

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON SEPTEMBER 26, 2017
FROM:	KELLY SCHERR, P. ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	AGREEMENT RENEWAL - THAMES RIVER EXPERIMENTAL STREAM SCIENCE FACILITY AT ADELAIDE POLLUTION CONTROL PLANT

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to a consent to enter agreement with the University of Western Ontario:

- (a) That the attached proposed by-law **BE INTRODUCED** at the Municipal Council meeting to be held on October 3, 2017 for the purpose of renewing a consent to enter agreement to allow The University of Western Ontario to conduct research at the Adelaide Pollution Control Plant, substantially in the form attached and satisfactory to the City Solicitor;
- (b) That the Mayor and City Clerk **BE AUTHORIZED** to execute the Municipal Access Agreement on behalf of the municipality.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Thames River Experimental Stream Science Facility at Adelaide Pollution Control Plant (October 6, 2015, meeting of the Civic Works Committee, Item #5)

2015-2019 STRATEGIC PLAN

Municipal Council has recognized the importance of environmental and sustainable programs and projects in its 2015-2019 - Strategic Plan. Providing collaborative research opportunities regarding our waterways and water resources supports three of the four areas of focus as follows:

Building a Sustainable City

- Strong and healthy environment
- Robust infrastructure
- Responsible growth

Leading in Public Service

- Collaborative, engaged leadership
- Proactive financial management

Growing our Economy

- Strategic, collaborative partnerships
- Local, regional and global innovation

BACKGROUND

Purpose

The purpose of this report is to renew the current agreement with The University of Western Ontario (also known as Western University) to locate and operate the Thames River Experimental Stream Science Facility at the Adelaide Pollution Control Plant.

Context

The City of London supports co-operative research projects with Western University and other academic and industrial partners. The renewal of this agreement will allow the continued collaboration with Dr. Adam Yates from the Geography Department and the continuation of his mesocosm research within the Thames River Experimental Stream Science Facility.

A mesocosm is any outdoor experimental system that examines the natural environment under controlled conditions.¹ A mesocosm study provides a link between field surveys and highly controlled laboratory experiments.¹ The goal of this particular mesocosm research project is to mimic natural stream conditions using artificial streams to model chemical and physical changes to stream environments. The fenced compound at Adelaide Pollution Control Plant (PCP) provides a secure space with access to electrical power and water services. This work is especially relevant given the renewed provincial and federal interest in phosphorus levels in Lake Erie.

DISCUSSION

The City of London has long recognized the benefits of collaborating on research with our local university. The Thames River Experimental Stream Science Facility has operated for three years under the direction of Dr. Adam Yates, an Assistant Professor in Western University's Geography Department. Dr. Yates reports that during the first three years of the operation, the Thames River Experimental Stream Science Facility has satisfied its academic research goals and successfully met its intended and anticipated results. A six-page project update prepared by Dr. Adam Yates is attached as Appendix 'B'.

Locating the research facility at the Adelaide PCP, takes advantage of the close proximity of the north branch of the Thames River and several area streams, such as Medway, Stoney and Pottersburg Creeks. The Adelaide PCP site provides a central location for the calibration and validation of the artificial streams being constructed in the mesocosm. Currently, the facility has been constructed with six artificial streams, each with specific substrate and biological life. Research work will continue through 2017 and is expected to conclude in the fall of 2020.

The proposed by-law (Appendix 'A') would renew the current agreement for the next three years, ending in November 2020. The by-law establishes the legal framework, using a Consent to Enter Agreement (Schedule "1" to the by-law) between the University and the City. The space designated in the agreement is a relatively small (30 metres square) fenced area for exclusive use of the researchers. The City investment in the facility to date has been approximately \$10,000. Ongoing operating costs of the facility are minor in nature.

CONCLUSIONS

The Thames River Experimental Stream Science Facility is expanding our understanding of natural stream systems. In addition, the City's participation in this initiative supports local scientific research at Western University. This partnership will continue to increase our understanding of the Thames River watershed and will aid in achieving future improvements to water quality and watershed health.

¹ Source: Mesocosm - <https://en.wikipedia.org>

Acknowledgments

This report and background material was prepared with assistance from Tom Copeland (Wastewater and Drainage Engineering), Dan Huggins (Water Operations), Richard Atkinson (Wastewater Treatment Operations) and David Munteer (Legal and Corporate Services).

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Appendix 'A' – Proposed By-law

Appendix 'B' – TRESS Project Update, April 2017

- c.c. Dr. Adam Yates, Geography Department, Western University
Peter White, Executive Director, Government Relations and Strategic Partnerships, Western University
Tom Copeland Dan Huggins Richard Atkinson David Munteer, City of London