













OPERATIONS AND COMPLIANCE RELIABILITY INDICES

Legend					
				Y/N	N/A
Achieved	On Target	Caution	Not Achieved	Yes/No	Not Applicable

	Target	July 2019	
Health & Safety			
Number of Incidents	0		
<i>Actual Result</i>		0	
Drinking Water			
Inspections Ratings (YTD)	100		
<i>Actual Result</i>		100 %	Done Feb.13 th , received report April 1 st
AWQI's	0		Filter performance criteria exceeded
<i>Actual Result</i>		1	
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		Multiple complaints received for yellow/brown water. All responded to by OCWA.
<i>Actual Result</i>			
Water Main Flushing	100%		
<i>Target Achieved</i>		N/A	
Wastewater			
Number of Non-Compliances	0	N/A	
<i>Actual Result</i>		0	
Number of Bypasses	0	N/A	
<i>Actual Result</i>		0	
Number of Sanitary Sewer Back-ups	0	N/A	
<i>Actual Result</i>		0	
Sanitary Collection System Flushing Completion as per PM Program	0	N/A	
Preventive Maintenance			
Work Orders Completed	>95%		All equipment tagged , entered in database and started to produce work orders
<i>Target Achieved</i>		Y	

OCWA Monthly Operations Report Card

For the Municipality of Casselman
Water Treatment and Distribution
Facilities

Prescott-Russell Cluster
Operations July 2019



Ontario Clean Water Agency
Agence Ontarienne Des Eaux



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1.0 FACILITY LISTINGS

1.1 Water Treatment & Distribution

Facility	Appurtenances
5971W Casselman Water Treatment Plant	1 WTP (Actiflo Process)
5971D Casselman Water Distribution System	1 Water Storage Tower Water Distribution System

2.0 COMPLIANCE

2.1 Water Treatment and Distribution

Most Recent MOE Compliance Inspection Report - Rating

ORG	Facility	Inspection Date	Report Period	Inspector Name	MOE CIR Rating	Inspection Report Received	Inspection Report Reply Submitted
5971	Casselman WTP and WD	11/12/2017	2017	Christina Des Rochers	90.65	31/01/18	13/02/18 Alain
5971	Casselman WTP and WD	13/02/2019	2018	James Peets	100	April 1 st	N/A

Annual Reports (Water)

All 2018 Annual Reports required under the Drinking Water Systems Regulation (O. Reg. 170/03) of the Safe Drinking Water Act: Water Taking, Section 10 and Schedule 22 Reports, were completed February 19th 2019.

Adverse Water Quality Incidents (AWQI's)

Date	Facility	AWQI#	ISSUE	Date Resolved
July 2019	WTP	146998	Failure to meet filter performance criteria	In Progress

3.0 FACILITY PERFORMANCE

3.1 Water Treatment and Distribution System

Facility	Reporting Period	Attachments
Casselman WTP & Distribution	July 2019	Performance Assessment report attached Appendix I

4.0 DRINKING WATER QUALITY MANAGEMENT STANDARD (DWQMS)

- We're happy to say that OCWA has received their Certificate of Accreditation (Limited Scope-Transitional) for your water and distribution system on November 19th.
- Off site and on site accreditation audits for full scope accreditation were held July 11th and 24th respectively and only 2 OFIs (Opportunity for improvement) were noted. We expect to receive our new certificate in August. (See Audit Reports attached)

5.0 MAINTENANCE / CAPITAL / VALUE ADDED

5.1 Water Treatment and Distribution

Facility	Date	Description
Casselman distribution	July	A total of 61 locates were done in June. Municipality will be charged for 41 locates at actual time spent as per agreement.
Casselman distribution	July 4 th	Closed curb stop at 697 St-Joseph for Richer plumbing
Casselman WTP	July 7 th	Installed new check valve for high lift pump#2
Casselman distribution	July 16 th	Opened water at 304 Nature, 117 Argile and Argile/Maria
Casselman distribution	July 18 th	Opened water at 285 Nature
Casselman distribution	July 22 nd	Closed water at 38 Industriel
Casselman distribution	July 23 rd	Opened and closed curb stop at 776 Laval
Casselman WTP	July 11 th and 16 th	Representative from Proquest on site for new pilot for manganese control, samples of raw/treated water taken for analysis
Casselaman WTP	July 30 th	Work for new VFDs continuing
Casselman distribution	July 31 st	Gagné excavation replaced a curb stop corner St-Isidore/Laval

5.3 Preventive Maintenance Plan (PMP) Work Order Summary

All equipment preventive work orders were completed and entered in database (see complete report attached)

6.0 COMMUNICATIONS

6.1 Water Treatment & Distribution

Facility	Date	Complaint/Incident	Actions Taken
Casselman Distribution	July	Multiple complaints received via email and telephone regarding yellow/brown water.	Operators responded directly to residents explaining colour in the water was due to naturally occurring manganese found in the source water and that it is an aesthetic property only and in no way indicates water is unsafe to consume.

7.0 RECOMMENDATIONS / GENERAL COMMENTS

7.1 Water Treatment and Distribution

- OCWA applied to modify the Drinking Water Works Permit to allow us to use the Ammonium Sulfate addition system that was built a couple of years ago. Draft was reviewed by MECP and final approval should be received in August.
- OCWA is looking into and trying different options to better deal with the manganese levels in the Nation River (Ozone, products to replace the potassium permanganate and any other new technologies). Starting May 1st OCWA received approval from the MECP to trial a new chemical to replace the potassium permanganate to control the manganese at the WTP and within the distribution system. The MECP approved extending the trial by an additional three months to gather more data during the summer months when manganese levels are higher. If the trial shows good results, OCWA will apply to amend the Drinking Water Works Permit to use permanently. Some complaints were received during the reporting month and both OCWA and Proquest (chemical supplier) are working diligently to resolve the issues.

Appendix I

Ontario Clean Water Agency - Performance Assessment Report

From 01/01/2019 to 31/12/2019

Facility Org Number: 5971
Facility Name: Casselman Drinking Water System
Facility Owner: The Village of Casselman

	01/2019	02/2019	03/2019	04/2019	05/2019	06/2019	07/2019	08/2019	09/2019	10/2019	11/2019	12/2019	Total	Avg	Max	Min
Raw Flow - m³/d																
Maximum	1336	1399	1479	1577	1359	1616	1860								1860	
Mean	1012.29	952.61	1028.42	1036.03	1040.71	1171.57	1354.45							1085.154		
Minimum	347	663	594	449	642	651	799									347
Total	31381	26673	31881	31081	32262	35147	41988						230413			
Treated Flow - m³/d																
Maximum	1127	1234	1149	1417	1199	1428	1760								1760	
Mean	885.03	851.54	877.19	910.13	899.19	1028.57	1101.47							936.16		
Minimum	507	630	564	427	99	540	133									99
Total	27436	23843	27193	27304	27875	30857	33044						197552			
Raw Water / E. Coli - cfu/100mL																
Count	5	5	4	5	4	4	5						32			
Maximum	52	53	27	52	77	66	11								77	
Mean	22	20.4	12	33.2	42	23.25	5.4							22.60714		
Minimum	0	0	0	1	2	1	0									0
Raw Water / Total Coliform: TC - cfu/100mL																
Count	5	5	4	5	4	4	5						32			
Maximum	136	184	104	74	130	118	100								184	
Mean	69	< 98	53	51.2	64.5	42.5	33.6									
Minimum	< 2	< 2	22	2	12	4	14									2
Actiflo Filter #1 / Turbidity - NTU																
Maximum	0.38	0.48	0.61	0.91	0.29	0.45	0.82								0.91	
Mean	0.027	0.065	0.096	0.092	0.083	0.094	0.211							0.10		
Actiflo Filter #2 / Turbidity - NTU																
Maximum	0.47	0.5	0.4	0.37	0.41	0.47	0.74								0.74	
Mean	0.009	0.102	0.091	0.08	0.08	0.09	0.21							0.09		
Filter Efficiency / Turbidity - % < 0.3 NTU																
Mean	99.88	99.98	99.94	99.94	99.95	99.95	94.76							99.20		94.76
Treated Water / Turbidity - NTU																
Maximum	2.83	3.83	3.1	3.42	1.888	0.81	2.77								3.83	
Mean	0.166	0.426	1.915	0.473	0.268	0.134	2.01							0.77		
Treated Water / UV Intensity - mW/cm²																
Minimum	58	71	57	75	65	52	47									47
Treated Water / Cl Residual: Free - mg/L (Online)																
Maximum	2.76	2.27	3.78	2.7	2.84	2.72	3.25								3.78	
Mean	1.943	1.771	6.605	2.099	2.00	1.94	2.01							2.62		
Minimum	0.56	0.95	0.21	1.29	0.127	0.63	0.3									0.127
Treated Water / E. Coli - cfu/100mL																
Count	5	5	4	5	4	4	5						32			
Maximum	0	0	0	0	0	0	0								0	
Mean	0	0	0	0	0	0	0									
Minimum	0	0	0	0	0	0	0									0
Treated Water / Total Coliform: TC - cfu/100mL																
Count	5	4	4	5	4	4	5						31			
Maximum	0	0	0	0	0	0	0								0	
Mean	0	0	0	0	0	0	0									
Minimum	0	0	0	0	0	0	0									0
Treated Water / HPC - cfu/mL																

Appendix II

Monthly Work Order Summary - July 2019

Casselman Water Treatment Plant

Description	Status	Work Type
Analyzer Chlorine Inspection/Service (1m) 5971	COMP	PM
Analyzer Chlorine Free Insp/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
Meter Level Inspection/Service (3m) 5971	COMP	PM
Pump Submersible ACTIFLO Inspection (3m) 5971	COMP	PM
PANEL ALARM/DIALER TEST (1m) - 5971	COMP	PM
Pump Diaphragm Inspection/Service (3m) 5971	COMP	PM
UV Light Bank Insp/Service (1m) - 5971	COMP	PM
Health And Safety Inspection (1m) 5971	COMP	PM
Locate Casselman WDS 5971 -239 Argile 20192520163	COMP	OPER
Locate Casselman WDS 5971 -300 Nature 20192610520	COMP	OPER
Locate Casselman WDS 5971 -231 Argile 20192625517	COMP	OPER
Locate Casselman WDS 5971 -674 Duhamel 2019272433	COMP	OPER
Locate Casselman WDS 5971 -285 Nature 2019274411	COMP	OPER
Locate Casselman WDS 5971 -29 Fillion 20192710325	COMP	OPER
1324217 Change Batteries on Generator at WTP	COMP	PM
Actiflo # 1 backwash valve adjustment, Casselman 5971	APPR	CORR
Locate Casselman WDS 5971 -856 Francess 2019281103	COMP	OPER
Locate Casselman WDS 5971 -19 Gagne 2019280559	COMP	OPER
Locate Casselman WDS 5971 -62 Racine 20192723479	COMP	OPER
Locate Casselman WDS 5971 -809 Principale 20192721163	COMP	OPER
Locate Casselman WDS 5971 -16 Maria 20192718667	COMP	OPER
Locate Casselman WDS 5971 -116 Argile 2019275374	COMP	OPER
Locate Casselman WDS 5971 -104 Argile 2019275429	COMP	OPER

Locate Casselman WDS 5971 -289 Nature 20192810961	COMP	OPER
Locate Casselman WDS 5971 -240 Nature 20192814359	COMP	OPER
Locate Casselman WDS 5971 -224 Laurier 20192818595	COMP	OPER
Locate Casselman WDS 5971 -805 Principale 20192816577	COMP	OPER
Locate Casselman WDS 5971 -803 Principale 20192816495	COMP	OPER
Locate Casselman WDS 5971 -727 Principale 2019286211	COMP	OPER
Locate Casselman WDS 5971 -Principale east 20192826490	COMP	OPER
Locate Casselman WDS 5971 - Duhamel st 20192822297	COMP	OPER
Open/Close 304 Nature Rd and 2 duplex Argile, Casselman, 5971	COMP	CORR
Open/Close water at 285 Nature st.	COMP	OPER
Open/Close 776 Laval St. 5971 Casselman	COMP	CORR
Cl Actiflo #1 alarm 19:50-21:30 5971	COMP	CALL
Close water at 38 Industrial 5971	COMP	OPER
Locate Casselman WDS 5971 -700 St-Isidore #20193013758	COMP	OPER
Locate Casselman WDS 5971 -228 Nature 2019301397	COMP	OPER
Locate Casselman WDS 5971 -288 Nature 2019301372	COMP	OPER
Locate Casselman WDS 5971 -296 Nature 2019301354	COMP	OPER
Locate Casselman WDS 5971 -1 Martin 2019301196	COMP	OPER
Locate Casselman WDS 5971 -744 St-jean 20192916547	COMP	OPER
Locate Casselman WDS 5971 -12 desnoyers 2019304800	COMP	OPER
Locate Casselman WDS 5971 -794 Aurele 2019301218	COMP	OPER
Locate Casselman WDS 5971 -200 Argile 20192927109	COMP	OPER
Locate Casselman WDS 5971 -117 Argile 20192927108	COMP	OPER
Locate Casselman WDS 5971 -863 Principale 20192920617	COMP	OPER
Locate Casselman WDS 5971 -697 Cartier 20192915879	COMP	OPER
Locate Casselman WDS 5971 -28 Faucher 20192915424	COMP	OPER
Locate Casselman WDS 5971 -728 St-joseph 20192912472	COMP	OPER
Locate Casselman WDS 5971 -154 Laurier 2019299758	COMP	OPER
Locate Casselman WDS 5971 -54 faucher 2019299833	COMP	OPER
Locate Casselman WDS 5971 -124 Laurier 2019299806	COMP	OPER
Locate Casselman WDS 5971 -16 River rd 2019299736	COMP	OPER
Locate Casselman WDS 5971 -108 Argile 2019298467	COMP	OPER
Locate Casselman WDS 5971 -148 Argile 2019298456	COMP	OPER

Locate Casselman WDS 5971 -236 Argile 2019298414	COMP	OPER
Locate Casselman WDS 5971 -2 Gagne 2019293488	COMP	OPER
Locate Casselman WDS 5971 -Duhamel st 20192822297	COMP	OPER
Locate Casselman WDS 5971 -264 Nature 20193013972	COMP	OPER
Locate Casselman WDS 5971 -304 Nature 20193015291	COMP	OPER
Locate Casselman WDS 5971 -4 Fillion 20193017654	COMP	OPER
Locate Casselman WDS 5971 -663 Montcalm 20193017008	COMP	OPER
Locate Casselman WDS 5971 -45 Isabelle 20193112614	COMP	OPER
Locate Casselman WDS 5971 -34 faucher 20193112468	COMP	OPER
Locate Casselman WDS 5971 -Laurier st 2019318349	COMP	OPER
Locate Casselman WDS 5971 -870 Principale 2019316621	COMP	OPER
Locate Casselman WDS 5971 -678 St-Joseph 2019316009	COMP	OPER
Locate Casselman WDS 5971 -688 Principale 2019315347	COMP	OPER
Locate Casselman WDS 5971 -758 Brebeuf 20193026920	COMP	OPER
Locate Casselman WDS 5971 -13 Mercier 20193021834	COMP	OPER
Locate Casselman WDS 5971 -16 Mercier 20193021674	COMP	OPER
Locate Casselman WDS 5971 -65 faucher 20193020671	COMP	OPER
Locate Casselman WDS 5971 -731 St-Isidore 20193020094	COMP	OPER
Locate Casselman WDS 5971 -64 Racine 20193019540	COMP	OPER
Locate Casselman WDS 5971 -500 Barrage 20193018186	COMP	OPER
Locate Casselman WDS 5971 -740 St-isidore 20193019202	COMP	OPER

Appendix III

Audit Report

Upgrade Audit for:

The Village of Casselman
1702443-02

Audited Address: 832 Laval Street, Casselman, Ontario
CAN K0A 1M0

Audit Date: Jul 11, 2019

Type of audit: Systems (Stage 1)

Issue Date: Jul 11, 2019

Revision Level: Final

BACKGROUND INFORMATION

SAI Global conducted an upgrade systems audit (Stage 1) of The Village of Casselman on July 11, 2019 to the DRINKING WATER QUALITY MANAGEMENT STSNDRD VERSION 2 - 2017.

The purpose of this audit report is to summarise the degree of conformance with relevant criteria, as defined on the cover page of this report, based on the evidence obtained during the audit of your organization. This audit report considers your organization's policies, objectives, and continual improvement processes. Comments may include how suitable the objectives selected by your organization appear to be in regard to maintaining customer satisfaction levels and providing other benefits with respect to policy and other external and internal needs. We may also comment regarding the measurable progress you have made in reaching these targets for improvement.

SAI Global audits are carried out within the requirements of SAI Global procedures that also reflect the requirements and guidance provided in the international standards relating to audit practice such as ISO/IEC 17021-1, ISO 19011 and other normative criteria. SAI Global Auditors are assigned to audits according to industry, standard or technical competencies appropriate to the organization being audited. Details of such experience and competency are maintained in our records.

In addition to the information contained in this audit report, SAI Global maintains files for each client. These files contain details of organization size and personnel as well as evidence collected during preliminary and subsequent audit activities (Documentation Review and Scope) relevant to the application for initial and continuing accreditation of your organization.

Please take care to advise us of any change that may affect the application/accreditation or may assist us to keep your contact information up to date, as required by SAI Global Terms and Conditions.

This report has been prepared by SAI Global Limited (SAI Global) in respect of a Client's application for assessment by SAI Global. The purpose of the report is to comment upon evidence of the Client's conformance with the standards or other criteria specified. The content of this report applies only to matters, which were evident to SAI Global at the time of the audit, based on sampling of evidence provided and within the audit scope. SAI Global does not warrant or otherwise comment upon the suitability of the contents of the report or the certificate for any particular purpose or use. SAI Global accepts no liability whatsoever for consequences to, or actions taken by, third parties as a result of or in reliance upon information contained in this report or certificate.

Please note that this report is subject to independent review and approval. Should changes to the outcomes of this report be necessary as a result of the review, a revised report will be issued and will supersede this report.

Standard:	DRINKING WATER QUALITY MANAGEMENT STANDARD VERSION 2 - 2017
Scope of Accreditation:	Drinking Water
Drinking Water System Owner:	The Village of Casselman
Operating Authority:	OCWA (Ontario Clean Water Agency)
Population Served:	3300
Activities:	Treatment and Distribution
Drinking Water System:	Casselman Drinking Water System Municipal Drinking Water Licence #173-101, issue #3
Total Audit Duration:	Days: 0.50 audit days
Audit Team Member:	Team Leader Patrick Moore
Other Participants:	None

Definitions and action required with respect to audit findings

Major Non-conformance

Based on objective evidence, the absence of, or a significant failure to implement and/or maintain conformance to requirements of the applicable standard. Such issues may raise significant doubt as to the capability of the management system to achieve its intended outputs (i.e. the absence of or failure to implement a complete Management System clause of the standard); or

A situation which would, on the basis of available objective evidence, raise significant doubt as to the capability of the Management System to achieve the stated policy and objectives of the customer.

NOTE: The “applicable Standard” is the Standard which SAI Global is issuing accreditation against, and may be a Product Standard, a management system Standard, a food safety Standard or another set of documented criteria.

Action required: This category of findings requires SAI Global to issue a formal NCR; to receive and approve client’s proposed correction and corrective action plans; and formally verify the effective implementation of planned activities. Correction and corrective action plans should be submitted to SAI Global prior to commencement of follow-up activities as required. Follow-up action by SAI Global must ‘close out’ the NCR or reduce it to a lesser category within 90 days for initial accreditation and within 60 days for surveillance or re-accreditation audits, from the last day of the audit.

If significant risk issues (e.g. safety, environmental, food safety, product legality/quality, etc.) are detected during an audit, these shall be reported immediately to the Client and more immediate or instant correction shall be requested. If this is not agreed and cannot be resolved to the satisfaction of SAI Global, immediate suspension shall be recommended.

In the case of initial accreditation, failure to close out NCR within the time limits means that the Accreditation Audit may be repeated.

In the case of an already certified client, failure to close out NCR within the time limits means that suspension proceedings may be instituted by SAI Global.

Follow-up activities incur additional charges.

Minor Non-conformance

This represents either a management system weakness or minor issue that could lead to a major nonconformance if not addressed. Each minor NC should be considered for potential improvement and to further investigate any system weaknesses for possible inclusion in the corrective action program

Action required: This category of findings requires SAI Global to issue a formal NCR; to receive and approve client’s proposed correction and corrective action plans; and formally verify the effective implementation of planned activities at the next scheduled audit.

Opportunity for Improvement

A documented statement which may identify areas for improvement, however shall not make specific recommendation(s).

Action required: Client may develop and implement solutions in order to add value to operations and management systems. SAI Global is not required to follow-up on this category of audit finding.

Audit Type and Purpose

Systems Audit

A desktop audit of the Operational Plan for the subject system to assess whether the documented QEMS meets the PLAN requirements of the DWQMS V2.

Audit Objectives

The objective of the audit was to determine whether the Operational Plan and associated documents of the drinking water Quality and Environmental Management System (QEMS) of the subject system conform to the requirements of the Ontario Ministry of the Environment, Conservation and Parks' (MECP) Drinking Water Quality Management Standard (DWQMS V2).

The audit was also intended to gather the information necessary for SAI Global to assess whether accreditation can continue to be offered to the Operating Authority.

Audit Scope

The Operational Plan and associated documents of the Drinking Water Quality and Environmental Management System of the subject system were reviewed.

Audit Criteria

- The Drinking Water Quality Management Standard Version 2
- Current QEMS manuals, procedures and records implemented by the Operating Authority
- SAI Global Accreditation Program Handbook

Confidentiality and Documentation Requirements

SAI Global stores their records and reports to ensure their preservation and confidentiality. Unless required by law, SAI Global will not disclose audit records to a third party without prior written consent of the applicant. The only exception will be that the SAI Global will provide audit and corrective action reports to the Ontario Ministry of the Environment, Conservation and Parks (MECP). For more information, please refer to the SAI Global Accreditation Program Handbook.

As part of the SAI Global Terms, it is necessary for you to notify SAI Global of any changes to your Quality Management System that you believe are significant enough to risk non-conformity with DWQMS V2: For more information, please refer to the SAI Global Accreditation Program Handbook.

Review of any changes to the Operating Authority

Changes to the Operating Authority since the last audit: no changes were identified.

EXECUTIVE OVERVIEW

The objective of this Systems (Stage 1) audit was to review the management system and processes, confirm the scope for accreditation, and determine the organization's preparedness for the on-site verification (Stage 2) audit. In addition, it allowed for the review of the adequacy of the SAI Global audit program and resources for the audit including confirming and preparing the draft audit plan.

The results of this Systems (Stage 1) audit indicate that the organization is now ready for an on-site accreditation (Stage 2) audit.

Recommendation

Based on the results of this audit, it has been determined that the management system is effectively implemented and maintained and meets the requirements of the standard relative to the scope of accreditation identified in this report; therefore, a recommendation for continued accreditation will be submitted to SAI Global review team.

Opportunities for Improvement

No opportunities for improvement were identified.

It is suggested that any opportunities for improvement be considered by management to further enhance the Operating Authority's Quality Management System and performance.

Management System Documentation

The management system's Operational Plan was reviewed and found to be in conformance with the requirements of the standard.

Management Review

The procedure for management review meets the requirements of DWQMS V2.

Internal Audits

The procedure for internal audits meets the requirements of DWQMS V2.

Corrective, Preventive Action & Continual Improvement Processes

The procedure for corrective action, preventive action and continual improvement meets the requirements of DWQMS V2.

Summary of Findings

1. Quality Management System	Conforms
2. Quality Management System Policy	Conforms
3. Commitment and Endorsement	Conforms
4. Quality Management System Representative	Conforms
5. Document and Records Control	Conforms
6. Drinking-Water System	Conforms
7. Risk Assessment	Conforms
8. Risk Assessment Outcomes	Conforms
9. Organizational Structure, Roles, Responsibilities and Authorities	Conforms
10. Competencies	Conforms
11. Personnel Coverage	Conforms
12. Communications	Conforms
13. Essential Supplies and Services	Conforms
14. Review and Provision of Infrastructure	Conforms
15. Infrastructure Maintenance, Rehabilitation & Renewal	Conforms
16. Sampling, Testing and Monitoring	Conforms
17. Measurement & Recording Equipment Calibration and Maintenance	Conforms
18. Emergency Management	Conforms
19. Internal Audits	Conforms
20. Management Review	Conforms
21. Continual Improvement	Conforms
Major NCR #	Major non-conformity. The auditor has determined one of the following: (a) a required element of the DWQMS has not been incorporated into a QMS; (b) a systemic problem with a QMS is evidenced by two or more minor non-conformities; or (c) a minor non-conformity identified with a corrective action request has not been remedied.
Minor NCR #	Minor non-conformity. In the opinion of the auditor, part of a required element of the DWQMS has not been incorporated satisfactorily into a QMS.
OFI	Opportunity for improvement. Conforms to requirement, but there is an opportunity for improvement.
Conforms	Conforms to requirement.
NA/NC	Not applicable/Not Covered during this audit.
****	Additional comment added by auditor in the body of the report.

PART D. Audit Observations, Findings and Comments

DWQMS Reference:	1 Quality Management System
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-01, Rev 0, 2018-08-28
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>The Operational Plan and associated documentation meet the requirements of the DWQMS Version 2 - 2017.</p>	

DWQMS Reference:	2 Quality Management System Policy
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-02, Rev 0, 2018-08-28
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>The QEMS Policy, last revised and approved on Apr 6, 2016, meets the requirements of the standard. The policy is reviewed annually. The policy is downloadable from the ocwa.com website.</p>	

DWQMS Reference:	3 Commitment and Endorsement
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-03, Rev 0, 2018-06-15 OP-03A Signed Commitment and Endorsement, Rev. 0, 2018-06-15
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Commitment and endorsement of the Operational Plan by OCWA Top Management, represented by the Senior Operations Manager (Prescott Russell Cluster) and the Regional Hub Manager (Eastern Regional Hub), was signed in Jan 2019. Commitment and endorsement by the Owner, represented by the Mayor and by the Directeur des Services Physiques for the Village of Casselman, was signed on Jan 9, 2019.</p> <p>Any major revision of the operational plan such as a change in the QEMS policy or a change to the drinking water system would require re-endorsement of the Operational Plan by OCWA Top Management and the Owner. Minor changes do not require re-endorsement.</p>	

DWQMS Reference:	4 Quality Management System Representative
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-04, Rev 0, 2018-06-15
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>The role of QEMS Representative for the Casselman Drinking Water System has been assigned to the Process and Compliance Technician (PCT). The Safety, Process and Compliance Manager (or alternate PCT) acts as an alternate QEMS Representative when required. Responsibilities of the QEMS Representative have been identified in the procedure.</p>	

Audit Report

DWQMS Reference:	5 Document and Record Control
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-05, Rev 0, 2018-08-28 OP-05A Document and Record Control Locations, Rev. 0, 2018-08-28
<i>Details: (personnel interviewed, procedures, activities and records observed)</i> <p>The procedure includes a table indicating the minimum retention times and relevant controlling requirements (OCWA or regulatory) for the various types of documents and records, and a table (OP-05A) indicating the locations for the internal and external documents and records required by OCWA's QEMS in both electronic and hardcopy format.</p>	

DWQMS Reference:	6 Drinking Water System
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-06, Rev 0, 2018-06-15
<i>Details: (personnel interviewed, procedures, activities and records observed)</i> <p>The Casselman drinking water system is classified as a Large Municipal Residential System. The water treatment plant is classified as a Class 2 facility while the water distribution system is categorized as a Class 1 system. The DWS comprises one drinking water treatment plant, one elevated steel storage tank (1575 m³ capacity) and approximately 20 km of PVC watermains, ranging in size from 150 mm to 250 mm diameter pipe. The source of raw water is the South Nation River. The Rated Maximum Daily Flow of the system is 3182 m³ per day. Currently, the DWS services a population of about 3300 individuals. The treatment plant has the capacity to serve up to 4,500 people and meet the needs of projected growth until 2021.</p> <p>For event-driven fluctuations, spring and fall variations in the flow of the South Nation River have a significant effect on the raw water quality at the plant (colour, turbidity, alkalinity, manganese content and zebra mussels). The Casselman DWS has historically experienced operational difficulties and taste and odour problems during the spring and fall when the quality of the South Nation River deteriorates. During warmer months, elevated levels of dissolved organic carbon can lead to higher levels of trihalomethanes. These seasonal fluctuations in raw water quality have made it difficult to treat the raw water during these periods.</p> <p>To address the operational challenges posed by these fluctuations, Operators monitor and adjust the operational parameters of the WTP to ensure the process is adjusted to provide high quality treated water, e.g. coagulant feed system dosage to control turbidity, potassium permanganate levels to control manganese concentrations, pH levels to control alkalinity and chlorine or potassium permanganate levels to control zebra mussels.</p>	

DWQMS Reference	7 Risk Assessment
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-07, Rev 0, 2018-08-28
<i>Details: (personnel interviewed, procedures, activities and records observed)</i> <p>The procedure includes a provision to ensure that the risk assessment information and assumptions are verified at least once every calendar year and includes in the risk assessment process the applicable hazardous events identified in the MECP document Potential Hazardous Events for Municipal Residential Drinking Water Systems. A full risk assessment of the drinking water systems is required at least once every 36 months.</p>	

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DWQMS Reference:	8 Risk Assessment Outcomes
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-08, Rev 0, 2018-05-14 OP-8A Summary of Risk Assessment Outcomes, Rev 0, issue date 2018-05-15
<i>Details: (personnel interviewed, procedures, activities and records observed)</i> Results of the risk assessment are well documented in the OP-08A Summary of Risk Assessment Outcomes. Table 1 in OP-08A is the Risk Assessment Table which identifies the potential hazardous events and associated hazards, control measures, risk values and CCPs. This table also provides a good cross reference to the applicable potential hazardous events identified in the MECP document and which are included in Table 4. Table 2 identifies the CCPs and monitoring and control procedures while Table 3 gives a summary of the results of the annual review/36-month risk assessment.	

DWQMS Reference:	9 Organizational Structure, Roles, Responsibility and Authorities
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-09, Rev 0, 2018-06-15 OP-09A Organizational Structure, Rev 0, 2018-06-15
<i>Details: (personnel interviewed, procedures, activities and records observed)</i> The information in the Organizational Structure, Roles, Responsibilities and Authorities procedure meets the requirements of DWQMS V2. QEMS Roles, responsibilities and authorities are well defined in Table 9-1 at the Corporate level (corporate oversight provided by the Board, the Senior Leadership Team and Corporate Compliance) and in Table 2 for the Eastern Region. Members of Top Management and the Owner have been identified in the organizational chart. The procedure specifies that responsibilities of Top Management include undertaking the annual management review of the QEMS.	

DWQMS Reference:	10 Competencies
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-10, Rev 0, 2018-08-28
<i>Details: (personnel interviewed, procedures, activities and records observed)</i> Competency requirements of operations personnel performing duties directly affecting drinking water quality have been detailed in the Required Minimum Competencies table. Activities carried out to ensure maintenance of competencies of operations personnel and to ensure that they are aware of the relevance of their duties and how they affect safe drinking water have been developed.	

Audit Report

DWQMS Reference:	11 Personnel Coverage
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-11, Rev 0, 2018-06-15
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>The personnel coverage procedure ensures that operations personnel meeting the competencies requirements identified in the OP-10 Competencies procedure are available for duties that directly affect drinking water quality. The procedure addresses regular hours of operation, after-hours, weekends and holiday coverage as well as labour disruptions. Use of tools such as the on-call schedule, and reaction plans such as the Critical Shortage of Staff Contingency Plan and Overall Responsible Operator (ORO) SOP help to ensure that coverage is maintained.</p>	

DWQMS Reference:	12 Communications
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-12, Rev 0, 2018-11-01
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>The procedure for communications covers how relevant aspects of the QEMS are communicated between Top Management and the Owner, Operating Authority (OCWA) personnel, essential suppliers and service providers (as identified under Plan (a) of Element 13) and the public (including any complaints from other interested parties).</p>	

DWQMS Reference:	13 Essential Supplies and Services
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-13, Rev 0, 2018-06-15 Essential Supplies and Services Contact Information-contained in Casselman WTF Emergency Contact List, Rev 9, issue date 01-Apr-2019
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>The procedure indicates that purchasing is carried out following OCWA's Corporate Procurement and Administration policies, procedures and guidelines. Contractors are selected based on their qualifications and ability to meet the facility's needs without compromising operational performance and compliance with applicable legislation and regulations. Chemicals purchased for use in the drinking water treatment process must meet AWWA Standards and be ANSI/NSF certified as per the Municipal Drinking Water Licence (MDWL).</p>	

DWQMS Reference:	14 Review and Provision of Infrastructure
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-14, Rev 0, 2018-08-28
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>The procedure calls for a review of the drinking water system's infrastructure to be held at least once every calendar year to assess the adequacy of the infrastructure required to operate and maintain the system. Operations Management in conjunction with operations conducts the review. The procedure includes a requirement to review the outcomes of the risk assessment process documented in OP-08. The output of the review is the Capital and Major Maintenance Recommendations Report to assist the Owner and OCWA with planning infrastructure needs for the short- and long-term.</p>	

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DWQMS Reference:	15 Infrastructure Maintenance, Rehabilitation and Renewal
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-15, Rev 0, 2018-08-28
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>The drinking water system maintenance program includes planned and unplanned maintenance, renewal and rehabilitation of infrastructure, and program monitoring and reporting. The procedure includes the need to ensure that the long-term forecast of major infrastructure maintenance, rehabilitation and renewal activities is reviewed at least once per calendar year. The approved Capital and Major Maintenance Recommendations Report generated during the annual infrastructure review provides the basis for long-term forecasts for major infrastructure maintenance, rehabilitation and renewal activities.</p>	

DWQMS Reference:	16 Sampling, Testing and Monitoring
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-16, Rev 0, 2018-06-15 SOP #4 Reporting Adverse Results, Rev 2, issue date 29-May-2019
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>Operators follow the Casselman DWS Sample Schedule 2019 to ensure that samples are taken and analyzed as required by the municipal drinking water licence. Sampling regimens for daily, monthly, quarterly, annual and 5-year sampling have been developed. There are no relevant upstream sampling, testing and monitoring activities that take place for this system. Sampling, testing and monitoring activities related to the WTP's most challenging conditions are referenced. The procedure describes how sampling, testing and monitoring results are communicated to the owner.</p>	

DWQMS Reference:	17 Measurement and Recording Equipment Calibration and Maintenance
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-17, Rev 0, 2018-06-15
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>All measurement and recording devices and associated calibration and/or verification schedules are entered into the automated Work Management System (WMS). Work orders are then automatically generated according to the schedule to ensure that calibration/verification activities are carried out as planned. The procedure includes what actions are to be taken to ensure that water quality has not been compromised in the event that a measurement or recording device does not meet its specified performance requirements, including the timely completion of any notifications required by applicable legislation.</p>	

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DWQMS Reference:	18 Emergency Management
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-18, Rev 0, 2018-06-15 Casselman WTF Emergency Contact List, Rev 17, issue date 2018-12-13
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>Six potential emergency situations or service interruptions and processes for responding to and recovering from each potential situation have been identified for the Casselman drinking water system, including loss of service (ERCP-04), unsafe water (ERCP-05) and security breach (ERCP-06). Three levels of emergency response have been identified, depending on the resources required to handle the situation. OCWA's training requirements related to the Facility Emergency Plan (FEP) have been identified in the procedure. The procedure requires that at least one contingency plan (CP) be tested each calendar year and each CP must be reviewed at least once in a five-calendar year period.</p> <p>The Emergency Contact List for the drinking water system is reviewed once per calendar year and includes contact information for OCWA personnel, regulatory bodies and emergency services.</p>	

DWQMS Reference:	19 Internal Audits
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-19, Rev 0, 2018-11-01
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>The procedure meets the requirements of the DWQMS V2 and includes the commitment to conduct internal audits of all elements of the DWQMS at least once every calendar year and describes how corrective actions are identified and initiated.</p>	

DWQMS Reference:	20 Management Review
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-20, Rev 0, 2018-11-01
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>The information in the Management Review procedure meets the requirements of DWQMS V2 and includes the need to hold a management review of the continuing suitability, adequacy and effectiveness of the QEMS at least once every calendar year. Consideration of applicable Best Management Practices (BMPs) has been added to the management review agenda. Review and possible adoption of applicable BMPs are revisited during subsequent management reviews and are incorporated into preventive and/or corrective actions as per OP-21 Continual Improvement as appropriate.</p>	

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DWQMS Reference:	21 Continual Improvement
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-21, Rev 0, 2018-11-01
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> The procedure indicates that continual improvement of the QEMS is driven through implementing corrective actions and preventive actions and consideration of best management practices, including any published by the MECP. Prime sources for identification of actual and potential nonconformances are internal and external audits of the QEMS. Opportunities for improvement identified during internal audits are another source of continual improvement.	

Details regarding the personnel interviewed and objective evidence reviewed are maintained on file at SAI Global.

This report was prepared by:
Patrick Moore
SAI Global Management Systems Auditor

The audit report is distributed as follows:

- SAI Global
- Operating Authority
- Owner
- MECP

Notes

Copies of this report distributed outside the organization must include all pages.

Audit Report

Initial Verification Audit for:

The Village of Casselman
1702443-02

Audited Address: 832 Laval Street, Casselman, Ontario
CAN K0A 1M0

Audit Date: Jul 24, 2019

Type of audit: Initial Verification Audit

Issue Date: Jul 25, 2019

Revision Level: Final

BACKGROUND INFORMATION

SAI Global conducted an initial verification audit of The Village of Casselman on July 24, 2019 to the DRINKING WATER QUALITY MANAGEMENT STSNDARD VERSION 2 - 2017.

The purpose of this audit report is to summarise the degree of conformance with relevant criteria, as defined on the cover page of this report, based on the evidence obtained during the audit of your organization. This audit report considers your organization's policies, objectives, and continual improvement processes. Comments may include how suitable the objectives selected by your organization appear to be in regard to maintaining customer satisfaction levels and providing other benefits with respect to policy and other external and internal needs. We may also comment regarding the measurable progress you have made in reaching these targets for improvement.

SAI Global audits are carried out within the requirements of SAI Global procedures that also reflect the requirements and guidance provided in the international standards relating to audit practice such as ISO/IEC 17021-1, ISO 19011 and other normative criteria. SAI Global Auditors are assigned to audits according to industry, standard or technical competencies appropriate to the organization being audited. Details of such experience and competency are maintained in our records.

In addition to the information contained in this audit report, SAI Global maintains files for each client. These files contain details of organization size and personnel as well as evidence collected during preliminary and subsequent audit activities (Documentation Review and Scope) relevant to the application for initial and continuing accreditation of your organization.

Please take care to advise us of any change that may affect the application/accreditation or may assist us to keep your contact information up to date, as required by SAI Global Terms and Conditions.

This report has been prepared by SAI Global Limited (SAI Global) in respect of a Client's application for assessment by SAI Global. The purpose of the report is to comment upon evidence of the Client's conformance with the standards or other criteria specified. The content of this report applies only to matters, which were evident to SAI Global at the time of the audit, based on sampling of evidence provided and within the audit scope. SAI Global does not warrant or otherwise comment upon the suitability of the contents of the report or the certificate for any particular purpose or use. SAI Global accepts no liability whatsoever for consequences to, or actions taken by, third parties as a result of or in reliance upon information contained in this report or certificate.

Please note that this report is subject to independent review and approval. Should changes to the outcomes of this report be necessary as a result of the review, a revised report will be issued and will supersede this report.

Standard:	DRINKING WATER QUALITY MANAGEMENT STANDARD VERSION 2 - 2017
Scope of Accreditation:	Drinking Water
Drinking Water System Owner:	The Village of Casselman
Operating Authority:	OCWA (Ontario Clean Water Agency)
Population Served:	3300
Activities:	Treatment and Distribution
Drinking Water System:	Casselman Drinking Water System Municipal Drinking Water Licence #173-101, issue #3
Total Audit Duration:	Days: 0.75 audit days
Audit Team Member:	Team Leader Patrick Moore
Other Participants:	None

Definitions and action required with respect to audit findings

Major Non-conformance

Based on objective evidence, the absence of, or a significant failure to implement and/or maintain conformance to requirements of the applicable standard. Such issues may raise significant doubt as to the capability of the management system to achieve its intended outputs (i.e. the absence of or failure to implement a complete Management System clause of the standard); or

A situation which would, on the basis of available objective evidence, raise significant doubt as to the capability of the Management System to achieve the stated policy and objectives of the customer.

NOTE: The “applicable Standard” is the Standard which SAI Global is issuing accreditation against, and may be a Product Standard, a management system Standard, a food safety Standard or another set of documented criteria.

Action required: This category of findings requires SAI Global to issue a formal NCR; to receive and approve client’s proposed correction and corrective action plans; and formally verify the effective implementation of planned activities. Correction and corrective action plans should be submitted to SAI Global prior to commencement of follow-up activities as required. Follow-up action by SAI Global must ‘close out’ the NCR or reduce it to a lesser category within 90 days for initial accreditation and within 60 days for surveillance or re-accreditation audits, from the last day of the audit.

If significant risk issues (e.g. safety, environmental, food safety, product legality/quality, etc.) are detected during an audit, these shall be reported immediately to the Client and more immediate or instant correction shall be requested. If this is not agreed and cannot be resolved to the satisfaction of SAI Global, immediate suspension shall be recommended.

In the case of initial accreditation, failure to close out NCR within the time limits means that the Accreditation Audit may be repeated.

In the case of an already certified client, failure to close out NCR within the time limits means that suspension proceedings may be instituted by SAI Global.

Follow-up activities incur additional charges.

Minor Non-conformance

This represents either a management system weakness or minor issue that could lead to a major nonconformance if not addressed. Each minor NC should be considered for potential improvement and to further investigate any system weaknesses for possible inclusion in the corrective action program

Action required: This category of findings requires SAI Global to issue a formal NCR; to receive and approve client’s proposed correction and corrective action plans; and formally verify the effective implementation of planned activities at the next scheduled audit.

Opportunity for Improvement

A documented statement which may identify areas for improvement, however shall not make specific recommendation(s).

Action required: Client may develop and implement solutions in order to add value to operations and management systems. SAI Global is not required to follow-up on this category of audit finding.

Audit Type and Purpose

On-site Verification Audit

An on-site audit to assess whether a QMS has been implemented for the subject system that meets the “DO” requirements of the DWQMS V2.

Audit Objectives

The objective of the audit was to determine whether the drinking water Quality and Environmental Management System (QEMS) of the subject system conforms to the requirements of the Ontario Ministry of the Environment, Conservation and Parks’ (MECP) Drinking Water Quality Management Standard (DWQMS V2).

The audit was also intended to gather the information necessary for SAI Global to assess whether accreditation can be offered to the Operating Authority.

Audit Scope

The facilities and processes associated with the Operating Authority’s QEMS were objectively evaluated to obtain audit evidence and to determine a) whether the quality management activities and related results conform with DWQMS V2 requirements, and b) if they have been effectively implemented and/or maintained.

Audit Criteria

- The Drinking Water Quality Management Standard Version 2
- Current QEMS manuals, procedures and records implemented by the Operating Authority
- SAI Global Accreditation Program Handbook

Confidentiality and Documentation Requirements

SAI Global stores their records and reports to ensure their preservation and confidentiality. Unless required by law, SAI Global will not disclose audit records to a third party without prior written consent of the applicant. The only exception will be that the SAI Global will provide audit and corrective action reports to the Ontario Ministry of the Environment, Conservation and Parks (MECP). For more information, please refer to the SAI Global Accreditation Program Handbook.

As part of the SAI Global Terms, it is necessary for you to notify SAI Global of any changes to your Quality Management System that you believe are significant enough to risk non-conformity with DWQMS V2: For more information, please refer to the SAI Global Accreditation Program Handbook.

Review of any changes to the Operating Authority

Changes to the Operating Authority since the last audit: no changes were identified.

EXECUTIVE OVERVIEW

Based on the results of this on-site verification (Stage 2) audit and the results of the System (Stage 1) audit, it has been determined that the management system is effectively implemented and meets the requirements of the standard relative to the scope of accreditation identified in this report; therefore, a recommendation for accreditation will be submitted to SAI Global review team.

Recommendation

Based on the results of this audit, it has been determined that the management system is effectively implemented and maintained and meets the requirements of the standard relative to the scope of accreditation identified in this report; therefore, a recommendation for accreditation will be submitted to SAI Global review team.

Opportunities for Improvement

The following opportunities for improvement have been identified:

- **Element 14 Review and Provision of Infrastructure**
The procedure for Review and Provision of Infrastructure calls for a review of the drinking water system's infrastructure to be held at least once a year. In practice, the review is an on-going process.
- **Element 17 Measurement & Recording Equipment Calibration and Maintenance**
Only one of the calibration companies provides calibration certificates which confirm that measuring equipment used in the WTP has been calibrated against measurement standards traceable to international or national measurement standards.

It is suggested that any opportunities for improvement be considered by management to further enhance the Operating Authority's Quality Management System and performance.

Management System Documentation

The management system's Operational Plan was reviewed and found to be in conformance with the requirements of the standard.

Management Review

Records of the most recent management review meetings were verified and found to meet the requirements of the standard. All inputs were reflected in the records and appear suitably managed as reflected by resulting actions and decisions.

Internal Audits

Internal audits are being conducted at planned intervals to ensure conformance to planned arrangements, the requirements of the standard and the established management system.

Corrective, Preventive Action & Continual Improvement Processes

The Operating Authority is implementing an effective process for the continual improvement of the management system through the use of the quality policy, quality objectives, audit results, data analysis, the appropriate management of corrective and preventive actions and management review.

Audit Report

Summary of Findings

1. Quality Management System	Conforms
2. Quality Management System Policy	Conforms
3. Commitment and Endorsement	Conforms
4. Quality Management System Representative	Conforms
5. Document and Records Control	Conforms
6. Drinking-Water System	Conforms
7. Risk Assessment	Conforms
8. Risk Assessment Outcomes	Conforms
9. Organizational Structure, Roles, Responsibilities and Authorities	Conforms
10. Competencies	Conforms
11. Personnel Coverage	Conforms
12. Communications	Conforms
13. Essential Supplies and Services	Conforms
14. Review and Provision of Infrastructure	OFI
15. Infrastructure Maintenance, Rehabilitation & Renewal	Conforms
16. Sampling, Testing and Monitoring	Conforms
17. Measurement & Recording Equipment Calibration and Maintenance	OFI
18. Emergency Management	Conforms
19. Internal Audits	Conforms
20. Management Review	Conforms
21. Continual Improvement	Conforms
Major NCR #	Major non-conformity. The auditor has determined one of the following: (a) a required element of the DWQMS has not been incorporated into a QMS; (b) a systemic problem with a QMS is evidenced by two or more minor non-conformities; or (c) a minor non-conformity identified with a corrective action request has not been remedied.
Minor NCR #	Minor non-conformity. In the opinion of the auditor, part of a required element of the DWQMS has not been incorporated satisfactorily into a QMS.
OFI	Opportunity for improvement. Conforms to requirement, but there is an opportunity for improvement.
Conforms	Conforms to requirement.
NA/NC	Not applicable/Not Covered during this audit.
****	Additional comment added by auditor in the body of the report.

PART D. Audit Observations, Findings and Comments

DWQMS Reference:	1 Quality Management System
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-01, Rev 0, 2018-08-28
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>The Operational Plan and associated documentation meet the requirements of the DWQMS Version 2 - 2017.</p>	

DWQMS Reference:	2 Quality Management System Policy
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-02, Rev 0, 2018-08-28
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>The QEMS Policy, last revised and approved on Apr 6, 2016, meets the requirements of the standard. The policy is reviewed annually. The policy is downloadable from the ocwa.com website.</p>	

DWQMS Reference:	3 Commitment and Endorsement
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-03, Rev 0, 2018-06-15 OP-03A Signed Commitment and Endorsement, Rev. 0, 2018-06-15
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Commitment and endorsement of the Operational Plan by OCWA Top Management, represented by the Senior Operations Manager (Prescott Russell Cluster) and the Regional Hub Manager (Eastern Regional Hub), was signed in Jan 2019. Commitment and endorsement by the Owner, represented by the Mayor and by the Directeur des Services Physiques for the Village of Casselman, was signed on Jan 9, 2019.</p> <p>Any major revision of the operational plan such as a change in the QEMS policy or a change to the drinking water system would require re-endorsement of the Operational Plan by OCWA Top Management and the Owner. Minor changes do not require re-endorsement.</p>	

DWQMS Reference:	4 Quality Management System Representative
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-04, Rev 0, 2018-06-15
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>The role of QEMS Representative for the Casselman Drinking Water System has been assigned to the Process and Compliance Technician (PCT). The Safety, Process and Compliance Manager (or alternate PCT) acts as an alternate QEMS Representative when required. Responsibilities of the QEMS Representative have been identified in the procedure.</p>	

Audit Report

DWQMS Reference:	5 Document and Record Control
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-05, Rev 0, 2018-08-28 OP-05A Document and Record Control Locations, Rev. 0, 2018-08-28
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>All documents requested - system procedures, forms, tables, lists and records - were readily available on the Eastern Region (Prescott Russell Cluster) shared drive in electronic format or at the water treatment plant for hardcopy versions of documents and records. The table in the procedure indicates the minimum retention times and relevant controlling regulations for the various types of documents and records, while the table in OP-05A indicates the locations for the different types of documents and records required by the QEMS in both electronic and hardcopy format. The protocol for making revisions to documents is being followed, including handling of superseded documents.</p>	

DWQMS Reference:	6 Drinking Water System
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-06, Rev 0, 2018-06-15
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>The Casselman drinking water system is classified as a Large Municipal Residential System. The water treatment plant is classified as a Class 2 facility while the water distribution system is categorized as a Class 1 system. The DWS comprises one drinking water treatment plant, one elevated steel storage tank (1575 m³ capacity) and approximately 20 km of PVC watermains, ranging in size from 150 mm to 250 mm diameter pipe. The source of raw water is the South Nation River. The Rated Maximum Daily Flow of the system is 3182 m³ per day. Currently, the DWS services a population of about 3300 individuals. The treatment plant has the capacity to serve up to 4,500 people and meet the needs of projected growth until 2021.</p> <p>For event-driven fluctuations, spring and fall variations in the flow of the South Nation River have a significant effect on the raw water quality at the plant (colour, turbidity, alkalinity, manganese content and zebra mussels). The Casselman DWS has historically experienced operational difficulties and taste and odour problems during the spring and fall when the quality of the South Nation River deteriorates. During warmer months, elevated levels of dissolved organic carbon can lead to higher levels of trihalomethanes. These seasonal fluctuations in raw water quality have made it difficult to treat the raw water during these periods.</p> <p>To address the operational challenges posed by these fluctuations, Operators monitor and adjust the operational parameters of the WTP to ensure the process is adjusted to provide high quality treated water, e.g. coagulant feed system dosage to control turbidity, potassium permanganate levels to control manganese concentrations, pH levels to control alkalinity and chlorine or potassium permanganate levels to control zebra mussels.</p> <p>The treatment system process flow chart accurately represents the drinking water system.</p>	

Audit Report

DWQMS Reference	7 Risk Assessment
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-07, Rev 0, 2018-08-28
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>The initial full risk assessment review was carried out on May 15, 2018 by the Operations Manager, QEMS Rep/PCT/Operator and another PCT/Operator.</p> <p>The annual review of the currency of the information and the validity of the assumptions used in the risk assessment for 2019 was carried out on May 30 by the QEMS Rep/PCT/Operator. No changes to the risk assessment tables were required.</p>	

DWQMS Reference:	8 Risk Assessment Outcomes
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-08, Rev 0, 2018-05-14 OP-8A Summary of Risk Assessment Outcomes, Rev 0, issue date 2018-05-15
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>Results of the risk assessment are well documented in the Summary of Risk Assessment Outcomes found in OP-08A. Table 1 is the Risk Assessment Table which identifies the potential hazardous events and associated hazards, control measures, risk value and CCPs. This table also provides a good cross reference to the potential hazardous events identified in the MECP document and which are included in Table 4. Table 2 identifies the CCPs and monitoring and control procedures while Table 3 gives a summary of the results of the 2018 initial full risk assessment and the 2019 annual review.</p>	

DWQMS Reference:	9 Organizational Structure, Roles, Responsibility and Authorities
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-09, Rev 0, 2018-06-15 OP-09A Organizational Structure, Rev 0, 2018-06-15
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>QEMS roles, responsibilities and authorities are well defined in the procedure. Members of Top Management (including those responsible for undertaking the annual management review of the QEMS) and the Owner have been identified in the organizational chart. The procedure includes QEMS roles, responsibilities and authorities of persons providing corporate oversight, e.g. members of the Board, the Senior Leadership Team and Corporate Compliance.</p>	

DWQMS Reference:	10 Competencies
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-10, Rev 0, 2018-08-28
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>Competency requirements of operations personnel performing duties directly affecting drinking water quality have been detailed in the Required Minimum Competencies table. Training programs are available to ensure development and maintenance of competencies of operations personnel and to ensure that they are aware of the relevance of their duties and how they affect safe drinking water. Drinking Water Operator licenses viewed for Operators who maintain the water treatment system were all current.</p>	

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DWQMS Reference:	11 Personnel Coverage
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-11, Rev 0, 2018-06-15
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>The personnel coverage procedure ensures that operations personnel meeting the competencies requirements identified in the OP-10 Competencies procedure are available for duties that directly affect drinking water quality. The procedure addresses regular hours of operation, after-hours, weekends and holiday coverage as well as labour disruptions. Use of tools such as the on-call schedule and vacation schedule, and reaction plans such as the Critical Shortage of Staff Contingency Plan and SOP #4 When the ORO is Absent or Unable to Act help to ensure that coverage is maintained.</p>	

DWQMS Reference:	12 Communications
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-12, Rev 0, 2018-11-01
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>Processes for communicating relevant aspects of the QEMS between Top Management and Operating Authority personnel (e.g. quarterly Operational Staff meetings), the Owner (e.g. Monthly Operations Reports and management review meeting minutes), suppliers (e.g. communications to suppliers regarding the QEMS) and the public (e.g. service issues and complaints) are in place.</p>	

DWQMS Reference:	13 Essential Supplies and Services
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-13, Rev 0, 2018-06-15 Essential Supplies and Services Contact Information-contained in Casselman WTF Emergency Contact List, Rev 9, issue date 01-Apr-2019
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>Primary suppliers of essential supplies and services have been identified in the detailed Essential Supplies and Services List. Chemicals used at the WTP meet ANSI/NSF standards (e.g. sodium hypochlorite). The main laboratory used for testing samples (Caduceon Environmental Laboratories) is CALA (Canadian Association for Laboratory Accreditation) certified. A few suppliers on the list are sole suppliers. An OFI identified during the internal audit is to identify additional suppliers for sole suppliers.</p>	

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DWQMS Reference:	14 Review and Provision of Infrastructure
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-14, Rev 0, 2018-08-28
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Review of the adequacy of the infrastructure required to operate and maintain the system is an on-going process carried out by the Senior Operations Manager, the QEMS Rep/PCT/Operator and other PCT/Operators. Updates are made to the 5-Year Capital and Major Maintenance Recommendations Report for 2019 to 2023 as appropriate. The latest update is dated July 25, 2019.</p> <p>Opportunity for Improvement: the procedure for Review and Provision of Infrastructure calls for a review of the drinking water system's infrastructure to be held at least once a year. In practice, the review is an on-going process.</p>	

DWQMS Reference:	15 Infrastructure Maintenance, Rehabilitation and Renewal
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-15, Rev 0, 2018-08-28
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>The drinking water system maintenance program includes planned and unplanned maintenance, renewal and rehabilitation of infrastructure and program monitoring and reporting. The 5-Year Capital and Major Maintenance Recommendations Report for 2019 to 2023 generated during the infrastructure review process provides the basis for long-term forecasts for major infrastructure maintenance, rehabilitation and renewal activities for the drinking water system. For the water treatment plant, capital expenditures include \$10K for UV system repairs and parts in 2020, \$30K for new drives for transfer and low lift pumps in 2019 and \$30K for replacement of GAC filters in 2023. For distribution operations, annual maintenance expenditures include \$5K for hydrant repairs, \$30K for valve repairs and \$5K for distribution spare parts.</p>	

DWQMS Reference:	16 Sampling, Testing and Monitoring
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-16, Rev 0, 2018-06-15 SOP #4 Reporting Adverse Results, Rev 2, issue date 29-May-2019
<p>Details: <i>(personnel interviewed, procedures, activities and records observed)</i></p> <p>Operators follow the Casselman DWS Sampling Calendar to ensure that samples are taken and analyzed as required by the municipal drinking water licence. Sampling regimens for daily, weekly, monthly, quarterly, bi-annual and annual sampling have been developed. There are no relevant upstream sampling, testing and monitoring activities that take place for this system. A challenging condition has been identified as possible failure of the Rollins Street raw water pump. Seasonal fluctuations which affect manganese content, colour and alkalinity present challenges to operating the plant. In 2018, there were only two incidents of adverse drinking water tests for the system (AWQI # 138549 and # 140121). For 2019 to-date, there have been no incidents of adverse drinking water tests.</p>	

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DWQMS Reference:	17 Measurement and Recording Equipment Calibration and Maintenance
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-17, Rev 0, 2018-06-15
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> Calibration certificates were available for all equipment calibrated by the two external calibration companies. The calibration status of all measurement and recording equipment seen at the Casselman WTP was current. Work orders for calibration/verification and maintenance of measurement and recording equipment are generated by the automated Work Management System (WMS). Opportunity for Improvement: only one of the calibration companies provides calibration certificates which confirm that measuring equipment used in the WTP has been calibrated against measurement standards traceable to international or national measurement standards.	

DWQMS Reference:	18 Emergency Management
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-18, Rev 0, 2018-06-15 Casselman WTF Emergency Contact List, Rev 17, issue date 2018-12-13
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> The annual testing of contingency plans was a desk-top exercise carried out on Dec 20, 2018 to review the spill response procedure (ERCP-01). The exercise was led by the QEMS Rep and attended by five Operators. The outcome of the exercise was that Operators gained greater familiarity with the procedure and would be more confident as the on-call person who has to deal with a spill and communicate with other individuals (e.g. Owner, Regional Hub Manager, VP Operations, media).	

DWQMS Reference:	19 Internal Audits
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-19, Rev 0, 2018-11-01
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> An internal audit of the complete drinking water system for 2019 was carried out on Jun 26, 2019 by a qualified auditor using a checklist which reflected the requirements of the new standard (DWQMS Version 2 - 2017). The internal audit identified one non-conformance for not reviewing the BMPs published on the MECP website (Element 21) and five opportunities for improvement.	

DWQMS Reference:	20 Management Review
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-20, Rev 0, 2018-11-01
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> The management review for the 2019 calendar year was conducted on Jul 11, 2019, attended by the Owner (Director of Physical Services), Top Management (Senior Operations Manager), the QEMS Rep. and one Operator. All required agenda items were covered and minutes of the meeting were prepared. A review of best management practices was included as part of the agenda. Action items identified during the meeting were recorded in the minutes.	

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DWQMS Reference:	21 Continual Improvement
Client Reference:	Operational Plan for the Casselman Drinking Water System QEMS Proc. OP-21, Rev 0, 2018-11-01
Details: <i>(personnel interviewed, procedures, activities and records observed)</i> <p>The procedure indicates that continual improvement of the QEMS is driven through implementing corrective actions and preventive actions and consideration of best management practices, including any published by the MECP. At this stage of development of the QEMS, no preventive actions or best management practices have been identified. A non-conformance was raised during the internal audit for not reviewing the BMPs published on the MECP website. Corrective action for this non-conformity is an opportunity to improve the QEMS. Opportunities for improvement identified during the internal audit provide additional opportunities to improve the QEMS.</p>	

Details regarding the personnel interviewed and objective evidence reviewed are maintained on file at SAI Global.

This report was prepared by:

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