

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 17, 2018
FROM:	KELLY SCHERR, P. ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	AWARD OF CONSULTING ENGINEERING SERVICES FOR LONG-TERM WATER STORAGE OPTIONS ENVIRONMENTAL ASSESSMENT

RECOMMENDATION

That on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the award of consulting engineering services for the long-term water storage options environmental assessment (EW3617):

- (a) The proposal submitted by AECOM Canada Limited, 410-250 York Street, Citi Plaza, London, Ontario N6A 6K2, in the amount of \$157,816, including 10% contingency, excluding H.S.T., **BE AWARDED** in accordance with Section 15.2 (e) of the City of London's Procurement of Goods and Services Policy;
- (b) The financing for this project **BE APPROVED** as set out in the Sources of Financing Report attached, hereto, as Appendix "A";
- (c) The Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project; and
- (d) The Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to effect these recommendations.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

- [CONTRACT AWARD: SPRINGBANK RESERVOIR #2 REHABILITATION PROJECT No. EW3617 TENDER No. 12-52, April 2, 2012 Civic Works Committee, Agenda Item #19](#)
- [Water System Risk Management Continuous Improvement Update, October 27, 2008, Environment and Transportation Committee, Agenda Item #11](#)
- Water System Risk Management Exercise and Evaluation, April 23, 2007, Environment and Transportation Committee.

2015-2019 STRATEGIC PLAN

This report supports the Strategic Plan in the following areas:

- Building a Sustainable City: robust infrastructure; strong and healthy environment; responsible growth.
- Leading in Public Service: open, accountable and responsive government.

BACKGROUND

Purpose

This report recommends that AECOM Canada Limited (AECOM) be appointed as the consultant to undertake the long-term water storage options environmental assessment (EW3617).

Context

The City of London has a robust water supply system, being fed from two Great Lakes, and having considerable stored water available in and around London. Water systems are required to have water storage to balance maximum day demands, fire needs and emergency storage. The City of London's storage is required to meet these needs, but also to provide back-up supply in the event the Lake Huron pipeline were to fail, as occurred in 1983, 1988, and 2010.

The Springbank Reservoir Two is nearing the end of its useful life, and now is the appropriate time to undertake the environmental assessment work that will consider how the reservoir will be reconstructed or replaced. This environmental assessment will also consider the long-term storage needs required to service anticipated urban growth.

DISCUSSION

The City currently has reservoirs and storage located at the Arva Reservoir and Pumping Station site, the Southeast Reservoir and Pumping Station facility, and at the Springbank Reservoir complex, which consists of reservoirs 1, 2 and 3. There is also storage at the Elgin Middlesex Pumping Station (in St. Thomas). Storage locations and volumes are indicated in the table below:

Storage Location	Construction Date	Volume (million litres)
Springbank No. 1	1970	82
Springbank No. 2	1920	45
Springbank No. 3	1964	82
Arva – 4 cells shared with Komoka Kilworth	1965/1990	109
Southeast Reservoir – 2 cells	2017	113
EMPS – 2 cells shared with St. Thomas & Aylmer	1993	24 (1 cell)
Total Gross Volume		455

Current Water Storage Issues

There are several issues across multiple locations that will be considered as part of the long-term water storage EA. Springbank Reservoirs One, Two and Three are elevated ground storage reservoirs. These were constructed in 1970 and 1964 respectively. The oldest of the Springbank Reservoirs, Reservoir Two was originally constructed around 1920 as an open-air reservoir. A membrane liner and floating cover were added in 1977. Since then both the liner and floating cover have been replaced multiple times. Issues with Springbank Reservoir Two include:

- Because of the floating cover, the reservoir must be out of service over the winter months.
- As the reservoir is at the end of its life, the concrete has started to deteriorate at the base of the reservoir.
- There is increased risk because the non-rigid floating cover is not as robust as a typical concrete reservoir cover.

The Arva Pumping Station and Reservoir was constructed in the 1960's and currently does not have adequate standby power to operate during a power outage. If a water outage were to occur at the Arva Pumping Station, water pumps from the Lake Huron Water Supply System would supply water to City of London customers, but at a reduced rate and pressure when compared to normal operating conditions. In addition, the water stored at the Arva Reservoir could not be used until power was restored. The need to have adequate standby power to operate the water distribution pumps to the City of London, and the ability to utilize the water stored at the Arva Reservoirs, will be considered during this municipal class environmental assessment and preliminary design work.

Funds were allocated, in the 2017 capital budget, to begin the environmental assessment and preliminary design. Future expenditure amounts to construct a new reservoir were included in capital budget projections in 2023 (\$16.5 million). This project is being undertaken to determine the location of a future reservoir site.

Procurement Process

A two-stage process of request for expression of interest/qualifications and request for proposals was selected for this project in accordance with section 15.2(e) of the City of London's Procurement of Goods and Services Policy. The two-stage process was followed because of the complexity of the project and the desire to prequalify consultants for the RFP process.

In October of 2017, a public request for expression of interest and request for qualifications (REOIRFQUAL) was posted for consulting services for a municipal class environmental assessment and a preliminary design for a long-term water storage solution. Four firms responded, submitting expressions of interest and qualifications. Three (3) firms were shortlisted to submit proposals. In February 2018, the request for proposal was sent to the three consultants, and three proposals were received at the RFP closing.

The City's evaluation team determined that the proposal provided by AECOM provided the best value. AECOM is the most experienced consultant when it comes to hydraulic modeling of our system and they have extensive understanding of how our system operates. They also have extensive experience completing reservoir projects and EAs. AECOM's fees were the lowest of the successful proposals and within the budget for the project. Overall, their proposal met all of the key project requirements and their staff are qualified to undertake the required engineering services.

Scope of Work

The scope of the project is to carry out a municipal class environmental assessment and the necessary preliminary design work to evaluate long-term water storage options in accordance with the municipal class environmental assessment process outlined by the Municipal Engineers Association of Ontario approved in 2000 and updated in 2007 and 2015.

This project will:

- Review the appropriate locations for new, expanded or replacement sites for existing water storage facilities for the City of London water distribution system;
- Review the need to install new, or replace, standby power equipment; and
- Address the need to retire a water facility.

A future engineering assignment beyond this environmental assessment will be carried out to address detailed design and construction administration of the preferred alternative. This future assignment will be awarded by a two-stage process, including a request for expression of interest/qualifications and request for proposals, as was followed for this project, in accordance with section 15.2(e) of the City of London's Procurement of Goods and Services Policy.

Project Costs

AECOM's fee submission of \$157,816, including 10% contingency, and excluding H.S.T., is within the budget allocation for this work. The project's evaluation team reviewed AECOM's proposal and found it met all of the key project requirements.

CONCLUSIONS

The proposed consulting team, AECOM, has extensive experience with similar work and is well qualified to undertake the required engineering services. Based on the review by the evaluation team, it is determined that retaining AECOM is in the best financial and technical interests of the City. It is recommended that AECOM be awarded this consulting assignment to undertake all tasks related to the long-term water storage options environmental assessment.

Acknowledgements

This report was prepared by Patricia Lupton, P.Eng. Environmental Services Engineer in the Water Engineering Division.

PREPARED BY:	REVIEWED & CONCURRED BY:
 AARON ROZENTALS, P. ENG. DIVISION MANAGER, WATER ENGINEERING	 SCOTT MATHERS, MPA, P. ENG. DIRECTOR, WATER AND WASTEWATER
RECOMMENDED BY:	
 KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER	

April 3, 2018

Attach: Appendix "A" – Sources of Financing

CC. John Freeman – Manager, Purchasing & Supply
Gary McDonald – Budget Analyst, Finance & Corporate Services
John Haasen – Senior Vice President, AECOM Canada Ltd.
John Simon – Division Manager, Water Operations
Alan Dunbar
Jason Davies