

Report to Council

Report Title: Lake Rosalind Water Testing Permit Report

Prepared By: Gregory Furtney, Director of Operations

Department: Operations

Date: July 9, 2019

Report Number: UT2019-12 **File Number:** C11UT

Attachments: Draft Lake Rosalind Microbial Source Tracking
Lake Rosalind Draft Sampling Schedule 2019
Draft Research Permit

Recommendation:

That the Council of the Municipality of Brockton hereby receives Report Number UT2019-12 - Lake Rosalind Water Testing Permit Report, prepared by Gregory Furtney, Director of Operations, and directs staff to enter into a Research Permit Agreement with Mr. Jeff Avedesian.

Report:

Background:

On May 28, 2019, Mr. Jeff Avedesian contacted Municipal Staff requesting an opportunity to sample raw water from the Lake Rosalind Water Treatment Facility (Well #1 and #3) for his Master's Thesis work on Microbial Source Tracking of fecal contamination in waterways, with the University of Guelph. He is working with Dr. Habash from the University of Guelph.

Mr. Avedesian is a resident of Lake Rosalind and has worked with the Lake Rosalind Property Owner's Association on a few occasions, specifically the "Water Quality" Subcommittee.

Analysis:

Mr. Avedesian's project involves two components. The first component is to expand on a test developed to evaluate water sources for human and bovine fecal pollution, originally developed by Dr. Habash and his colleagues at the University of Guelph and the Ministry of the Environment, Conservation, and Parks (MOECP). Dr. Habash has been continuing with this work, in collaboration with MOECP, and their current project (which was initiated in September of 2017 and ends in about 6-8 months) and aims to expand that first test to include markers to evaluate porcine and chicken fecal pollution as well. The second part of this work involves collecting water samples from locations that are potentially impacted by these different sources of fecal pollution to help field test the assay (an investigative procedure in laboratory medicine, pharmacology,

environmental biology and molecular biology for qualitatively assessing or quantitatively measuring the presence, amount, or functional activity of a target entity (the analyte) they are developing. The sites for Mr. Avedesian's Master's project include the Thames and Grand Rivers, which are potentially impacted by human, bovine, and porcine sources of fecal contamination. Their MOECP collaborators have been sampling the Thames River and Dr. Habash's research group has been sampling the Grand River. They have also been looking for other sites to include as part of their field testing, to ensure their test functions are appropriate. A site such as Rosalind Lake apparently meets their sampling site criteria.

The end result of the research work is to prove a method of identifying what kind of fecal matter is contaminating waterways and find the source so the contamination can be mitigated.

The testing will be done in an "unaccredited" lab, as stated by Dr. Habash in a June 10, 2019 email exchange. Results will be presented to the Collaborative Group at the University of Guelph and the MOECP.

Sampling and testing is already underway with Lake Rosalind water from the Lake. No permission is necessary for that sampling and testing to take place.

Mr. Avedesian is asking for permission to take raw water samples from the Lake Rosalind Water Treatment Facility which is a "Restricted Access" Facility and that requires Council approval under the *Safe Drinking Water Act, 2002*, S.O. 2002, c. 32:

Section 19(1) Each of the persons listed in subsection (2) shall,

- (a) exercise the level of care, diligence and skill in respect of a municipal drinking-water system that a reasonably prudent person would be expected to exercise in a similar situation; and
- (b) act honestly, competently and with integrity, with a view to ensuring the protection and safety of the users of the municipal drinking water system.

(2) The following are the persons listed for the purposes of subsection (1):

1. The owner of the municipal drinking water system.
2. If the municipal drinking-water system is owned by a corporation other than a municipality, every officer and director of the corporation.
3. If the system is owned by a municipality, every person who, on behalf of the municipality, oversees the accredited operating authority of the system or exercises decision-making authority over the system."

After a significant email exchange discussing contractual and insurance obligations and a risk analysis by staff, Mr. Avedesian has agreed to have Veolia North America staff take the samples, rather than access the facility himself.

The attached "Research Permit" is an agreement between the Municipality of Brockton and Mr. Avedesian that indemnifies both parties, as well as Veolia North America contractors, from any potential legal issues. Council and staff will be made aware of the project results as they become available. Mr. Avedesian's work will be published through the University of Guelph to start. Apparently it is undecided, as of now, if his work will be published in any scientific journals, or which ones.

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? N/A
- Do the recommendations contribute to achieving Cultural Vibrancy? N/A
- Do the recommendations contribute to achieving Economic Prosperity? N/A
- Do the recommendations contribute to Environmental Integrity? N/A
- Do the recommendations contribute to the Social Equity? N/A

Financial Impacts/Source of Funding:

- Do the recommendations represent a sound financial investment from a sustainability perspective?
N/A

Reviewed By:



Trish Serratore, Chief Financial Officer

Respectfully Submitted by:



Gregory Furtney, Director of Operations

Reviewed By:



Sonya Watson, Chief Administrative Officer