



Staff Report

Report To: Dan Best, Chief Administrative Officer
From: **Scott Currie, Manager of Community Services**
Date: November 30 2020
Report: CSD 09.2020
Subject: Stephen Arena – status update on compressor, shell and tube chiller and surge drum

Recommendations:

That South Huron Committee of the Whole receives the report from Scott Currie, Manager of Community Services, titled "Stephen Arena – status update on compressor, shell and tube chiller and surge drum" for information.

Purpose:

The purpose of this report is to update Council on the status of the Stephen Arena refrigeration system as this item is part of 2021 budget deliberations.

Background and Analysis:

A recent inspection of the Stephen Arena refrigeration system was completed by Technical Standards and Safety Authority (TSSA) on November 2, 2020. The report from TSSA identified two issues:

- 1) the safety valve on the 50 hp ammonia compressor was scheduled to be replaced, and
- 2) The log book needed to be updated with the testing of the guarded safety devices.

Both of these issues have been resolved – the log book is updated and the valve replaced, and the refrigeration plant continues to operate in good working order.

In preparation for 2021 budget deliberations, staff submitted a Capital Budget Request Form (project number 2021-RS-01) recommending that the compressor, shell and tube chiller and surge drum be replaced in 2021. This recommendation was based on the system's age of 23 years (this system was installed in 1997) and in consideration of the median life expectancy of 24 years of these systems as published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (see "heat exchanger shell and tube" in ASHRAE Equipment Life Expectancy Chart).

However, given the recent inspection report and that the refrigeration system continues to operate in good working order – possibly because its hours do not reflect its age (the refrigeration system operates 8 months a year), information suggests that the capital work to replace the system could be postponed for another year without issue.

Operational Considerations:

Given the age of the refrigeration system, no one – not staff, not technicians - can provide assurances on system performance over the medium term. Capital investment in Stephen Arena cannot be deferred indefinitely for arena services to continue.

Each year that investment is postponed increases the risk of system failure, which could cause service interruption or termination at Stephen Arena.

South Huron's Strategic Plan:

7.2.2 Strategic Objective: Administrative Efficiency and Fiscal Responsibility

Financial Impact:

None.

Legal Impact:

None.

Staffing Impact:

None.

Communication Actions:

None.

Policies/Legislation:

None.

Consultation:

- Mr. Dave Atthill, Facilities & Public Works Co-ordinator

Related Documents:

- TSSA report of November 2, 2020
- ASHRAE Equipment Life Expectancy Chart

Respectfully submitted,

Scott Currie, Manager of Community Services

Report Approval Details

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|----------------------|---|
| Document Title: | Stephen Arena - status update on proposed 2021 capital work.docx |
| Attachments: | - ASHRAE_Chart_HVAC_Life_Expectancy.pdf - TSSA - R-8408- HURON PARK ARENA - INSP. NOV. 2, 2020.pdf |
| Final Approval Date: | Nov 25, 2020 |

This report and all of its attachments were approved and signed as outlined below:

No Signature - Task assigned to Sandy Becker was completed by workflow administrator Dan Best

Sandy Becker - Nov 25, 2020 - 9:01 PM

No Signature - Task assigned to Rebekah Msuya-Collison was completed by workflow administrator Dan Best

Rebekah Msuya-Collison - Nov 25, 2020 - 9:02 PM

Dan Best - Nov 25, 2020 - 9:02 PM