TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MARCH 18, 2019**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**APPOINTMENT OF SERVICES FOR DINGMAN CREEK SURFACE WATER MONITORING PROGRAM (ES2452)**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the appointment of Upper Thames River Conservation Authority (UTRCA) for Surface Water Monitoring of the Dingman Creek Subwatershed:

a) The Upper Thames River Conservation Authority **BE AUTHORIZED** to carry out a three year surface water monitoring pilot program in concert with the City of London in the total amount of $562,075.00, including contingency, excluding HST. This is a unique program for which the UTRCA offers licenses as well as full services to complete this work per 14.4e) & h) of the Procurement of Goods and Services Policy;

b) the financing for the project **BE APPROVED** in accordance with 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;

d) the approvals given herein **BE CONDITIONAL** upon the Corporation entering into a formal contract; and,

e) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

PEC – November 12, 2018 – Upper Thames River Conservation Authority Dingman Creek Subwatershed Screening Area Mapping

CWC – October 6, 2015 – Dingman Creek Subwatershed Stormwater Servicing Strategy Schedule C Municipal Class Environmental Assessment

CWC – February 3, 2013 – Contract Award T13-89 Dingman Creek Stormwater Management Erosion Control Wetland (ES2682)

CWC – November 20, 2012 – A by-law to amend the Official Plan for the City of London, 1989 relating to lands located in the southwest quadrant of the City, generally bounded by Southdale Road West, White Oak Road, Exeter Road, Wellington Road South, Green Valley Road, and the Urban Growth Boundary.

2015 – 2019 STRATEGIC PLAN

The following report supports the 2015 – 2019 Strategic Plan through the strategic focus areas of Building a Sustainable City including:

- Robust Infrastructure 1B – Manage and improve water, wastewater, and stormwater infrastructure; and
- Responsible Growth 5B – Build new transportation, water, wastewater and stormwater infrastructure as London grows.

BACKGROUND

Purpose

The purpose of this report is to seek approval to award funding to UTRCA for the completion of a three year pilot project for water quality and the establishment of flow monitoring stations within Dingman Creek. This pilot program will include a comprehensive review, compilation, and analysis of historical surface water monitoring data, and the continuation of existing water monitoring and reporting of the Dingman Creek Subwatershed.

Context

The Dingman Creek Subwatershed is 17,200 hectares with flows tributary to the Thames River. The Dingman Creek has the largest subwatershed within the City of London, with 74% of the subwatershed within the city limits. This subwatershed is generally located in the southern portion of the City in an area that is planned for significant future development, primarily in the area associated with the Southwest Area Secondary Plan (SWAP).

DISCUSSION

Over the past 10 years, the City of London has carried out surface water monitoring programs including aquatic invertebrate (benthic) and water chemistry within the Dingman Creek. Benthic monitoring has been completed by consultants with yearly results submitted to the City. City staff over the past 30 years have collected monthly water chemistry data at a number of established locations along Dingman Creek. Through these programs, a historical surface water dataset has been collected; however, comprehensive data analysis to determine baseline conditions, trends, and an overall review of conditions with Dingman Creek is outstanding. The purpose of the proposed three year surface water monitoring pilot program is to:

a) Continue collection of baseline aquatic invertebrate and water chemistry data to build upon the existing historical dataset;
b) Compile existing historical monitoring data into a single database that can be shared, accessed and utilized by both UTRCA and the City;
c) Develop a comprehensive Dingman Creek Subwatershed Surface Monitoring Report that includes various annual monitoring parameters. This report can be updated at regular intervals to consider overall trends of the Dingman Creek system; and,
d) Establish new flow and level monitoring stations in Dingman Creek to calibrate and verify future floodplain and stormwater modeling efforts.

The results and findings of the surface water monitoring pilot program may assist to determine targets as part of the on-going “Dingman Creek Subwatershed Stormwater Servicing, Schedule C Municipal Class Environmental Assessment” (Dingman EA).

Through the proposed pilot program, the City and UTRCA will work together to streamline surface water monitoring data collection, data sharing, and reporting. Benefits of this collaborative approach will be consistency in data collection, reduction in

data collection duplication, and archiving of data through UTRCA's existing Western Ontario Environmental Database (WOED) that is accessible to the City and UTRCA.

The UTRCA have experienced and knowledgeable staff that are trained in performing surface water monitoring tasks as part of their day-to-day activities. These staff are well versed in surface water monitoring protocols and have a vested interest in ensuring consistency and reliability in data collection. Additionally, UTRCA owns specialized equipment and software licences (Water Information Systems by KISTERS (WISKI)), as well as an existing water flow monitoring network which will support the proposed pilot project. Together UTRCA's local expertise and resources will provide a full-complement to undertake the proposed pilot program. This monitoring program will also supplement the UTRCA's preparation of the Dingman Creek report card.

Review of UTRCA's work plan costs demonstrates this pilot project will offer better value for service than previous proposals from the private industry. UTRCA's work plan for benthic data collection, analysis and reporting is just under $1,700.00 per site (in 2019 dollars). Comparable work plans submitted by private consultants included costs just under $2,000.00 per site (in 2015 dollars). The UTRCA's overall work plan also includes $135,000.00 capital costs for purchasing of monitoring equipment that will be permanently installed and offer long-term flow and level data at three locations in Dingman Creek.

Project Schedule

This pilot program is anticipated to be completed in Q2 2021. The findings of the historical data review will be completed in Q1 2020 and may be considered in the development of a future subwatershed targets and monitoring as part of the on-going Dingman EA. Upon completion of the pilot program City and UTRCA staff will determine a way forward for future monitoring efforts within Dingman Creek.

CONCLUSIONS

This project will be the first step in establishing a continous data sharing service between the City and UTRCA.The Dingman Creek Surface Water Monitoring Program pilot project will continue to build upon existing historical datasets and provide both the City and UTRCA with an understanding of observed trends and access to Dingman Creek data available.

Acknowledgements

This document has been prepared by Adrienne Sones, P.Eng. Environmental Services Engineer within the Stormwater Engineering Division.

SUBMITTED BY:	**REVIEWED AND CONCURRED BY:**
SHAWNA CHAMBERS, P.ENG. **DIVISION MANAGER** **STORMWATER ENGINEERING**	**SCOTT MATHERS, MPA, P.ENG.** **DIRECTOR, WATER AND** **WASTEWATER ENGINEERING**

RECOMMENDED BY:
KELLY SCHERR, P.ENG., MBA, FEC **MANAGING DIRECTOR** **ENVIRONMENTAL SERVICES AND CITY ENGINEER**

Attach: Appendix ‘A’ – Sources of Financing

cc: John Freeman, Manager, Purchasing and Supply
Chris Harrington, UTRCA
Gary McDonald, Budget Analysis
Alan Dunbar, Financial and Corporate Services
Jason Davies, Financial Planning and Policy
Chris Ginty, Purchasing and Supply
Adrienne Sones, Stormwater Engineering