



Corporation of the Township of Brock

Staff Report to the Mayor and Members of Council

From: Wayne Ward

Position: Director Parks, Recreation & Facilities

Title / Subject: LSRCA Low Impact Development Retrofit - Beaverton Fire Hall

Date of Report: April 22, 2024

Date of Meeting: April 29, 2024

Report No: 2024-OP-005

1.0 Issue/Origin

The Township of Brock is partnering with the Lake Simcoe Regional Conservation Authority (LSRCA) on a Low Impact Development (LID) project at the Beaverton Fire Hall. The purpose of the project is to enhance the existing stormwater management, by improving the quantity and quality of the runoff entering the Beaver River. A reduction in the quantity of stormwater that enters the storm sewers helps minimize the overland runoff, sediment transport, and streambank erosion that occurs within Beaverton.

2.0 Background

The LSRCA provides leadership in the protection and restoration of the environmental health and quality of Lake Simcoe and its watershed. In 2022, the LSRCA reached out to the Township of Brock to discuss potential funding opportunities for low impact development and stormwater projects. In addition to funding, the LSRCA also offered assistance with all the procurement and project management of consultants and contractors, and implementation of any project eligible for funding.

Several possible projects and locations were discussed including stormwater improvements to the Beaverton Harbour, the arena parking lot, and the fire hall. The Beaverton fire hall was determined to be the location best suited for stormwater retrofits to address water quantity and quality.

3.0 Analysis

The LID retrofit project at the Beaverton Fire Hall is designed to make better use of rainwater collected at the site as opposed to it flowing into Lake Simcoe. Features include new gardens to filter rain run off from the roof, a water storage tank to collect and store rainwater for fire staff use, and a swale to capture the parking lot surface water. In addition to filtration, the new gardens will improve the esthetics of the property.

The Tom Hawtin Memorial Garden will be temporarily displaced and recreated with new plantings.

The project commenced the first week of April and is expected to be complete before the end of May.

4.0 Related Policies / Procedures

The LSRCA delivered a presentation at the February 8, 2023, Waterfront Advisory Group meeting to ensure the LID project at the Beaverton Fire Hall was consistent with the Township's Waterfront Master Plan.

5.0 Financial / Budget Assessment

The LID project is spearheaded and funded by the LSRCA. The Township has agreed to provide a minimal in-kind contribution, by assisting with the disposal of the excavated material at the Beaverton Public Yard.

There will be minimal ongoing operating costs associated with the project. The water pump requires little to no maintenance, costs between \$1,200 – \$1,800 to replace and is readily available. The water tank can be drained and cleaned by staff when needed and the filter should be changed annually.

5.1 Asset Management

The entire pump and tank system (including installation, all applicable labour, materials, professional oversight, and submission documents) is approximately \$82,500 - \$150,000. There is a 30-year warranty on the tank and a 10-year warranty on the liner. Under the Township's Donated Asset Policy, the municipality is not under any obligation to replace any assets which exceed their useful life despite accounting for regular care and maintenance. Staff recommend including the water tank in any asset management plans moving forward.

6.0 Climate Change Impacts

Phosphorus is a naturally occurring element and is commonly found in commercial fertilizers and other household products. While phosphorus is a valuable nutrient that helps plants to grow, when there is an excessive amount of phosphorus, it can have a negative impact on the watershed environment, including the quality of water in Lake Simcoe and its river system. Too much phosphorus can cause serious issues including

excessive weeds, toxic algae and depleted oxygen levels in rivers, streams and ultimately, Lake Simcoe.

Phosphorus comes from many sources, but one of the most significant sources is stormwater, which picks up phosphorus as it travels across paved and hardened surfaces. The LID project at the Beaverton Fire Hall is an important partnership between the Township and the LSRCA that will reduce the amount of phosphorus entering Lake Simcoe.

7.0 Communications

This report is being published on a public agenda.

8.0 Conclusion

The LID retrofit project will filtrate the rainwater from the roof and parking surface, through the gardens and naturalized swale, before entering the stormwater drainage system, all to help improve the quality of run off water that enters Lake Simcoe.

The project is fully funded by the LSRCA.

9.0 Recommendation

BE IT RESOLVED THAT report # 2024-OP-005 entitled “LSRCA LID Retrofit Beaverton Fire Hall”, be received; and

THAT Council endorses the Low Impact Development Retrofit project at the Beaverton Fire Hall.