



## **Finance, Administration and Operations Committee**

Tuesday, April 17, 2018, 4:30 pm  
City Hall, Council Chambers

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### Committee Members

Councillor J. Fullarton,  
Chair  
Councillor T. Blanchard  
Councillor P. Deery  
Councillor J. Earle  
Mayor D. Henderson,  
Ex-Officio

### Areas of Responsibility:

Clerk's Office	CRCA
Environmental Services	Cemetery
Finance Department	Health Unit
Fire Department	Joint Services
Human Resources Dept.	Committee
Operations Department	PLMG
Airport Commission	Police Services Board
Arena Advisory Board	Safe Communities
Brockville Municipal	Coalition
Accessibility Advisory	St. Lawrence Lodge
Committee (BMAAC)	Management Board
	Volunteer Awards

All legal matters  
[excepting the purchase  
and sale of land]

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Page

## **AGENDA**

### **Disclosure of Interest**

### **Delegations and Presentations**

Nil.

### **Correspondence & Communications**

1. Poutine Feast (Municipally Significant)  
James Doucet

*THAT the Committee approve the request from James Doucet to declare "Poutine Feast" to held in Hardy Park, on Water Street, May 4-6, 2018, to be an event of "Municipal Significance" for the purpose of the issuance of Special Occasion Permits required by the Alcohol and Gaming Commission of Ontario (AGCO), subject to all necessary permits and approvals being obtained and compliance with all City of Brockville By-laws.*

Finance, Administration and Operations Committee  
April 17, 2018

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**Reports from Boards and Committees**

Nil.

**Staff Reports**

- 4 - 6      1.    2018-042-04  
                Proposed Parking Restrictions Scace Avenue  
  
*THAT parking be restricted on the north side of Scace Avenue from Oxford Avenue to 230.0 metres westerly (the west side of the pedestrian crossing at 19 Scace Avenue) from 8am to 4pm.*  
  
*THAT Schedule "1" of Subsection 72 of By-law 119-89 be amended accordingly.*
- 7 - 32     2.    2018-043-04  
                Water and Wastewater Systems  
                Quarterly Report (Jan. - Mar. 2018)  
  
*THAT Report 2018-043-04 Water and Wastewater Systems Quarterly Report (Jan. - Mar. 2018) be received for information purposes.*
- 33 - 34    3.    2018-044-04  
                Supply and Installation of Heavy Duty Swing Sets and Camel Back Climbers  
  
*THAT the Tender from Henderson Recreation Equipment Limited, in the amount of forty two thousand, nine hundred and ninety five dollars and sixty three cents (\$42,995.63) for City of Brockville Contract 2018-26 for the Supply and Installation of Heavy Duty Swing Sets and Camel Back Climbers, be accepted; and*  
  
*THAT the project be funded from the 2018 Parkland Equipment Program.*
- 35 - 36    4.    2018-045-04  
                New Refrigeration Condenser for Memorial Centre  
  
*THAT Council authorize the purchase of a refrigeration condenser for the Brockville Memorial Civic Centre, model EVAPCO ECO-ATC 157A5*

Finance, Administration and Operations Committee

April 17, 2018

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37 - 38      5.    2018-048-04

Supply of Paint and Painting of Centre, Lane and Edge Line Pavement Markings

*THAT Council authorize the extension of contract 2017-02, "Supply of Paint and Painting of Centre, Lane and Edge Line Pavement Markings", with RanN Maintenance into in the amount of twenty-six thousand, six hundred and fifty dollars (\$26,650.00) excluding HST into 2018 and;*

*THAT this work be charged to account 01-5-245435-3010.*

39 - 42      6.    2018-049-04

New Refrigeration Compressor (30 hp Model N4A) for Memorial Centre

*THAT Council authorize the purchase of a refrigeration compressor for the Brockville Memorial Civic Centre, (30hp, Model N4A), from the single source Cimco Refrigeration, in the amount of \$21,500.00; and*

*THAT the purchase be funded from project surpluses in the Building and Equipment Maintenance Program.*

**New Business - Reports from Members of Council**

Nil.

**FAO - Consent Agenda**

**Adjournment**

*THAT the Finance, Administration and Operations Committee adjourn its meeting until the next regular meeting scheduled for May 15, 2018.*

April 11, 2018

**REPORT TO FINANCE, ADMIN. & OPERATIONS COMMITTEE – APRIL 17, 2018**

**2018-042-04**

**PROPOSED PARKING RESTRICTIONS  
SCACE AVENUE**

**MATTHEW LOCKE  
TRANSPORTATION SERVICES  
C.J. COSGROVE, P.ENG.  
DIRECTOR OF OPERATIONS**

**RECOMMENDED**

THAT parking be restricted on the north side of Scace Avenue from Oxford Avenue to 230.0 metres westerly (the west side of the pedestrian crossing at 19 Scace Avenue) from 8am to 4pm.

THAT Schedule "1" of Subsection 72 of By-law 119-89 be amended accordingly.

**PURPOSE/BACKGROUND**

Transportation Services staff were requested by the principal of Toniata Public School to review the on-street parking on Scace Avenue between their eastern school bus loading zone and Oxford Avenue. The principal and school bus drivers have expressed concern that when vehicles are parked on both sides of the street in this location it is difficult for school buses to enter and exit the school bus loading zone, particularly from Oxford Street to the school.

**ANALYSIS**

After observing the site and reviewing the current parking by-laws and responses of the survey provided to local residents, the Transportation Services Division has made the following observations:

- There is currently a parking restriction on the north side of Scace Avenue from 7m east of the east entrance at Toniata Public School to 45m easterly (The Bus Loading Zone).
- The road width is 8.5m leaving approximately 4.5m of clear space when vehicles are parked on both sides of the street. Snow banks in winter conditions reduce this distance significantly.
- Vehicles parked on the north and south sides of the street during school pick up and drop off hours make it difficult for school buses to enter and exit the school bus loading zone.
- Busses arrive between 8:45am and 8:55am before school and depart between 3:15pm and 3:30pm after school.
- Fifty-five residences on Scace Avenue were provided with surveys requesting their input on the proposed amendment to Parking By-Law #119-89.

2018-042-04  
Proposed Parking Restrictions  
Scace Avenue

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- Two residents provided responses to the survey, of which both were in favour of the proposed parking restrictions.
- Appendix 'A' illustrates the location of the proposed parking restriction.

## POLICY IMPLICATIONS

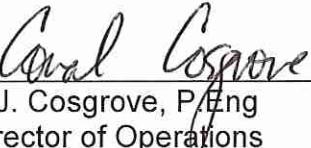
An amendment to the City's Parking By-Law 119-89 requires Council authorization.

## FINANCIAL CONSIDERATIONS

Annually, Public Works budgets for the installation of a variety of signs throughout the City. There are sufficient funds in the Public Works 2018 Operating Budget to accommodate the estimated installation cost of \$250 per sign.

## CONCLUSION

It is recommended that a parking restriction be implemented as detailed.

  
\_\_\_\_\_  
C.J. Cosgrove, P.Eng

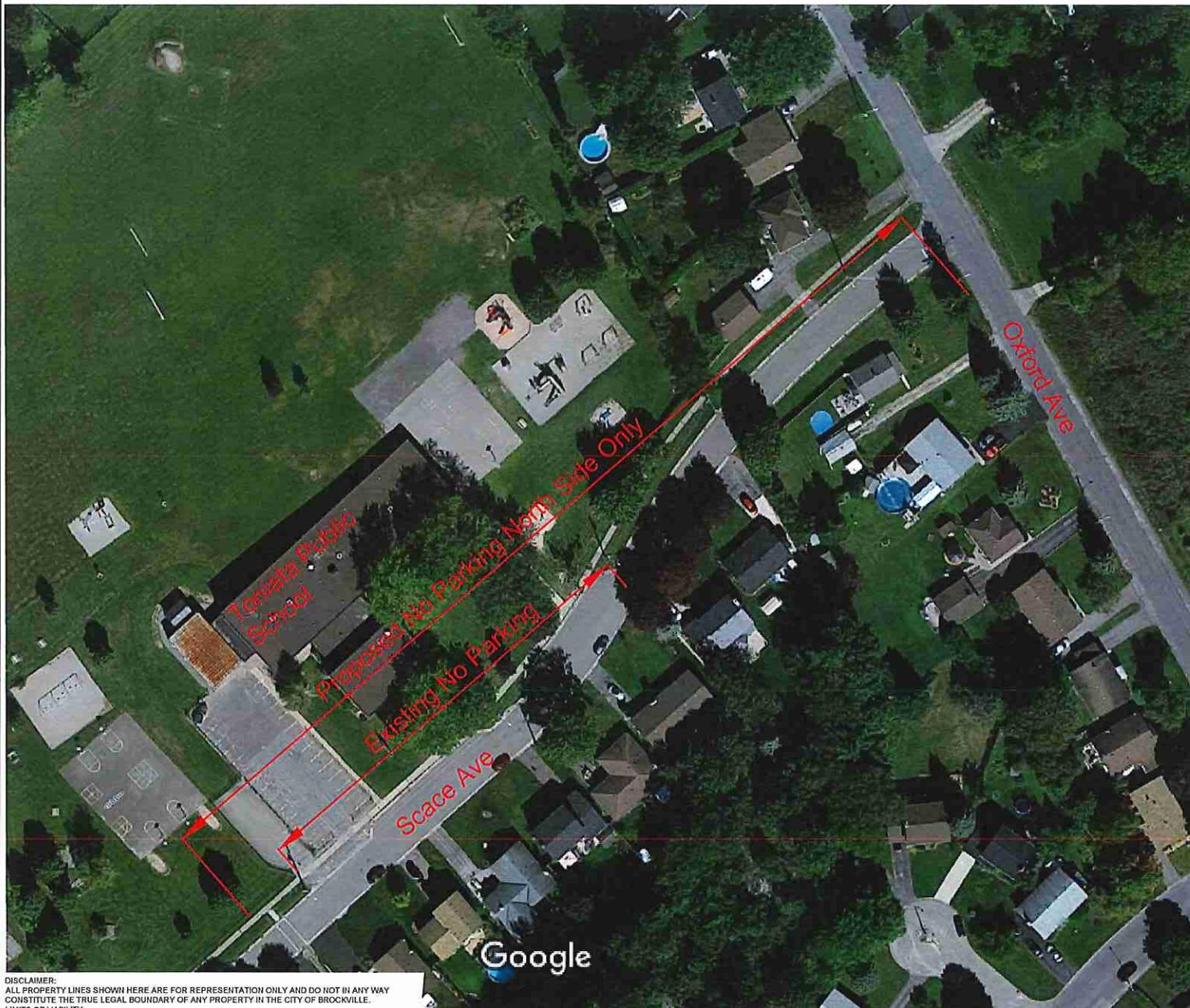
Director of Operations

  
\_\_\_\_\_  
D. Dick, CA, CPA  
Director of Corporate Services

  
\_\_\_\_\_  
Matthew Locke

Supervisor of Transportation  
Services

  
\_\_\_\_\_  
for B. Casselman  
City Manager



## BROCKVILLE

CITY OF THE 1000 ISLANDS

TRANSPORTATION SERVICES

North:



Legend:

Notes:

- 1) All drawings, specifications and related documents are the copyright property of the City of Brockville and must be returned upon request.
- 2) Reproduction of drawings, specifications, and related documents in part or whole is forbidden without the City of Brockville's written permission.
- 3) Drawings are provided for information only and are not to be scaled.

DRAWING NAME

SCACE AVENUE PARKING BY-LAW  
AMENDMENT APPENDIX 'A'

Rev.	Date	Comments
1	APR 12/18	-

Drawn By:	JPB
Date:	April 12, 2018

April 3, 2018

**REPORT TO FINANCE, ADMINISTRATION, OPERATIONS COMMITTEE – APRIL 17,  
2018**

**2018-043-04  
WATER & WASTEWATER  
SYSTEMS QUARTERLY REPORT  
(JAN. – MAR. 2018)**

**PETER RAABE, P. ENG.  
DIRECTOR OF ENVIRONMENTAL SERVICES  
ED MALCOMMSON  
SUPERVISOR – WASTEWATER SYSTEMS  
DON RICHARDS  
SUPERVISOR – WATER SYSTEMS**

**RECOMMENDED**

THAT Report 2018-043-04 Water & Wastewater Systems Quarterly Report (Jan. – Mar. 2018) be received for information purposes.

**PURPOSE**

This report covers the months of January, February and March 2018. The intent of the report is to keep the Committee, Council, and the public current with performance and major operational aspects of the Water Treatment Plant, Water Distribution System, Water Pollution Control Centre (wastewater treatment system), and Wastewater Collection System, including any notable highlights, MOECC inspections and adverse conditions.

**BACKGROUND**

This report is submitted quarterly, and represents the first quarter of 2018.

**ANALYSIS/OPTIONS**

**A. WATER TREATMENT PLANT AND WATER DISTRIBUTION SYSTEM**

The Brockville Drinking Water System 2017 Annual Water Quality Report was approved by Council, submitted to the Medical Officer of Health, and Elizabethtown-Kitley Township and posted on the City's website.

City continues to be in compliance with the Water Treatment Plant's Municipal Drinking Water Licence and Drinking Water Works Permit, in addition to the Ontario Safe Drinking Water Act and Regulations. Please refer to Attachment #1 – Brockville Drinking Water System Performance Assessment Report to review the treatment and bacteriological sampling results.

Adverse Water Quality Incidents: No incidents to report

2018-043-04

**Water & Wastewater Systems Quarterly Report (Jan. – Mar. 2018)****Page 2****Items of Note:****1. Flows - Water Treatment Plant**January

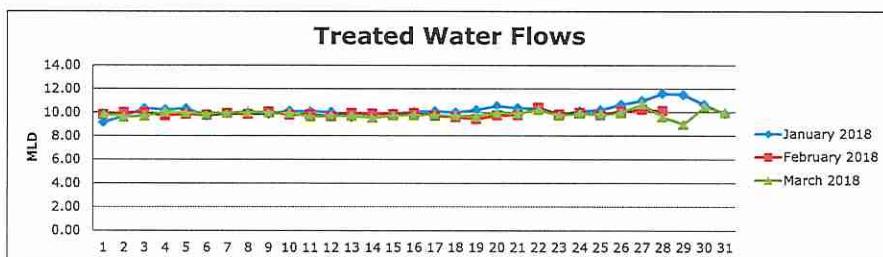
Total Volume Treated: 315.650 ML  
 Average Daily Flow: 10.180 ML/d  
 Average FI2 Residuals: 0.55 mg/l  
 Distribution Free Cl2 Res: Min 0.91, Max 2.10, Avg 1.60 mg/l

February

Total Volume Treated: 277.177 ML  
 Average Daily Flow: 9.900 ML/d  
 Average FI2 Residuals: 0.49 mg/l  
 Distribution Free Cl2 Res: Min 1.11, Max 1.87, Avg 1.51 mg/l

March

Total Volume Treated: 305.794 ML  
 Average Daily Flow: 9.864 ML/d  
 Average FI2 Residuals: 0.61 mg/l  
 Distribution Free Cl2 Res: Min 1.00, Max 2.00, Avg 1.57 mg/l

**2. Main Treatment Plant**

- All uninterruptible power supply units replaced on programmable logic controllers
- Installation of voltage optimization unit “Harmonizer” Legend Power in progress (Capital)
- Flash mixer pump was leaking - pump replaced
- Coagulant injection quill inspected and cleaned
- Repairs completed on chlorinator discharge header
- Backwash wastewater residual management upgrades - engineering completed with tender closing on April 26, 2018
- Replaced reservoir chlorine analyzer

**3. Booster Stations and Parkedale Reservoir:**

- First Avenue pump maintenance in progress (Capital)

2018-043-04

## Water &amp; Wastewater Systems Quarterly Report (Jan. – Mar. 2018)

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**Flows - Parkedale Reservoir****January**

Total Flow Zone 2: 171.931 ML

Average Daily Flow: 5.546 ML/d

**February**

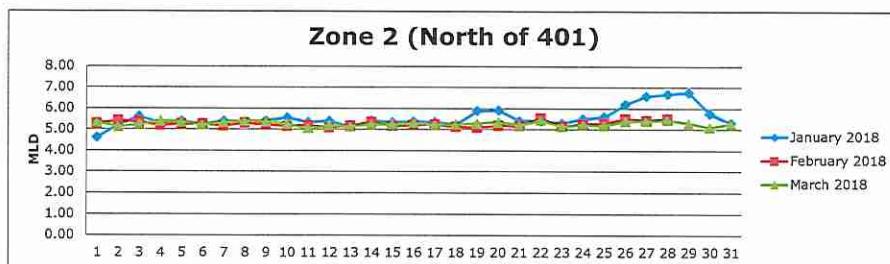
Total Flow Zone 2: 147.759 ML

Average Daily Flow: 5.277 ML/d

**March**

Total Flow Zone 2: 163.718 ML

Average Daily Flow: 5.281 ML/d

**Flows – First Avenue Booster Station****January**

Total Flow Zone 3: 0.872 ML

Average Daily Flow: 0.028 ML/d

**February**

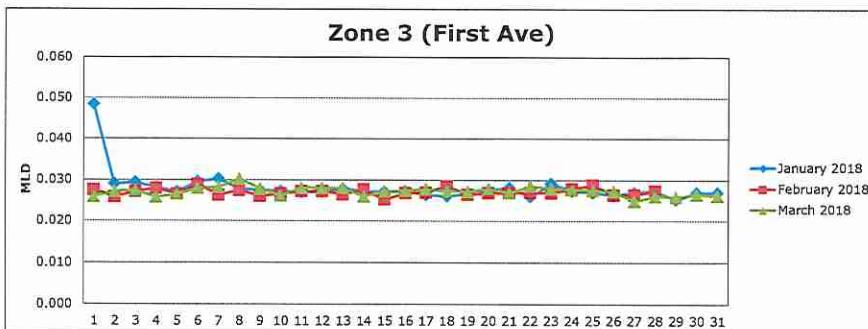
Total Flow Zone 3: 0.759 ML

Average Daily Flow: 0.027 ML/d

**March**

Total Flow Zone 3: 0.844 ML

Average Daily Flow: 0.027 ML/d



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**Water & Wastewater Systems Quarterly Report (Jan. – Mar. 2018)****Page 4**

4. Filters:
  - Filter media samples sent to Continental Carbon
5. Overhead Tank:
  - Mixer failure – unit is scheduled for replacement in early spring
6. Low Lift Pump Station:
  - Installation and commissioning of gas heating conversion completed (Capital)
7. Drinking Water Quality Management System:
  - Annual risk assessment completed
  - External Audit completed – waiting on report
  - Internal Audit completed (see Attachment #2)
8. MOECC Inspections:
  - No inspections scheduled
9. Regulatory Updates:
  - No items to report
10. Regulatory Sampling:
  - All regulatory weekly bacti sampling for Brockville and Elizabethtown-Kitley completed
  - All regulatory quarterly sampling for THM's Nitrate, Nitrite for Brockville and Elizabethtown-Kitley completed
  - Regulatory lead sampling completed for Brockville and Elizabethtown-Kitley
11. Trunk Water Distribution:
  - No items to report
12. Elizabethtown-Kitley Distribution:
  - Replaced heater at Lily Bay Booster Station
  - Problem with communications line to Lily Bay booster station – Bell Canada resolved issue

**Flows - Elizabethtown-Kitley****January**

Total flow: 3.104 ML  
Average daily flow: 0.100 ML/d

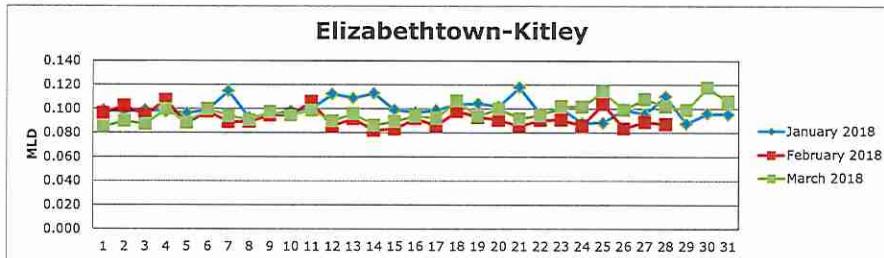
**February**

Total flow: 2.585 ML  
Average daily flow: 0.092 ML/d

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**Water & Wastewater Systems Quarterly Report (Jan. – Mar. 2018)****Page 5****March**

Total flow: 3.014 ML  
 Average daily flow: 0.097 ML/d

**13. Local Water Distribution:**

- Service Calls

**January (total 35 service calls)**

- 0 bleed valves
- 12 curb stop repairs
- 1 Fire Dispatch
- 0 general inquiries
- 6 hydrant repairs
- 4 other inquiries
- 2 valve repairs
- 2 water main break inquiries
- 2 water meter/inside valve leaks
- 6 water quality complaints (dirty water/low pressure)

**February (total 16 service calls)**

- 0 bleed valve
- 6 curb stop repairs
- 0 Fire Dispatch
- 1 general inquiry
- 4 hydrant repairs
- 1 other inquiry
- 0 valve repairs
- 0 water main breaks
- 0 water meter/inside valve leaks
- 4 water quality complaints (dirty water/low pressure/no water)

**March (total 27 service calls)**

- 0 bleed valves
- 18 curb stop repairs
- 1 Fire Dispatch
- 1 general inquiry
- 1 hydrant repair

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**Water & Wastewater Systems Quarterly Report (Jan. – Mar. 2018)****Page 6**

- 2 other inquiries
- 1 valve repair
- 1 water main break
- 0 water meter/inside valve leak
- 2 water quality complaints (dirty water/low pressure/no water)

- Watermain Breaks:

January

- Glengarry Road – 150 mm CI shear
- Cowan Avenue – 100 mm CI shear
- Laurier and Peden Boulevard – 150 mm CI shear

February

- No breaks to report

March

- No breaks to report

- Flushing Program:

- No flushing scheduled

- Service Repairs/Replacement:

- Broken service line Raxx building on Chelsea Street – service isolated
- Broken service line 3 Apple Street – service isolated
- Frozen service 47 Country Club Place

- Valves/Hydrant Inspection/Leak Detection:

- No hydrant inspections conducted

- Capital Projects WD:

- Bartholomew Street – new watermain disinfected and commissioned
- Preliminary project planning for Byng Avenue reconstruction

## **B. WASTEWATER TREATMENT PLANT AND COLLECTION SYSTEM**

The 2017 WPCC Annual Summary Report for Council was approved by Council and submitted to the MOECC in March 2018. A copy was also posted on the City's website.

The plant is currently meeting or exceeding all MOECC effluent discharge requirements and the first quarter Effluent Acute Toxicity test was completed with 0% Rainbow Trout mortality and 0% Daphnia Magna mortality. MOECC Regulations regard ≤ 50% mortality to be a pass.

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**Water & Wastewater Systems Quarterly Report (Jan. – Mar. 2018)****Page 7**

Please refer to Attachment #3 – Brockville WPCC Sewage Plant Performance Assessment Report for all Operational Data for the quarter.

**Items of Note:****1. Main Plant:**

- Primary Clarifiers 3 and 4 are online
- Primary Clarifiers 1 and 2 are currently not in use (on standby)
- Secondary Clarifiers 1 and 2 are online
- Secondary Clarifier 3 is currently not in use (on standby)
- 2017 4<sup>th</sup> Quarter Federal Wastewater Systems Effluent Regulations (WSER) Report submitted to Environment Canada
- EVB Engineering has been contracted for engineering services regarding aeration tank repairs that will be completed in the spring (Capital)
- Semi-annual diesel generator inspection completed
- Annual lifting device inspections completed
- Semi-annual gas monitoring equipment and calibrations completed
- Annual vibration analysis completed on both digester mixers
- Aeration tank modulating actuators rebuilt and recalibrated
- New refrigerated sampler purchased for head of the primary clarifiers (Capital)
- Contractor working on gantry crane fabrication for UV Building (Capital)
- Replacement and spare parts for UV disinfection system ordered and received (Capital)
- Parts ordered and received for RAS pumps (4) Rebuild (Capital)
- Parts ordered for WAS pumps (2) Rebuild (Capital)
- New grinder ordered for septage receiving station (Capital)
- Parts ordered for septage grinder rebuild (Capital)
- New replacement liner ordered for Screen and Degrit separator (Capital)
- Purchased replacement Primary, Secondary and Historian servers – ISI Controls to commission (Capital)
- Parts ordered for digester sludge feed grinder rebuild (Capital)
- Parts ordered and received for the dewatering makeup polymer pumps (Capital)
- New Dewatering primary air compressor ordered (Capital)
- Parts ordered for gas booster rebuild (Capital)
- WPCC Staff responded to one (1) call-in related to high rain and high flow conditions
- WPCC Staff responded to twelve (12) call-ins related to mechanical/process issues
- WPCC Staff responded to two (2) call-ins related to electrical/control issues

2018-043-04

**Water & Wastewater Systems Quarterly Report (Jan. – Mar. 2018)****Page 8****2. Main Pumping Station:**

- Bypasses:
  - On January 12, 2018 there was a 13 hour and 35 minutes bypass at the Main Pumping Station due to heavy precipitation/snow melt. Approximate volume of the bypass was 38,910 m<sup>3</sup>. MOECC was notified of the event. Chlorination was established and samples taken.
- The 8" bypass valve is leaking and can't be taken out of service for repair without incurring a bypass
- The City has received confirmation from CWWF that funding for the design of the Main Pumping Station has been approved
- City staff along with Pure Technologies continuing to plan for the forcemain condition assessment - City staff are working on the logistics of facilitating the assessment (Capital)
- Pump #2 Variable Frequency Drive (VFD) was replaced (Capital)
- Annual pump vibration analysis completed on all three pumps. Pump #2 not recommended for long term use

**3. Pumping Stations:**

- WPCC Staff responded to ten (10) mechanical/equipment and communication problems
- New Flygt pumps installed in Georgina Street pumping station (Capital)
- Meltric electrical emergency generator plug upgrades nearing completion (Capital)
- Wet well cleanouts completed at Bayview, West End, Georgina Street and Central pumping stations
- New communication equipment installed and commissioned in Elizabeth Street and Chelsea Street pumping stations (Capital)
- Four (4) new atmospheric testers complete with accessories were purchased for confined and restricted space air monitoring (Capital)
- Two (2) new pumps and motors ordered for Broome Park Pumping Station (Capital)
- Two (2) new pumps and motors ordered for Chelsea Street Pumping Station (Capital)

**4. Power Outages:**

- There was one (1) power outage - no issues to report

**5. Wastewater Collection System:**

- 44 blocked sewer/camera inspections
- 1 sanitary sewer lateral dig-up and repair
- 0 blocked mains
- Contract 2018-21 Wastewater Main Line Cleaning was awarded to L. A. Knapp Inc.

2018-043-04

**Water & Wastewater Systems Quarterly Report (Jan. – Mar. 2018)****Page 9****POLICY IMPLICATIONS**

No policy implications at this time.

**FINANCIAL CONSIDERATIONS**

No financial considerations at this time.

**CONCLUSION**

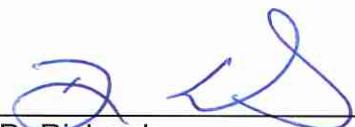
It is recommended that Council receive the report for information purposes.



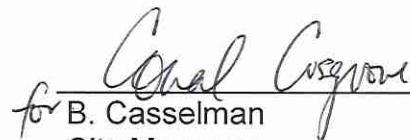
P. Raabe, P. Eng.  
Director of Environmental Services



E. Malcomson  
Supervisor – Wastewater Systems



D. Richards  
Supervisor - Water Systems



B. Casselman  
City Manager

**BROCKVILLE DRINKING WATER SYSTEM  
PERFORMANCE ASSESSMENT REPORT**

Month 2018	CITY OF BROCKVILLE				ELIZABETHTOWN-KITLEY		BACTERIOLOGICAL SAMPLING		
	Total Volume Treated (ML)	Avg. Daily Flow (ML/d)	Avg. F12 Residual (mg/L)	WDS Avg. FCR (mg/L)	Total Flow (ML)	Avg. Daily Flow (ML/d)	BROCKVILLE WDS		
							EC	TC	HPC
JAN	315.65	10.18	0.55	1.60	3.10	0.10	45 45 out of 45 safe	45 45 out of 45 safe	20 20 out of 20 safe
FEB	277.18	9.90	0.49	1.51	2.59	0.09	36 36 out of 36 safe	36 36 out of 36 safe	16 16 out of 16 safe
MAR	305.79	9.86	0.61	1.57	3.01	0.10	36 36 out of 36 safe	36 36 out of 36 safe	16 16 out of 16 safe

FCR - Free Chlorine Residual

WDS - Water Distribution System

EC - E. coli

TC - Total Coliform

HPC - Heterotrophic Plate Count

ML - Million Litres

ATTACHMENT #2

# Internal Audit Report

For the period of:

May 3, 2017 to March 8, 2018

For:

Brockville (152-401)

And

Elizabethtown-Kitley (257-401)

Water Systems

Facilitated by:



with City of Brockville's Water Systems Division team

Audit dates: March 7-8, 2018

## 1.0 Introduction

Brockville and Elizabethtown-Kitley water systems' internal audit was performed as a full-scope quality management system (QMS) internal audit by an internal audit team comprised of one lead auditor (Brigitte Roth of Acclaims Environmental Inc.) and 14 City of Brockville staff members, as part of a facilitated internal audit session.

The internal audit team performed the audit at City of Brockville's Memorial Civic Centre located at 100 Magedoma Blvd. in Brockville. The reason for the selected location was to accommodate a large staff training and facilitation session for the 2018 internal audit. Key documents, records and software programs were available at the audit site through staff logins and projection to view demonstrations.

The process and program audits were completed March 7-8, 2018. Process audits examine the resources (equipment, materials and people) used to transform the inputs into outputs, the methods (procedures and instructions) followed and the measures collected to determine process performance. Process audits check the adequacy and effectiveness of the process controls established by procedures, work instructions, training and process specifications.

Operational Plans for Brockville's and Elizabethtown-Kitley's drinking water systems were reviewed entirely for conformity to the Drinking Water Quality Management Standard (DWQMS) version 2.0 that was released in April 2017.

The last internal audit was conducted on May 3, 2017.

Results of previous **internal and external audits** were reviewed and considered during this internal audit.

## 1.1 Objectives and Scope

The objective of the internal audit is to confirm conformity with the DWQMS and the drinking water systems' planned processes and programs. Additionally, auditors identified areas of potential improvement of the quality management system (QMS) and the drinking water system (DWS) through process auditing.

The list of all auditing criteria is included in Appendix "A" – Audit Criteria & Schedule. The audit period focused on the period between May 3, 2017 and March 8, 2018.

## 1.2 Methodology

The audit was conducted in accordance with CAN/CSA-ISO 19011:12 – Guidelines for auditing management systems. Table 1 presents the schedule of tasks completed in the performance of the internal audit, with additional details provided in Appendix "A" – Audit Criteria & Schedule. Appendix "B" – Interviews, Documents and Records lists persons interviewed, along with documents and processes reviewed. Appendix "C" – Interview Checklists includes the checklists used to conduct the audit.

### Table 1

#### SCHEDULE OF BROCKVILLE AND ELIZABETHTOWN-KITLEY INTERNAL AUDIT

Task	Date
Internal Audit Plan	March 7, 2017
Opening Meeting	March 7, 2017
Review of site documentation and records – during each field audit	March 7-8, 2018

## ATTACHMENT #2

2018 Internal Audit

Task	Date
Site tour of facility – during each field audit	NA
Interviews with pertinent staff members – during each field audit	March 7-8, 2018
Closing Meeting	March 8, 2018

**1.3 Audit Program Monitoring and Reviewing**

The implementation of the audit program was monitored and, at appropriate intervals, reviewed to assess whether the objectives have been met and to identify opportunities for improvement. The results of this review will be reported to top management.

Performance indicators were used to monitor characteristics such as:

- the ability of the audit teams to implement the audit plan,
- conformity with audit program, schedules and audit objectives, and
- feedback from top management, auditees, auditors and other interested parties.

The audit program review considered:

- a) results and trends from monitoring,
- b) conformity with procedures,
- c) evolving needs and expectations of staff involved,
- d) audit program records,
- e) alternative or new auditing practices,
- f) effectiveness of the measures to address the risks associated with the audit program, and
- g) confidentiality and information security issues relating to the audit program.

Corrective actions and opportunities for improvement from the results of audit program reviews are included in the internal audit report's section 2.0 Audit Findings, under the section for Internal Audits.

**1.4 Auditors**

The Lead Auditor was Brigitte Roth, who has extensive auditing experience and is a certified auditor with the Environmental Careers Organization of Canada (ECO Canada). The Internal Audit Team is described in the introductory paragraphs of this section and include staff from the City of Brockville's Water division. Records of lead auditor training are included in Appendix "D" – Auditor Training Certificates.

**1.5 Sampling**

In order to audit within time constraints, audits are always based upon a sampling of processes, systems, operations and documents. Not every single document, operation, system, process, or piece of information relating to management system performance can be reviewed. The size of the sample selected by the auditors are appropriate to the size and scale of the operation and information available. Objective evidence collected by the auditors is based upon the sampling.

**1.6 Limiting Conditions**

The conclusions presented in the report represent the auditors' professional opinions, in light of the terms of reference, scope of work, and any limiting conditions noted in the audit report.

The conclusions presented are based solely on information obtained prior to and during the days of the audit. Any pertinent information not provided to the auditors by the end of the closing meeting on March 8, 2018 will not be taken into consideration of the audit report.

## 2.0 Introduction

### 2.1 Positive Findings

The following positive audit findings were noted during the audit by the audit team:

#### ***Customer Complaints***

- The City's "SysAid" system works well, and is a great communication tool with time, date on incident recorded and generates reports.
- Knowledgeable staff aware of SOP 202 and where information is located.

#### ***Flushing & Hydrant Inspection***

- Brockville targets 100% of the City's distribution system every year.
- "Inframap" GIS software program is a great, reliable tool for recording hydrant inspection and flushing program data with daily status updates.
- Knowledgeable staff overseeing the program with detailed awareness of impact of work on the quality policy.

#### ***Health & Safety***

- Inspections triggered through Work Tech to ensure none are missed.
- Good communication with safety concerns to representative.
- Verbally confirmed monthly safety inspections are being completed.

#### ***QMS Representative's Programs***

- QMS Representative is well-organized with past years' QMS Records.
- "DWQMS Rep Annual Checklist" lays out all annual QMS requirements (ensuring nothing is missed).
- Does more than what the DWQMS and legislation requires.
- Strong infrastructure planning and capital budget records and reports.
- Excellent and educational information provided to top management and council.

#### ***New Watermain Commissioning***

- Knowledgeable staff who are very familiar with procedures.
- Adapted MOECC's Watermain Disinfection Procedure before it was required.

#### ***Treatment – Maintenance***

- Work Tech and record-keeping are well-executed and maintained.
- Knowledgeable and competent staff are involved.
- Redundant systems (e.g. back-up generator) is in place.

#### ***Treatment – Sampling, Testing and Monitoring***

- Knowledgeable and competent staff.
- Well-organized operation.
- Redundant systems in place with paper trail, multiple levels of review: Chief Operator, Supervisor, Council.

## 2.2 Non-Conformities

One non-conformity was noted during this audit that relates to a "preventative non-compliance" (using City of Brockville's corrective action system terminology). A City of Brockville Preventative Non-Compliance (Pvcp) form will be prepared to address the identified potential noncompliance issue:

## ATTACHMENT #2

2018 Internal Audit

*The City of Brockville is committed to completing flushing of 100% of the City's distribution system every year.*

- The City of Brockville did not complete its target of flushing 100% of the distribution system in 2017.

## 2.3 Opportunities for Improvement

The following is a list of follow-up items identified by staff through internal audit interviews on the ways in which the City of Brockville can potentially improve. Consideration should be given to the following:

### ***Customer Complaints***

- "SysAid" or a similar system should be made available and used by other City departments.
- Completion of documentation in a timely manner could be improved.

### ***Flushing & Hydrant Inspection***

- Due to the heavy and physically demanding nature of the work related to this activity, staff are prone to injuries. Consideration should be given to rotating between 2-person crews so that no individual is burdened with the full program's physical demands.
- Consider broadening the notices regarding neighbourhoods impacted by flushing activities using social media and link to updates online with maps (or description of locations) and targeted schedules.

### ***Health & Safety***

- Revise 1304 to exclude outside H&S member.
- Listed trucks for first aid kits no longer exist – either revise 1305 or change to general truck reference.
- Bring forward ideas for safety checklist for pressure testing to H&S Representative.
- Make emergency shower outside accessible by fob/keycard. If maintaining current lock & key system, should add in the procedure that staff unlock the shower door before going into the chlorine room.

### ***Internal Audit***

- Identify targeted processes and programs to audit in advance and determine which 4-person auditor / auditee teams could be set-up to ensure that all participants are acting as either auditor or auditee.
- Provide a high-level overview of the Municipal Drinking Water Licensing Program as part of the next facilitated internal audit so that participants better understand the reason behind requirements.
- The lead auditor should demonstrate how a process or program audit should be carried out using the turtle diagram so that participants will be more comfortable using that tool when it is time to audit.
- Consider cross-referencing the turtle diagram's series of questions along with the tabular format checklist to ensure that both options contain the same questions (it appears there are differences).
- The audit plan activity was confusing for participants who'd never participated in an audit before. This activity could be delayed to a time when auditors know what processes or programs they'll be responsible to audit and then request that the audit plan segment is completed. New auditors can use the standard checklists to preview and determine items likely to be included in the scope of their audit.
- The City of Brockville's procedure for internal auditing should include a process flow diagram for what forms are completed when in the audit process.

### ***New Watermain Commissioning***

- Additional training and details in the related SOP would be beneficial.
- Records should also include job names (additional to job dates) into the file for consideration of future staff attempts in locating records.
- A safety checklist would be beneficial.

## ATTACHMENT #2

2018 Internal Audit

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- Need to clarify who is main contact, roles / responsibilities, and who to contact in event of a problem.
- Communications between Engineering, the contractor and water staff could be improved.

***QMS Representative's Programs*** (as noted by all staff in the full Operational Plan reviews)

- Consider adding a reference in Element 5's procedure regarding the deletion of electronic documents and records that exceed their retention times.
- Consider adding Jill and Kathy as back-ups to WQA's in personnel coverage (Element 11) procedure.
- Consider describing the Owner / Operating Authority roles and responsibilities regarding emergency management (Element 18) procedure.

***Treatment – Maintenance***

- The facility space for the workshop is small.

***Treatment – Sampling, Testing and Monitoring***

- SOP 204 should move to 1400's.

## 3.0 Conclusions

The internal audit performed at the City of Brockville for the Brockville and Elizabethtown-Kitley drinking water systems demonstrated that it is committed to ongoing maintenance and continual improvement of its quality management system and drinking water systems it oversees. While a non-conformity and opportunities for improvement were cited during the audit, they do not undermine the positive programs and attitudes already in place among Brockville's Operating Authority staff.



Brigitte Roth, BES, EP(EMSLA)

**ATTACHMENT #2**

2018 Internal Audit

## **Appendix “A” – Audit Criteria & Schedule**

## Appendix "B" – Documents and Records

The list of documents and records reviewed and observations made during the audit include:

- City of Brockville Water Division staff Interviews March 7-8, 2018
  - Andrew Christophersen, Water Systems Operator
  - Cameron Deir, Water Systems Operator
  - Clay Sluytman, Water Systems Operator
  - Don Richards, Supervisor Water Systems
  - Dwayne Mallory, Water Systems Operator
  - Doug Jenson, Water Systems Operator
  - Greg Grant, Water Systems Operator
  - Jason Barlow, Chief Operator
  - Logan Cuthbert, Water Systems Operator
- 2017 Internal Audit Report, dated May 11, 2017
- Operational Plan – City of Brockville Drinking Water System Owner
- Operational Plan – Township of Elizabethtown-Kitley Owner
- Distribution SOPs
- Treatment SOPs
- Quality Policy
- Owner Commitment and Endorsement
- Appointment of QMS Representative
- Documents and Records Lists
- Drinking Water System Descriptions
- Risk Assessment Outcomes
- Compliance 365 database for Training and Certification Records
- Supplies and Services Agreements
- Supplier Evaluations
- Capital plans for both Brockville and Elizabethtown-Kitley systems
- Infrastructure priority listings
- Long-term forecast (as presented to council)
- 10-year capital plan
- WorkTech Maintenance program
- Emergency Training and Test exercise – June 2017
- Management Review Meeting Minutes dated June 1, 2017 and December 7, 2017
- Reports / Presentations to Owner
- Corrective action reports



ATTACHMENT #2

# INTERNAL AUDIT SUMMARY & CHECKLIST

## **Appendix "C" – Interview Checklists**

Date:	Auditor(s):
Process or Program:	
<input type="checkbox"/> Mentioned opportunity to provide additional info, if they think of it later?	

**Strengths:**

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**Opportunities for Improvement:**

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OK to link auditee name to OFI's?

**Non-Conformities:**

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**ATTACHMENT #2**

# INTERNAL AUDIT SUMMARY & CHECKLIST

Date:	Auditor(s):
Process or Program:	

### **Audit Notes:**



## ATTACHMENT #2

# INTERNAL AUDIT SUMMARY & CHECKLIST

DWQMS Element	Question	Comments	Status <sup>1</sup>				
			C	NC	STR	OFI	NA
<b>2</b> Policy	Aware of Quality Policy? (can describe how job impacts policy)						
<b>3</b> Commitment	Aware of legal requirements (as they apply to their job)?						
	Have adequate resources? (e.g. staff, equipment, supplies)						
<b>4</b> QMS Rep	Can name the QMS Rep?						
<b>5</b> Doc & Records Control	Can demonstrate how to access documents? (e.g. SOPs, forms, WO's, standards, guidelines)						
	Can describe records produced and where they are filed? Are records legible and complete?						
	Documents and records are kept in accordance w/ QMS 05?						
<b>7/8</b> Risk Assess. & Risk Outcomes	Aware of critical control points? (e.g. primary / secondary disinfection & backflow prev.)						
	Aware of hazardous events / risks (what things can go wrong)?						
	Understands actions to take when things go wrong? (e.g. notifications, documentation)						
<b>9</b> Org. Structure	Can describe related roles & responsibilities?						
	Understands who is part of top management? Who is owner?						
<b>10</b> Competencies	Can describe competencies required for staff involved?						
	Understands how to develop and maintain competencies required?						
	Can describe how job affects drinking water quantity /quality?						
<b>11</b> Personnel Coverage	How are staff scheduled to ensure we meet req'd coverage?						
<b>12</b> Communications	Can describe how communications take place? (e.g. with owner, with staff, with suppliers, with public)						
<b>13</b> Essential Supplies, Services	Can describe how supplies and services are made available?						
	Can describe what happens if supply / service is not available?						
	Do special requirements exist for supplies / services? Is evidence available that these meet reqts?						

<sup>1</sup> C – conforming; NC – non-conforming; STR – strength; OFI – opportunity for improvement; NA – not applicable



## ATTACHMENT #2

# INTERNAL AUDIT SUMMARY & CHECKLIST

DWQMS Element	Question	Comments	Status <sup>1</sup>				
			C	NC	STR	OFI	NA
<b>14</b> Review / Provision of Infrastructure	Can describe the condition of the process /program infrastructure?						
	Can describe communications related to infrastructure issues?						
<b>15</b> Infras., Maintce., Rehab., Renewal	Can describe the maintenance, rehabilitation, renewal program?						
	Monitors program effectiveness for maint., rehab., renewal?						
<b>16</b> Sampling, Testing, Monitoring	Can describe sampling, testing, monitoring activities?						
	Can describe how results are recorded? Is info reviewed and analyzed for meeting req'ts?						
	Can describe how and to whom results are communicated? Verbally? In writing?						
<b>17</b> Instrument Calibration & Maint.	Can describe calibration and maintenance requirements for measurement and recording equipment?						
<b>18</b> Emergency Management	Aware of potential emergency situations or service interruptions?						
	Understands the process for and their role in emergency response and recovery?						
	Received emergency response training?						
	Participates in emergency test exercises?						
	Can access emergency contacts?						
<b>19</b> Internal Audits	Is the previous internal and external audit result considered for this internal audit?						
	Aware of how corrective actions are identified and initiated?						
<b>21</b> Continual Improvement	Can describe process improvements considered or implemented in the last year?						
	Was involved in investigating causes of non-conformities (e.g. issues)?						
	Any other suggestions for process /program improvement?						

[DWQMS element 20 is for top management and QMS Rep only].

ATTACHMENT #2  
**INTERNAL PROCESS AUDIT CHECKSHEET**

<b>Process:</b>	<b>Auditor(s):</b>	<b>Audit Date:</b>
<b>1.0 Adequate Resources?</b> (s. 9, 11, 13, 14-15) 1.1 What are the different roles and responsibilities involved? 1.2 What are the resources required to carry out this/these tasks? Such as: a. Staff b. Supplies c. Equipment d. Facilities / space 1.3 Are there enough resources? 1.4 Are there special requirements for the resources? a. How do we ensure the quality of supplies / equipment?	<b>4.0 Process Under Control?</b> (s. 5, 17) 4.1 Do you rely on documents to provide details of what tasks are required? a. SOPs? Forms? WO's? MRF's? Standards or Guidelines? b. Are they current / legible / identifiable / retrievable / stored / protected / retained? 4.2 Are documents disposed of? Why? When? 4.3 Does the work area appear safe, organized and clean?	<b>6.0 Who?</b> (s. 2, 3-4, 10) 6.1 What are the competencies for these duties? 6.2 What types of activities can develop competencies / experience? 6.3 Do staff involved know how their duties affect drinking water quantity / quality? 6.4 Do staff know what the quality policy states? 6.5 How do staff know what legal requirements apply to their tasks?
<b>2.0 Process Input?</b> 2.1 What are your process inputs? a. Legal/other requirements b. Work orders or maintenance requests c. Internal or external customers 2.2 Is there a "previous process step" that feeds into this one? 2.3 Are you happy with the supplies / data / information provided by the previous step?	4.4 If resources include measurement and recording equipment, is this equipment calibrated and maintained? How?	<b>7.0 Output?</b> (s. 5) 7.1 What is the output of your process? 7.2 What records do you produce? a. Are they legible / identifiable / retrievable / stored / protected / retained? b. Are they complete? 7.3 Are records disposed of? Why? When?
<b>3.0 Measured?</b> (s. 8, 12, 16) 3.1 What things do you check, sample, monitor or test? 3.2 Where do you record results? Are records complete? 3.3 Is the information reviewed, analyzed or checked for effectiveness (in meeting requirements)? 3.4 Do you communicate results? To whom? Verbally? In Writing?	<b>5.0 What If Out-of-Control?</b> (s. 7-8, 12, 18) 5.1 What types of things can go wrong? (out-of-ordinary / emergencies / service interruptions) 5.2 What actions are taken when they do go wrong? 5.3 What notifications? To whom? 5.4 What do you document? Where? 5.5 Is there an emergency contact list? Is it maintained?	<b>8.0 Stakeholder Satisfaction?</b> (s. 12, 20) 8.1 Are relevant stakeholders satisfied with this work? a. internal / external customers, b. government agencies, c. public, d. owner, e. top management 8.2 How do you know?
<b>Process:</b>	<b>Auditor(s):</b>	<b>Audit Date:</b>

ATTACHMENT #2  
**INTERNAL PROCESS AUDIT CHECKSHEET**

<b>1.0 Adequate Resources?</b> (s. 9, 11, 13, 14-15)	<b>4.0 Process Under Control?</b> (s. 5, 17)	<b>6.0 Who?</b> (s. 2, 3-4, 10)
<b>2.0 Process Input?</b>		<b>7.0 Output?</b> (s. 5)
<b>3.0 Measured?</b> (s. 8, 12, 16)	<b>5.0 What If Out-of-Control?</b> (s. 7-8, 12, 18)	<b>8.0 Stakeholder Satisfaction?</b> (s. 12, 20)  <b>9.0 Evidence of Continual Improvement?</b> (s. 21)

**ATTACHMENT #2**

## **Appendix “D” – Lead Auditor Training Certificates**



ATTACHMENT #3

**BROCKVILLE WATER POLLUTION CONTROL CENTRE  
SEWAGE PLANT PERFORMANCE ASSESSMENT REPORT**

MUNICIPALITY:	BROCKVILLE	DESCRIPTION:	A Secondary Treatment Facility, complete with two anaerobic digesters, two centrifuges for sludge thickening and two RDT's for sludge co-thickening and utilizing Alum for phosphorus removal and UV for effluent disinfection	YEAR:	2017/2018
PROJECT:	BROCKVILLE			WATER COURSE:	ST. LAWRENCE RIVER
WORKS NUMBER:	120000122			DESIGN CAPACITY:	21,800 x 1000m <sup>3</sup> /day
				PEAK DESIGN CAPACITY:	62,500 X 1000m <sup>3</sup> /day

MONTH	FLOWS			BOD/CBOD			SUSPENDED SOLIDS				PHOSPHORUS				TOTAL AMMONIA NITROGEN		E. COLI
	TOTAL FLOW 1000M <sup>3</sup>	AVG DAY FLOW 1000M <sup>3</sup>	MAX DAY FLOW 1000M <sup>3</sup>	Avg Raw BOD (mg/L)	Avg Eff CBOD (mg/L)	Total Loading Eff CBOD (kg/day)	Avg Raw SS (mg/L)	Avg Eff SS (mg/L)	Total Loading Eff SS (kg/day)	Percent Removal	Avg Raw Phos. (mg/L)	Avg Eff Phos. (mg/L)	Total Loading Eff Phos. (kg/day)	Percent Removal	Avg Eff Tan (mg/L)	Total Loading Eff Tan (kg/day)	E. Coli (Org/100 ml) (GEOMEAN)
MAR 18	582.46	18.789	25,796	141.00	4.00	75.16	147.00	8.00	150.31	94.6	2.49	0.45	8.46	81.9	1.27	23.86	1
FEB 18	569.52	20.340	42,628	139.00	4.00	81.36	153.00	8.00	162.72	94.8	2.54	0.33	6.71	87.0	1.48	30.10	2
JAN 18	588.18	18.973	38,692	138.00	6.00	113.84	128.00	8.00	151.78	93.8	2.46	0.32	6.07	87.0	4.20	79.69	1
DEC 17	471.55	15.211	20,726	138.00	5.00	76.05	160.00	10.00	152.11	93.8	2.69	0.41	6.24	84.8	7.59	115.45	1
NOV 17	651.87	21.729	32,760	142.00	5.00	108.65	152.00	12.00	260.75	92.1	2.66	0.55	11.95	79.3	4.96	107.78	3
OCT 17	470.22	15.168	34,800	419.00	4.00	60.67	491.00	8.00	121.34	98.4	3.91	0.52	7.89	86.7	3.76	57.03	2
SEP 17	422.15	14.072	17,586	309.00	4.00	56.29	410.00	8.00	112.58	98.0	3.68	0.52	7.32	85.9	2.67	37.57	1
AUG 17	564.61	18.213	23,393	244.44	3.78	68.85	290.33	8.11	147.71	97.2	3.01	0.54	9.84	82.1	1.84	33.51	1
JUL 17	678.60	21.890	47,039	154.50	4.22	92.38	176.40	7.55	165.49	95.7	2.28	0.57	12.48	75.0	4.56	99.82	4
JUN 17	595.82	19.851	26,400	187.44	3.56	70.71	217.56	5.78	114.80	97.3	3.00	0.47	9.33	84.3	5.83	115.79	4
MAY 17	864.87	27.899	51,513	165.00	3.27	91.23	206.45	8.00	223.19	96.1	2.17	0.32	8.93	85.3	3.10	86.49	5
APR 17	798.39	26.613	47,588	289.71	3.50	93.15	344.43	7.88	209.71	97.7	2.89	0.44	11.71	84.8	2.20	58.55	2
AVG		19.897		205.59	4.19	82.36	239.68	8.28	164.37	95.79	2.82	0.45	8.91	83.67	3.62	70.47	2
MAX		51.513	419.00	6.00	113.84	491.00	12.00	260.75	98.37	3.91	0.57	12.48		7.59	115.79		
Objective Limit						15.00		15.00				0.80		12.0 (Nov. 1 to Apr. 30) 8.0 (May 1 to Oct. 31)			100
Compliance Limit			21,800			25.00	545.00		25.00	545.00		1.00	21.80	18.0 (Nov. 1 to Apr. 30) 16.0 (May 1 to Oct. 31)	892 (Nov. 1 to Apr. 30) 349 (May 1 to Oct. 31)		200

MONTH	TOTAL LOADINGS		
	TOTAL RAW BOD (kg/day)	TOTAL RAW SS (kg/day)	TOTAL RAW PHOS. (kg/day)
MAR 18	2,649	2,762	47
FEB 18	2,827	3,112	52
JAN 18	2,618	2,429	47
DEC 17	2,099	2,434	41
NOV 17	3,086	3,303	58
OCT 17	6,355	7,447	59
SEP 17	4,348	5,770	52
AUG 17	4,452	5,288	55
JUL 17	3,382	3,861	50
JUN 17	3,723	4,321	60
MAY 17	4,603	5,760	61
APR 17	7,710	9,166	77
AVG	3,988	4,638	55
MAX	7,710	9,166	77

COMMENTS:

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April 3, 2018

**REPORT TO FINANCE, ADMIN. & OPERATIONS COMMITTEE – April 17, 2018**

**2018-044-04**

**SUPPLY & INSTALLATION OF  
HEAVY DUTY SWING SETS AND  
CAMEL BACK CLIMBERS**

**RUSS FRASER  
SUPERVISOR, PUBLIC WORKS/PARKS  
C.J. COSGROVE, P.ENG.  
DIRECTOR OF OPERATIONS**

**RECOMMENDED**

THAT the Tender from Henderson Recreation Equipment Limited, in the amount of forty two thousand, nine hundred and ninety five dollars and sixty three cents (\$42,995.63) for City of Brockville Contract 2018-26 for the *Supply and Installation of Heavy Duty Swing Sets and Camel Back Climbers*, be accepted; and

THAT the project be funded from the 2018 Parkland Equipment Program.

**PURPOSE**

To replace the existing 9 swing sets and 2 camel back climbers in various parks in the City with new units compliant with CSA Z614 standards, as approved in the 2018 Capital Budget, Parkland Equipment Program.

**BACKGROUND**

The existing swing sets and camel back climbers have been in service for approximately 50 years. The units have had numerous repairs and have been repainted numerous times over this time period. The new units will require less maintenance, as the swing sets are galvanized and the camel back climbers are powder coated. The replacement of the units would also make them compliant to the current CSA Standard Z614, which is the standard for public use play equipment for children (18 months to 12 years).

The locations for replacement are at the following locations:

St. Lawrence Park - 2 swing sets  
Brookview Park – 1 swing set  
Bramshot Park – 1 swing set  
Victoria Park – 1 swing set  
Butterfield Park – 1 swing set  
Little Fulford Park – 2 swing sets, 1 climber  
Davidson Park – 1 swing set, 1 climber

## ANALYSIS

The Tender was opened at 2:00 p.m., on April 2, 2018 with the following results:

Henderson Recreation Equipment Limited Price including HST: \$47,744.36  
Price after HST Rebate: \$42,995.63  
Operations Department Estimate: \$49,800.00

The new play equipment will be installed between September 24 and October 12, 2018.

## POLICY IMPLICATIONS

As per the Purchasing By-Law 090-2005, Council approval for this contract is required as only one bid was received.

## FINANCIAL ANALYSIS

Sufficient funding for the play equipment included in this contract is contained in the following Parkland Equipment Reserve Accounts:

01-5-709777-2010 - \$8,800 – St. Lawrence Park  
01-5-707777-2010 - \$41,000 – Community Parks

## CONCLUSION

THAT the City award Contract 2018–26 *Supply and Installation of Heavy Duty Swing Sets and Camel Back Climbers* to Henderson Recreation Equipment Limited.

  
\_\_\_\_\_  
C.J. Cosgrove, P.Eng

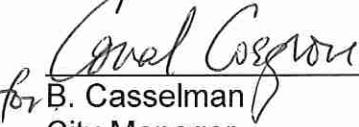
Director of Operations

  
\_\_\_\_\_  
Russ Fraser

Supervisor Public Works/Parks

  
\_\_\_\_\_  
D. Dick, CA, CPA

Director of Corporate Services

  
\_\_\_\_\_  
B. Casselman  
City Manager

April 6, 2018

**REPORT TO FINANCE, ADMIN. & OPERATIONS COMMITTEE – April 17, 2018**

**2018-045-04**

**NEW REFRIGERATION CONDENSER FOR MEMORIAL CENTRE**

**C.J. COSGROVE, P.ENG.  
DIRECTOR OF OPERATIONS**

**RECOMMENDED**

THAT Council authorize the purchase of a refrigeration condenser for the Brockville Memorial Civic Centre, model EVAPCO ECO-ATC 157A5 (90TR), from the single source Cimco Refrigeration, in the amount of \$115,000.00.

**PURPOSE**

This report recommends a supplier/contractor for the replacement of the refrigeration condenser at the Brockville Memorial Civic Centre.

**ANALYSIS**

The Building and Equipment Maintenance Program in the approved 2018 Capital Budget includes the replacement of the condenser. The condenser is an integral component of the ice refrigeration system. It changes the state of the ammonia gas to a liquid by extracting heat from the system and discharges the unwanted heat into the atmosphere. The refrigeration system cannot operate without the condenser unit.

The new condenser will provide significant operational benefits as follows:

- i) Increased capacity will allow for future increase in overall refrigeration capacity of approximately 18% and overall ice plant efficiency.
- ii) Cooling water requirement at outside temperature of -2C and below will be drastically reduced or eliminated.
- iii) The installation will include a glycol cooling loop that will eliminate the need for water, reducing hard water build-up in the compressor units and associated piping and water cooling circulation pump.
- iv) Lower operating pressure will aid in additional efficiencies
- v) The condenser design and cooling air flow will lower the risk of long term water leaks and fan freeze-ups
- vi) A total of four mechanical contractors were contacted – both local and regional – and three of the firms declined to provide a quote.
- vii) It is recommended that this be a single source purchase from Cimco

2018-045-04

Refrigeration Condenser for Memorial Centre

Page 2

- Refrigeration, a leading supplier in the ice refrigeration market. The entire system is Cimco and it is highly desirable to have compatible equipment.
- viii) The refrigeration system Life Cycle Replacement Plan includes the upgrade of the #2 existing 30hp compressor to a 50hp compressor. Replacing the existing size condenser with the recommended size unit will allow for the compressor upgrade to proceed without significant additional condenser cost.

## POLICY IMPLICATIONS

Purchasing By-Law 090-2005 requires Council approval for non-competitive purchases of this amount.

## FINANCIAL CONSIDERATIONS

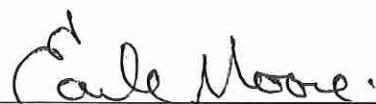
The 2018 Budget, Building and Equipment Maintenance Program has a total funding allocation, including both Arenas, in the amount of \$115,000 for this project. The total quotation, excluding HST, submitted by CIMCO Refrigeration is \$115,000. The full amount of HST is rebated to the City.

## CONCLUSION

The quotation from CIMCO Refrigeration for the replacement of the Refrigeration Condenser Model EVAPCO ECO-ATC 157A5 (90TR), at the Memorial Centre should be accepted.



C.J. Cosgrove, P.Eng  
Director of Operations



C.E. Moore,  
Arenas and Facilities Supervisor



D. Dick, CA, CPA  
Director of Corporate Services

for   
B. Casselman  
City Manager

APRIL 4, 2018

**REPORT TO FINANCE, ADMIN & OPERATIONS COMMITTEE – APRIL 17, 2018**

**2018-048-04  
TENDER FOR CONTRACT 2018-02  
SUPPLY OF PAINT AND PAINTING OF  
CENTRE, LANE AND EDGE LINE  
PAVEMENT MARKINGS**

**MATTHEW LOCKE  
TRANSPORTATION SERVICES  
C.J. COSGROVE, P.ENG.  
DIRECTOR OF OPERATIONS**

**RECOMMENDED**

THAT Council authorize the extension of contract 2017-02, "Supply of Paint and Painting of Centre, Lane and Edge Line Pavement Markings", with RanN Maintenance into in the amount of twenty-six thousand, six hundred and fifty dollars (\$26,650.00) excluding HST into 2018 and;

THAT this work be charged to account 01-5-245435-3010.

**PURPOSE**

The purpose of this report is to retain the services of a qualified contractor to complete Contract 2018-02 Supply of Paint and Painting of Centre, Lane and Edge Line Pavement Markings.

**BACKGROUND**

The Operations Department tenders for this work annually. This contract is limited to centre, lane and edge line pavement markings only as the City does not have the necessary equipment to complete this work. Public Works are responsible for turning arrows, stop lines and other miscellaneous hand work painting. Pavement markings are required to ensure safe driving conditions and proper traffic operations.

**ANALYSIS/OPTIONS**

One company requested a tender package however no bids were received by Tuesday April 3, 2018 when the tender period closed. RanN Maintenance was the successful bidder in the years 2016 and 2017 and has performed the work to the City's satisfaction. They have offered to extend their 2017 contract with the City at the same unit rates into the 2018 painting season.

**POLICY IMPLICATIONS**

In accordance with the City's Purchasing By-law 090-2005, approval from Council is

2018-048-04

Tender for Contract 2018-02

Supply of Paint and Painting of Centre, Lane and Edge Line Pavement Markings

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required as less than three bids were received.

## FINANCIAL CONSIDERATIONS

The bid price for this work in 2017 was \$26,650.00 excluding HST which R&N Maintenance has offered to extend into 2018. Funds in the amount of \$28,474.00 were budgeted in the Public Works 2018 Operating Budget for this expense. Sufficient funds are available to cover the costs associated with this contract.

## CONCLUSION

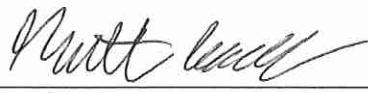
It is recommended that Council accept offer of contract extension for 2017-02 from R&N Maintenance in the amount of \$26,650.00.



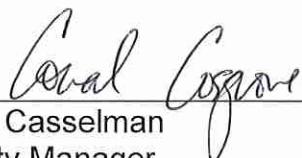
C.J. Cosgrove, P.Eng  
Director of Operations



D. Dick, CA, CPA  
Director of Corporate Services



M. Locke  
Supervisor of Transportation Services



for B. Casselman  
City Manager

April 10, 2018

**REPORT TO FINANCE, ADMIN. & OPERATIONS COMMITTEE – April 17, 2018**

**2018-049-04**

**NEW REFRIGERATION COMPRESSOR FOR MEMORIAL CENTRE**

**C.J. COSGROVE, P.ENG.  
DIRECTOR OF OPERATIONS**

**RECOMMENDED**

THAT Council authorize the purchase of a refrigeration compressor for the Brockville Memorial Civic Centre, (30hp, Model N4A), from the single source Cimco Refrigeration, in the amount of \$21,500.00; and

THAT the purchase be funded from project surpluses in the *Building and Equipment Maintenance Program*.

**PURPOSE**

This report recommends a supplier/contractor for the replacement of the refrigeration compressor (30hp Model N4A) at the Brockville Memorial Civic Centre.

**ANALYSIS**

The compressor is an integral component of the ice refrigeration system. The ammonia has been changed to vapour by the heat being removed from the ice through the brine system. The compressor changes the ammonia vapour from low temperature and pressure to a high temperature and pressure so that the vapour can efficiently release the heat to the atmosphere through the condenser. All three compressors at the Memorial Centre must be operating to install the ice surface during August and are required to maintain required ice temperatures throughout the ice season.

During the week of February 26, in the course of routine plant inspections and record keeping, staff found the 30hp refrigeration compressor was not operating to expectations. An unfamiliar mechanical sound resulted in the compressor being shut down. Following inspection by the refrigeration system maintenance contractor, major primary components were removed and it was determined by the technician that the compressor requires a major overhaul, at an approximate cost of \$6,500.00.

This compressor is one of two 30hp units that were installed in 1981, and is now 37 years old. The industry standard for compressor replacement is 30 years, subject to run

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New Refrigeration Compressor for Memorial Centre

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hours and life cycle maintenance. The scheduled replacement of the compressor had been on hold while the Memorial Centre was being considered as the potential location of two additional ice surfaces. A major compressor overhaul only addresses major internal component parts and the remainder of the compressor is still 37 years old and subject to unforeseen failures.

Given the relative cost of the overhaul (\$6,500) in comparison to the cost of replacing the compressor (\$21,500), and given that the location of the new ice pads has been determined, it is recommended to replace the 30hp compressor, instead of a major overhaul of this unit at this time.

It is recommended that a sole source quote from CIMCO Refrigeration be accepted. All of the refrigeration system components are CIMCO units. CIMCO also provides the contracted maintenance services. As evidenced by the inability to obtain quotes for a condenser, the current market for ice refrigeration equipment manufacturers and contractors in this region is dominated by CIMCO.

## POLICY IMPLICATIONS

Purchasing By-Law 090-2005 requires Council approval for non-competitive purchases of this amount. Council approval is also required to re-allocate funds of this magnitude to an unbudgeted expenditure.

## FINANCIAL CONSIDERATIONS

Cimco Refrigeration has provided a quote for all required work to supply, remove, replace and test a new refrigeration compressor, for \$21,500.00. The standard warranty covers the compressor for a term of one year from the date of commissioning, including parts and labour.

Surplus funds from the following *Building and Equipment Maintenance Program* projects are available to be used to finance the replacement:

	Amount	Amount
CIMCO Refrigeration Quote		\$21,500
Re-allocate the 2018 life cycle maintenance for Compressors 1 and 2	\$6,500	
City Hall Eavestrough Replacement Project surplus	\$7,000	
Brockville Arts Centre Replacement of HVAC Unit Surplus	\$3,900	
Gord Watts Municipal Centre Window and Blind replacement surplus	\$1,000	
Transit Overhead door replacement #9, 10 & 11 surplus	\$3,100	
TOTAL	\$21,500	\$21,500

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New Refrigeration Compressor for Memorial Centre

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## CONCLUSION

The quotation from CIMCO Refrigeration for the replacement of the Refrigeration Compressor 30hp (Model N4A) at the Memorial Centre should be accepted.



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C.J. Cosgrove, P.Eng  
Director of Operations



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D. Dick, CA, CPA  
Director of Corporate Services

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C.E. Moore,  
Arenas and Facilities Supervisor

  
for 

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B. Casselman  
City Manager

## Lynn Murray

**From:** David Dick  
**Sent:** April-13-18 10:45 AM  
**To:** Lynn Murray  
**Subject:** FW: Report 2018-049-04 - New Refrigeration Compressor for the Memorial Centre

Can you attach to Conal's report

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**From:** Conal Cosgrove  
**Sent:** April 13, 2018 10:44 AM  
**To:** David Dick  
**Subject:** Report 2018-049-04 - New Refrigeration Compressor for the Memorial Centre

David

To clarify the reasons for recommending a sole source purchase for this item:

1. We were unsuccessful in obtaining competitive bids for the condenser (Report 2018-045-04), despite contacting four local and regional mechanical contractors. The circumstances are the same for the compressor, which is another component of the same system. At this time, CIMCO has significant control over the arena refrigeration equipment supply, installation and maintenance market in this region. This being said, we continue to be very satisfied with CIMCO's pricing and service.
2. Even if we could get quotes from other compressor suppliers/installers, our evaluation of those quotes would consider that the other two compressors at the Memorial Centre are CIMCO models, maintained by CIMCO. It is highly likely that it would not be an optimum circumstance to introduce a compressor from another supplier, with a separate maintenance contractor.

Conal