

Report to Council

Report Title: Walkerton UV Disinfection System

Prepared By: Sonya Watson, Chief Administrative Officer

Department: Public Works

Date: February 21, 2019

Report Number: PW2019-08 **File Number:** C11 PW

Attachments: BM Ross Feasibility Report

Recommendation:

That the Council of the Municipality of Brockton hereby receives Report Number PW2019-08, Walkerton UV Disinfection System, prepared by Sonya Watson, Chief Administrative Officer, for information purposes and further directs staff to proceed with the grant application through FCM for the Walkerton UV Disinfection upgrade in the amount of \$626,000.

Report:

Background:

Federal legislation requires that all effluent from the Walkerton Water Pollution Control Plan (the “WWPCP”) be free from chlorine residue by 2021. B.M. Ross and Associates Limited was retained to determine the feasibility of converting the existing chlorine contact tank to a UV (ultraviolet) Disinfection System to ensure compliance with the federal legislation.

Analysis:

BM Ross’s Feasibility Report outlining the results of the study has been attached and indicates that the preferred option for reducing the chlorine and complying with the federal legislation is to replace the existing chlorine contact tanks with a UV disinfection system.

There is a funding opportunity available to partially cover the cost of the upgrade to the wastewater system. The grant through FCM is a loan/grant combination. The loan would be for 80% of the project, and a grant for 15% of the loan amount. They offer an interest rate lower than the province, currently 3.65% for a 10 year loan, with the grant the effective rate is 0.72%. or a 20 year 4.25% or effective rate of 2.53%. The interest is a fixed rate for the duration of the loan. There would be a penalty for paying the loan before half of the contract.

With a total project cost of \$630,000 the loan would be for \$504,000 and the grant - \$75,600. The actual interest rate is negotiated with the contract signing. If successful in the application, the grant will cover 80% of the project costs. In order to proceed with the grant application, staff recommends that council approves a resolution to move forward with the implementation of the wastewater upgrade recommended in B.M Ross's Feasibility Study. This project cannot start until September 2019 so this would align with our plans to construct in 2020 to meet the 2021 legislative requirements.

Sustainability Checklist:

What aspect of the Brockton Sustainable Strategic Plan does the content/recommendations in this report help advance?

- Do the recommendations help move the Municipality closer to its Vision? Yes
- Do the recommendations contribute to achieving Cultural Vibrancy? Yes
- Do the recommendations contribute to achieving Economic Prosperity? Yes
- Do the recommendations contribute to Environmental Integrity? Yes
- Do the recommendations contribute to the Social Equity? Yes

Financial Impacts/Source of Funding:

- Do the recommendations represent a sound financial investment from a sustainability perspective? Yes

Based on construction in 2018, the probable capital costs related to provision of UV disinfection are as follows:

Supply UV Equipment	\$280,000
Installation	\$ 202,000
MECP Approval Fees	\$ 4,000
Engineering	\$ 34,000
Engineering	\$ 39,000
Contingency (10%)	\$56,000
Net HST (1.76%)	\$11,000
Total Capital Cost	\$626,000

Based on an estimate provided by Trojan for their UV3000plus system, the annual operating costs are expected to be in the order of \$32,000. This figure includes annual lamp replacement and electricity costs. It is assumed that routine monitoring and changing the UV lamps will be a similar workload to the current chlorination process. These costs will be offset in part by the elimination of chlorine supply and handling costs.

Reviewed By:



Trish Serratore, Chief Financial Officer

Respectfully Submitted by:

A handwritten signature in dark ink, appearing to read "Sonya Watson", with a long, sweeping horizontal line extending to the right.

Sonya Watson, Chief Administrative Officer