Casselman WTP	COMP	CALL
Call Back - Casselman WTP - 5971 - Chemical feed pump fault.	COMP	CALL
Low Actiflow alarm Casselman WTP	COMP	CALL

Monthly Work Order Summary – September 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
Outpost Panel Inspection/Maintenance (1y) 1501	APPR	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
UPS LAGOON (1y) 1501	APPR	PM
PANEL ALARM/DIALER TEST (1m) - 1501	COMP	PM
Workplace Inspection (1m) - 1501	COMP	OPER
WISKI Monthly Review(1m) 1501	COMP	PM
Chemical Review/Expiry Verification (1y) 1501	COMP	PM

Monthly Work Order Summary – September 2024
Casselman Wastewater Treatment & Collection System

Chemical Review (1y) - 1501	APPR	PM
1501-01 Casselman Sewage Emergency Repairs-MM - Wet well Cleaning 2nd time SPS 1&6	COMP	CAP
1501-WWCA - Low Level at SPS2	COMP	CALL
1501-WWCA - Power Event at SPS6	COMP	CALL
SPS6 call in	COMP	CALL

Appendix C

Locate Summary



Casselman Monthly Locate Summary – September 2024

Description	Status	Work Type
Locate Casselman WDS 1553 - 20243515266 - 650 Principale	COMP	OPER
Locate Casselman WDS 1553 - 2024361598 - 20 Brisson	COMP	OPER
Locate Casselman WDS 1553 - 20243611194 - 751 St Jean	COMP	OPER
Locate Casselman WDS 1553 - 2024368038 - Zakari	COMP	OPER
Locate Casselman WDS 1553 - 20243621712 - 740 Du Boise	COMP	OPER
Locate Casselman WDS 1553 - 20243621102 - 4 Sarah	COMP	OPER
Locate Casselman WDS 1553 - 20243622985 - Racine	COMP	OPER
Locate Casselman WDS 1553 - 2024375567 - HWY 417	COMP	OPER
Locate Casselman WDS 1553 - 2024375785 - 750 St Jean	COMP	OPER
Locate Casselman WDS 1553 - 20243711927 - 665 Prom Des Erabres	COMP	OPER
Locate Casselman WDS 1553 - 20243713687 - 665 Prom De Erabres	COMP	OPER
Locate Casselman WDS 1553 - 20243717173 - 700-704 Principale	COMP	OPER
Locate Casselman WDS 1553 - 20243722460 - 309 Zakari	COMP	OPER
Locate Casselman WDS 1553 - 20243724822 - 727 St Joseph	COMP	OPER
Locate Casselman WDS 1553 - 20243724860 - 640 St Isidore	COMP	OPER
Locate Casselman WDS 1553 - 20243725965- 872 Laval	COMP	OPER
Locate Casselman WDS 1553 - 2024382998 - 33 Percy	COMP	OPER
Locate Casselman WDS 1553 - 2024387554 - 700 Du Boise	COMP	OPER
Locate Casselman WDS 1553 - 20243520948 - HWY 417	COMP	OPER
Locate Casselman WDS 1553 - 2024366612 - 647 Des Epinette	COMP	OPER
Locate Casselman WDS 1553 - 2024387569 - Sarah St	COMP	CAP
Locate Casselman WDS 1553 - 2024387602 - Ste Anne	COMP	CAP
Locate Casselman WDS 1553 - 20243725063 - Route 650	COMP	CAP
Locate Casselman WDS 1553 - 2024382470 - St Isidore	COMP	CAP
Locate Casselman WDS 1553 - 20243815469 - 3 Castonguay	COMP	CAP
Locate Casselman WDS 1553 - 2024386863- 727 St Joseph	COMP	CAP
Locate Casselman WDS 1553 - 2024387388- 700 Principale	COMP	CAP
Locate Casselman WDS 1553 - 2024395826- 795 Laval	COMP	CAP

Casselman Monthly Locate Summary – September 2024

Locate Casselman WDS 1553 - 2024386925- 50 Racine	COMP	CAP
Locate Casselman WDS 1553 - 20243814422- 740 Brebeuf	COMP	CAP
Locate Casselman WDS 1553 - 20243910243- 715 St. Isidore	COMP	CAP
Total		31