

Monthly Operations Report

for the Municipality of Casselman's Water and
Wastewater Systems

September 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	September 2022	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>		0	
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 systems.

The most recent MECP inspections are listed below:

Location	Inspector	Inspection Rating (%)	Date
Casselman Water	Jean-Francois Durocher	100	March 10, 2022
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 2022 Re-Accreditation Audit by SAI Global is scheduled to take place in November 2022.

SECTION 6 - MAINTENANCE / CAPITAL / ADDED VALUE

Water Treatment & Distribution

- Responded to three call-in alarms at the WTP
- Responded to after-hours call for broken hydrant lateral on Argile Street
- Repaired stand-post on Des Pins
- Repaired services hit by contractors on Laurier Street

Wastewater Treatment & Collection

- Responded to one call-in alarm
- Cleaned disc filter in preparation for starting discharge next month
- Collected pre-discharge samples
- Electrician in to SPS #6 to repair pump soft start; tested and put back in service

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

- 53 locates completed in September
- Approved Capital & Major Maintenance work for 2022 is ongoing

Water Treatment & Distribution

- The pilot study using manganese dioxide filters at the WTP was set up during the last week of August and ran through September. Awaiting report.

Wastewater Treatment & Collection

- Wastewater sampling as part of Queen’s University’s Covid sampling program continued in September.

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: 2022
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) quarterly	HAA (µg/L) quarterly
JAN	30632	988	1389	0.96	2.60	1.08	2.48	6.00	6.00	398.00	0.10	0.12	3.30	3.30	401.00	0.09	0.72	58.00	41.30
FEB	28433	1015	1367	0.78	2.60	1.06	2.37	3.60	4.70	478.00	0.18	0.90	2.00	2.50	480.00	0.08	0.14	-	-
MAR	31167	1005	1296	1.32	2.61	0.50	2.61	7.30	9.70	138.00	0.17	0.72	3.70	4.20	287.00	0.12	0.58	-	-
APR	31432	1048	1373	0.75	2.59	0.85	2.10	7.70	7.70	267.00	0.08	0.09	3.40	3.40	264.00	0.03	0.04	58.00	43.40
MAY	37972	1225	2029	0.39	2.24	1.04	2.10	6.30	6.30	285.00	0.11	0.19	2.90	2.90	282.00	0.03	0.07	-	-
JUN	37112	1237	1483	0.73	3.25	0.85	2.20	7.30	7.30	308.00	0.09	0.15	3.50	3.50	308.00	0.02	0.04	-	-
JUL	40529	1307	1618	0.44	2.74	0.58	1.83	7.80	7.80	344.00	0.18	0.35	3.70	3.70	333.00	0.03	0.04	163.00	126.00
AUG	39559	1276	1703	0.64	2.94	0.52	3.58	11.30	11.30	293.00	0.15	0.33	5.60	5.60	288.00	0.06	0.17	-	-
SEP	38211	1274	1828	0.67	2.64	0.76	2.06	8.40	8.40	297.00	0.25	0.61	3.10	3.10	311.00	0.05	0.16	-	-
OCT																			
NOV																			
DEC																			
TOTAL	315,046																		
AVG		1,153						7.30	7.69	312.00	0.15		3.47	3.58	328.22	0.06		93.00	70.23
MAX			2,029		3.25		3.58					0.90					0.72		
MIN				0.39		0.50													
CRITERIA			3,182	CT		0.25	3.00											<100	<80

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)	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)	Safe		Adverse		Max. Count	Max. Count
														Treated	Distribution	Treated	Distribution		
JAN	38152	1231	1618	0.07	0.38	0.35	0.80	99.97	< 3	3	0.37	0.60	61.00	5	15	0	0	140	38
FEB	34681	1239	1686	0.08	0.24	0.06	0.69	99.93	7	6	0.61	0.98	70.00	4	12	0	0	17600	117
MAR	37198	1200	1546	0.11	0.39	0.07	0.78	99.85	3	6	0.53	0.94	67.00	4	12	0	0	180	51
APR	38033	1268	1824	0.13	0.33	0.10	0.60	99.88	6	6	0.34	0.97	76.00	4	12	0	0	470	20
MAY	46116	1488	2668	0.17	0.75	0.15	0.86	97.98	14	< 3	0.48	3.33	55.00	5	15	0	0	180	32
JUN	45684	1523	1796	0.14	0.41	0.13	0.78	99.39	< 3	4	0.50	0.76	56.00	4	12	0	0	260	28
JUL	49779	1606	2058	0.18	0.61	0.16	0.53	98.24	5	3	0.65	1.11	52.00	4	12	0	0	29	11
AUG	49799	1606	2164	0.13	0.41	0.12	0.55	99.90	9	5	0.61	2.66	64.94	5	15	0	0	150	58
SEP	58138	1938	2204	0.14	0.56	0.12	0.50	99.83	23	6	0.82	2.08	71.00	4	12	0	0	420	14
OCT																			
NOV																			
DEC																			
TOTAL	397,580													39	117	0	0		
AVG		1,455		0.13		0.14		99.44	7.8	4.5	0.55								
MAX			2,668		0.75		0.86		23	6		3.33						17600	117
MIN													52.00						
CRITERIA			3,182		<1		<1	>95%				<5	>40						

COMMENTS:

Appendix B

Work Order Summary Reports



Monthly Work Order Summary – September 2022

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
Drive VFD Inspection (6m) 5971	APPR	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	APPR	PM
MCC Insp/Service (1y) - 5971	APPR	PM
Tank Pressure Insp/Service (1y) 5971	APPR	PM
Mixer Chemical Inspection (3m) 5971	APPR	PM
PANEL ALARM/DIALER TEST (1m) - 5971	COMP	PM
Panel Control Inspection/Service (1y) 5971	APPR	PM
Panel Control SCADA Inspection/Service (1y) 5971	APPR	PM
Relief Valve UV Room Inspection (3m) 5971	APPR	OPER
Tank Chemical Inspection (1y) 5971	APPR	PM
Tank Water Clearwell Inspection (1y) 5971	APPR	PM
Tank Hot Water Insp. (1y) - 5971	APPR	PM
Tank Process (1y) Inspection 5971	APPR	PM
UV Light Bank Insp/Service (1m) - 5971	COMP	PM
Workplace Inspection (1m) - 5971	COMP	OPER
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
Analyzer Turbidity Inspection/Service (1m) 1501	COMP	PM
Casselman Drawing Scanning and Labelling 5971	COMP	CAP
Casselman MnO2 Filter Pilot - 5971 - JLR & H2Flow	APPR	CAP
Analyzer Chlorine Portable Verification Caroline (1m) 1555	COMP	PM

Monthly Work Order Summary – September 2022
Casselman Drinking Water System

Casselman 5971 Actiflo 1 Backwash process/low clearwell	COMP	CALL
Casselman 5971 Actiflo 1 Backwash process/low clearwell	COMP	CALL
Casselman WTP 5971 Water Pump for Chlorine analyzer	APPR	CAP
UV Sensor Reference Check/Calibration (1m) - 5971	COMP	PM
Flow Meter Calibration (1y) 5971	APPR	PM

Monthly Work Order Summary – September 2022
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
Outpost Panel Inspection/Maintenance (1y) 1501	APPR	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
UPS LAGOON (1y) 1501	APPR	PM
PANEL ALARM/DIALER TEST (1m) - 1501	COMP	PM
Workplace Inspection (1m) - 1501	COMP	OPER
Casselman Sewage 1501 -SPS3 loss of echo	COMP	CALL

Appendix C

Locate Summary



Casselman Monthly Locate Summary – September 2022

Description	Status	Work Type
Locate Casselman WDS 1553 - 2022362302 - 693 St Marie	COMP	OPER
Locate Casselman WDS 1553 - 2022362313 - 21 Isabelle	COMP	OPER
Locate Casselman WDS 1553 - 2022362323 - 55 Faucher	COMP	OPER
Locate Casselman WDS 1553 - 2022362334 - 656 St Anne	COMP	OPER
Locate Casselman WDS 1553 - 2022362280 - Richer Close	COMP	OPER
Locate Casselman WDS 1553 - 2022366515 - 792 Joliette St	COMP	OPER
Locate Casselman WDS 1553 - 2022367055 – Principale	COMP	OPER
Locate Casselman WDS 1553 - 2022367314 - Concession and Principale	COMP	OPER
Locate Casselman WDS 1553 - 20223613304 - Zakari St	COMP	OPER
Locate Casselman WDS 1553 - 20223614612 - 410 Dore St	COMP	OPER
Locate Casselman WDS 1553 - 20223614690 - 321 Dore St	COMP	OPER
Locate Casselman WDS 1553 - 20223614722 - 124 Argile St	COMP	OPER
Locate Casselman WDS 1553 - 20223617785 - 3 Vanessa Cir	COMP	OPER
Locate Casselman WDS 1553 - 20223619085 - 754 Brebeuf St	COMP	OPER
Locate Casselman WDS 1553 - 20223621473 - 304 Dore St	COMP	OPER
Locate Casselman WDS 1553 - 20223624204 - 401 Dore St	COMP	OPER
Locate Casselman WDS 1553 - 20223624329 - 304 Dore St	COMP	OPER
Locate Casselman WDS 1553 - 20223625921 - 825 Principale St	COMP	OPER
Locate Casselman WDS 1553 - 2022369198 - Conservation St	COMP	OPER
Locate Casselman WDS 1553 - 20223612154 - 739 Laval St	COMP	OPER
Locate Casselman WDS 1553 - 20223217014 - 133 Laurier (High School)	COMP	CAP
Locate Casselman WDS 1553 - 20223623855 - 248 Nature St	COMP	CAP
Locate Casselman WDS 1553 - 2022376642 - HWY 417	COMP	CAP
Locate Casselman WDS 1553 - 2022376645 - HWY 417	COMP	CAP
Locate Casselman WDS 1553 - 2022378791 - 759 St Jean	COMP	CAP
Locate Casselman WDS 1553 - 20223717073 - 95 Lafleche Blvd	COMP	CAP
Locate Casselman WDS 1553 - 20223714316 - Principale and Racine	COMP	CAP
Locate Casselman WDS 1553 - 20223720420 - 645 Principale St	COMP	CAP
Locate Casselman WDS 1553 - 2022383042 - 22 Sauve Terrace	COMP	CAP
Locate Casselman WDS 1553 - 2022388158 - Laurier St	COMP	CAP
Locate Casselman WDS 1553 - 2022388163 - Brebeuf St	COMP	CAP
Locate Casselman WDS 1553 - 20223810776 - 8 Gagne St	COMP	CAP
Locate Casselman WDS 1553 - 20223811268 - Zakari St	COMP	CAP
Locate Casselman WDS 1553 - 20223822884 - Argile St	COMP	CAP
Locate Casselman WDS 1553 - 20223822921 - Conservation St	COMP	CAP
Locate Casselman WDS 1553 - 20223823020 - Conservation St	COMP	CAP
Locate Casselman WDS 1553 - 2022390754 - Principale and HWY 417	COMP	CAP
Locate Casselman WDS 1553 - 2022390223 - 632 Principale St	COMP	CAP
Locate Casselman WDS 1553 - 2022393111 - 683 to 673 Des Erables	COMP	CAP
Locate Casselman WDS 1553 - 20223918336 - 524 Barrage St	COMP	CAP
Locate Casselman WDS 1553 - 20223918371 - 528 Barrage St	COMP	CAP
Locate Casselman WDS 1553 - 20223918375 - Principale St and Racine	COMP	CAP
Locate Casselman WDS 1553 - 20223918435 - 120 Argile St	COMP	CAP
Locate Casselman WDS 1553 - 20223918836 - 46 Faucher	COMP	CAP

Casselman Monthly Locate Summary – September 2022

Locate Casselman WDS 1553 - 20223918956 - HWY 417	COMP	CAP
Locate Casselman WDS 1553 - 20223919831 - 778 Brebeuf St	COMP	CAP
Locate Casselman WDS 1553 - 2022403769 - Laurier St	COMP	CAP
Locate Casselman WDS 1553 - 2022403815 - Brebeuf St	COMP	CAP
Locate Casselman WDS 1553 - 2022408230 - Principale St and HWY 417	COMP	CAP
Locate Casselman WDS 1553 - 2022408381 - Principale St and HWY 417	COMP	CAP
Locate Casselman WDS 1553 - 20224010790 - 21 + 23 Sarah St	COMP	CAP
Locate Casselman WDS 1553 - 2022406311 - 700 Des Pins	COMP	CAP
Locate Casselman WDS 1553 - 20224016287 - 703 Des Cedres	COMP	CAP
Total		53