

Monthly Operations Report

for the Municipality of Casselman's Water and
Wastewater Systems

June 2024



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	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	1	▲	
<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 2 after-hours call-in alarms
- Flushed dead ends throughout distribution system
- Cleaned Transfer Tank & Actiflo #2
- ODS Marine brought in to clean & inspect raw water valve at WTP. Quote to be provided for replacement of valve.
- Operated valves on St. Isidore Street in preparation for construction
- Service repaired at 19 Albert St. and new curb stop installed at 16 Albert St.

Wastewater Treatment & Collection

- Cleaned bar screen at SPS #1
- Performed confined space entry to inspect wet well and clean off floats at SPS #1
- Cleaned rags out of both pumps at SPS #1
- Replaced UPS batteries at all SPS’s
- Back up at 674 Dollard Street – flushed service and sanitary & performed camera inspection

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

- 42 locates were completed in June.

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.
- OCWA began a pilot study using larger 135 um size silica sand in Actiflo #2 (recommended by Onita Basu of Carleton University following her site visit).
- Northland chemicals brought in to jar test different types of coagulant. Pilot study using ACH 50 to take place in July.

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																						
AUG																						
SEP																						
OCT																						
NOV																						
DEC																						
TOTAL	209,267																					
AVG		1,150						7.35	7.80	288	0.10		0.36		3.48	3.78	281	0.05		57.5	32.9	0.0010
MAX			1,679		2.35		2.48					0.27		0.97				0.09				
MIN				0.65		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. Coliform Count	Max. E.coli 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																							
AUG																							
SEP																							
OCT																							
NOV																							
DEC																							
TOTAL	252,741																26	78	0	0			
AVG		1,389			0.17		0.14		98.75	99.38	18	5	0.28										
MAX			2,006	2,260		0.74		0.68			50	7		2.28							39,000	290	
MIN															53	70							
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-BAHPRE
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																			
JUL																			
AUG																			
SEPT																			
OCT																			
NOV																			
DEC																			
TOTAL	261,092								427,106										
AVG		1,717		91	280	462	49.0	6.06		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								
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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 – June 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
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	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 5971	COMP	PM
Relief Valve UV Room Inspection (3m) 5971	APPR	PM
UV Light Bank Insp/Service (1m) - 5971	COMP	PM
Workplace Inspection - DS Silica- 1m - 5971	COMP	PM
Annual Corporate H&S Checklist (1y) - 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	APPR	PM
Pump Diaphragm Potassium Permanganate Route Inspection/Service (1m) 5971	COMP	PM
Hydrant Ends Flushing (1m) 1553	COMP	PM
WISKI Monthly Review(1m) 5971	COMP	PM
5971-04 Casselman Tank Cleaning (Clearwell/Backwash/Raw Water)-MM Transfer tank/ Actiflo 2	COMP	OPER
UV Sensor Reference Check/Calibration (1m) - 5971	COMP	CAP
1553-05 Casselman DIST. Distribution Spare Parts - CAP - Valve Boxes	COMP	CAP
-5971-01 Casselman Emergency Repairs-MM -Chlorine analyzer replacement probe	COMP	CAP
5971-WTCA-P - Actiflow 1 and 2 high level alarm	COMP	CALL

Monthly Work Order Summary – June 2024
Casselman Drinking Water System

1553-02 Casselman DIST. Distribution Maintenance (Valves)-MM	APPR	CAP
1553-03 Casselman DIST. Maintenance (Secondary Valves) - Curb Stop and Service 16,19 Albert	COMP	CAP
Casselman WTP 5971 Power Blip	COMP	CALL
5971-04 Casselman Tank Cleaning (Clearwell/Backwash/Raw Water)-MM - Raw water tank	APPR	CAP
5971 Casselman WTP coagulant solenoid FAILED	COMP	CAP
5971 - Pilot - Coagulant trial ACH	APPR	CAP

Monthly Work Order Summary – June 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
UPS SPS #4 (1y) 1501	APPR	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	BUSCO MP	PM
Annual Corporate H&S Checklist (1y) - 1501	APPR	OPER
Workplace Inspection (1m) - 1501	COMP	OPER
WISKI Monthly Review(1m) 1501	COMP	PM
Meter Flow Influent MBBR #2 Calibration/Service (1y) 1501	APPR	PM

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

Meter Flow Influent MBBR #1 Calibration/Service (1y) 1501	APPR	PM
1501-01 Casselman Sewage Emergency Repairs - MM - Construction Debris Flush Sewer Sarah & Zacharie	APPR	CAP
1501-04 Casselman Sewage Camera Inspection Sewermain-MM Dollard St Blocked sewer main	COMP	CAP

Appendix C

Locate Summary



Casselman Monthly Locate Summary – June 2024

Description	Status	Work Type
Locate Casselman WDS 1553 - 20242317706 - 755 Levesque Cr	COMP	OPER
Locate Casselman WDS 1553 - 20242314936 - 344 Dore St	COMP	OPER
Locate Casselman WDS 1553 - 20242310838 - 24 Sarah St	COMP	OPER
Locate Casselman WDS 1553 - 2024232885 - 20 Percy St	COMP	OPER
Locate Casselman WDS 1553 - 2024232463 - 22 Industrial St	COMP	OPER
Locate Casselman WDS 1553 - 2024230314 - 9 Vennesa Cr	COMP	OPER
Locate Casselman WDS 1553 - 20242226912 - 678 St Joseph	COMP	OPER
Locate Casselman WDS 1553 - 20242226683 - DuBose	COMP	OPER
Locate Casselman WDS 1553 - 20242217053 - route 500 E, Laurier	COMP	OPER
Locate Casselman WDS 1553 - 20242217053 - 52 Racine St	COMP	OPER
Locate Casselman WDS 1553 - 20242216234 – Zakari St	COMP	OPER
Locate Casselman WDS 1553 - 2024241093 - 775 Brebeuf St	COMP	OPER
Locate Casselman WDS 1553 - 2024241705 - 13 Martin St	COMP	OPER
Locate Casselman WDS 1553 - 2024243986 - 739 Laval St	COMP	OPER
Locate Casselman WDS 1553 - 2024246021 - 309 Zakari St	COMP	OPER
Locate Casselman WDS 1553 - 2024246010 - 306 Zakari St	COMP	OPER
Locate Casselman WDS 1553 - 2024245976 - 304 Zakari St	COMP	OPER
Locate Casselman WDS 1553 - 2024247331 - 37 Isabelle St	COMP	OPER
Locate Casselman WDS 1553 - 2024247759 - 700 Principale St	COMP	OPER
Locate Casselman WDS 1553 - 2024247761 - 739-747 Laval St	COMP	CAP
Locate Casselman WDS 1553 - 20242417223 - 684 Dollard	COMP	CAP
Locate Casselman WDS 1553 - 20242412423 - 700 Principale St	COMP	CAP
Locate Casselman WDS 1553 - 20242417581 - 700 Principale St	COMP	CAP
Locate Casselman WDS 1553 - 202421738 - 600 Conservation St	COMP	CAP
Locate Casselman WDS 1553 - 20242423705 - 841 Marquette St	COMP	CAP
Locate Casselman WDS 1553 - 2024240089 - La Fontaine	COMP	CAP
Locate Casselman WDS 1553 - 20242418505 - 778 Brebeuf St	COMP	CAP
Locate Casselman WDS 1553 - 20242423414 - St Therese	COMP	CAP

Casselman Monthly Locate Summary – June 2024

Locate Casselman WDS 1553 - 2024256877- 745 St Joseph	COMP	CAP
Locate Casselman WDS 1553 - 2024259891 - 568 564 St Isidore Rd	COMP	CAP
Locate Casselman WDS 1553 - 2024221695 - 667 Des Erables	COMP	CAP
Locate Casselman WDS 1553 - 20242519092 - 823 Laval St	COMP	CAP
Locate Casselman WDS 1553 - 20242519153 - 809 Principale St	COMP	CAP
Locate Casselman WDS 1553 - 20242519008 - 722 724 Isidore Rd	COMP	CAP
Locate Casselman WDS 1553 - 20242313272 -332 Dore	COMP	CAP
Locate Casselman WDS 1553 - 20242522167 - 414 Dore	COMP	CAP
Locate Casselman WDS 1553 - 20242523815 - 700 Principale	COMP	CAP
Locate Casselman WDS 1553 - 2024263906 - 22 Sarah	COMP	CAP
Locate Casselman WDS 1553 - 20242610396 - 810 Isidore Rd	COMP	CAP
Locate Casselman WDS 1553 - 2024250286 - 23 Alice	COMP	CAP
Locate Casselman WDS 1553 - 20242521822- 188 Argile	COMP	CAP
Locate Casselman WDS 1553 - 2024269571- 726 Brebeuf	COMP	CAP
Total		42