Report to Civic Works Committee

To: **Chair and Members**
Civic Works Committee
From: **Kelly Scherr, P.Eng., MBA, FEC**
Deputy City Manager, Environment and Infrastructure
Subject: **Appointment of Consulting Engineers – Stormwater Management Facility Build-out Sediment Survey**
Date: **August 31, 2021**

Recommendation

That, on the recommendation of the Deputy City Manager, Environment and Infrastructure, the following actions **BE TAKEN** with respect to the Appointment of Consulting Engineers for the Stormwater Management Facility Build-out Sediment Survey project:

(a) Ecosystem Recovery Inc. **BE APPOINTED** Consulting Engineers to complete the Stormwater Management Facility Build-out Sediment Survey project, in the total amount of $273,600.00, including contingency, excluding HST;

(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 work;

(d) the approvals given, herein, **BE CONDITIONAL** upon the Corporation entering into a formal contract with the consultant for the project; and,

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

Executive Summary

Purpose

The purpose of this report is to appoint Ecosystem Recovery Inc. as the Consulting Engineers to complete the Stormwater Management Facility Build-out Sediment Survey project.

Context

In accordance with the City's Just-in-Time process, Regional Stormwater Management Facilities (SWM ponds) are constructed by the City in advance of subdivision development. These SWM ponds are funded by Development Charges to receive runoff from development lands during buildout conditions and currently accumulate sediment at much higher rates compared to ponds in established neighbourhoods.

Ultimately, the goal of this 3-year pilot project is to ensure that newly constructed SWM ponds are not overloaded with sediment during development build-out, maintenance costs are attributed to the upstream developers, and the City can get the greatest usable life out of new facilities prior to undergoing costly sediment removal works.

Linkage to the Corporate Strategic Plan

This recommendation supports the following 2019-2023 Strategic Plan area of focus:

- Building a Sustainable City
    - London constructs Regional Stormwater Management Facilities to support development of new subdivisions.

- London maintains Regional Stormwater Management Facilities to ensure they function correctly; providing quantity and quality controls to protect downstream waterways and the natural environment.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

- Civic Works Committee – July 29, 2012 – Development Charges Policy Review: Major Policies Covering Report

2.0 Discussion and Considerations

2.1 Discussion

When lands are developed, vegetation is removed and topsoil is stripped to facilitate construction of buildings, roads, and sewers. In efforts to mitigate the impacts, erosion and sediment control (E&SC) measures are required as part of development approval. The success of E&SC measures requires a continuous, multibarrier approach of planning, design, monitoring, adaptation, implementation, and maintenance. Inevitably, SWM ponds in proximity to active construction sites accumulate sediment at higher rates than SWM ponds in established neighbourhoods.

The City is responsible for the maintenance of SWM ponds in accordance with the Ministry of Environment, Conservation, and Parks (MECP) approval through an Environmental Compliance Approval (ECA). Sediment that accumulates in SWM ponds during upstream construction must be removed in accordance with ECA maintenance requirements. SWM ponds in established neighbourhoods have a 10 to 15-year sediment removal frequency. Each pond cleanout can cost from approximately $200,000 to $500,000, depending on the size of the SWM pond and how much sediment can accumulate. In developing neighbourhoods, a shorter clean out cycle is expected. The sediment loading to each pond can vary based on the amount of development in the area, soil conditions, topography, and the efficacy of on-site erosion and sediment controls. It is particularly important that E&SC measures are actively maintained to mitigate sediment loadings to each pond since it much more costly to remove sediment from the SWM pond than to prevent it from entering the pond.

Recognizing this issue, the City has begun requesting securities from upstream developments as part of the Subdivision Agreement to ensure that active developments contributing to the Regional SWM ponds cover the costs of sediment removal associated with the build-out period.

This 3-year pilot program will evaluate the effectiveness of E&SC measures implemented, the rate at which sediment is accumulating in the downstream SWM pond, estimate securities to address SWM pond maintenance during the build-out period, as well as look at ways to incentivize improvements to current E&SC practices. In essence, better E&SC measures would reduce sediment loadings to SWM ponds, thereby lowering the cost to remove sediment at each pond and lower costs to each development. Policies regarding funding for sediment removal for SWM ponds during buildout will also be reviewed during the next Development Charges Update process.

2.2 Work Description

Ecosystem Recovery Inc. will undertake an initial assessment of select SWM ponds across the City (listed in section 2.3 below) to determine baseline conditions. Then, semi-annual (Spring and Fall) surveys will be conducted for a period of three years (2021 – 2024) to assess the increase in sediment levels. Summary reports of inspection and survey results will be provided semi-annually. A final report summarizing the 3-year

program will be completed, including recommendations for E&SC protocols, SWM pond operations and maintenance, and the chemical analysis of sediment for each facility.

2.3 Locations

1. Trib. C Riverbend SWMF F
2. Trib. C Riverbend SWMF G
3. Parker Phase 2 SWMF
4. Pincombe Drain SWMF 3
5. Old Victoria SWMF 1
6. Fox Hollow 1 North Cell
7. Fox Hollow 1 South Cell
8. Fox Hollow SWM 2
9. Fox Hollow SWM 3
10. North Lambeth P9
11. Dingman Tributary SWMF B4
12. Wickerson SB
13. Hyde Park 4

The program includes capacity to allow for additional ponds constructed between now and 2024 to be added to the monitoring program.

2.4 Procurement Process

A two-staged procurement process was used to select the recommended consultant in accordance with Section 15.2(e) of the Procurement of Goods and Services Policy.

Stage one was an open, publicly advertised Request for Qualifications (RFQUAL21-04). The City received 20 submissions, which were evaluated by EESD and resulted in a short-list of engineering consulting firms.

Stage two was a competitive Request for Proposal (RFP21-43). Six consultant firms from the short-list were invited to submit a formal proposal for the Stormwater Management Facility Build-out Sediment Survey project. The City received two proposals, and the evaluation included both a technical and a cost component. The consultant was selected based on their knowledge and understanding of project goals, their experience on directly related projects, and their project team members' capacity, and qualifications.

2.5 Stakeholder Engagement

The results of the pilot program will be shared with the development community, including the London Development Institute and London Home Builders Association. The City plans to initiate a working group in the coming year to discuss improvements to E&SC measures citywide and make suitable updates to the City's design standards, policies, or by-laws.

3.0 Financial Impact/Considerations

Staff have reviewed the fee submissions in detail considering the hourly rates provided by each staff member and the time allocated to each project related task.

The fee of $273,600.00 includes a 20% contingency and excludes HST.

Conclusion

The Stormwater Management Facility Build-out Sediment Survey pilot project will provide beneficial information on sediment loading rates in SWM ponds downstream of active developments. The data will primarily be used to approximate security amounts for developments but will also provide insight on implementation of E&SC measures during construction and incentivize improvement to current standards of E&SC methods. Ultimately, the goal is to ensure that newly constructed SWM ponds are not overloaded with sediment during development build-out, maintenance costs are attributed to the upstream developers and the City can get the greatest usable life out of new facilities prior to undergoing costly sediment removal works.

Ecosystem Recovery Inc. have demonstrated their competency and expertise with completing SWM pond sediment surveys for this type of project and it is recommended that they be appointed the consulting engineers for this project.

Prepared by	**Shawna Chambers, P. Eng., DPA** **Division Manager, Stormwater Engineering**
Submitted by	**Scott Mathers, MPA, P. Eng.** **Director, Water, Wastewater, and Stormwater**
Recommended by	**Kelly Scherr, P. Eng., MBA, FEC** **Deputy City Manager, Environment and Infrastructure**

Attachments: Appendix ‘A’ – Sources of Financing

CC: Steve Mollen
Gary McDonald
Alan Dunbar
Jason Davies
Adrienne Sones
Mike Wallace – London Development Institute
Jared Zaifman – London Home Builders Association
Chris Moon – Ecosystem Recovery Inc.

Appendix "A"

#21143
August 31, 2021
(Appoint Consulting Engineers)

Chair and Members
Civic Works Committee

RE: Stormwater Management Facility Build-out Sediment Survey
(Subledger NT21ES14)
Capital Project ES5427 - Pre-Assumption Monitoring
Ecosystem Recovery Inc. - $273,600.00 (excluding HST)

Finance Supports Report on the Sources of Financing:

Finance Supports confirms that the cost of this project can be accommodated within the financing available for it in the Capital Budget and that, subject to the approval of the Deputy City Manager, Environment and Infrastructure, the detailed source of financing is:

Estimated Expenditures	**Approved Budget**	**Committed To Date**	**This Submission**	**Balance for Future Work**
Engineering	590,526	104,990	278,415	207,121
Construction	409,474	409,474	0	0
Total Expenditures	$1,000,000	$514,464	$278,415	$207,121
Sources of Financing				
Drawdown from City Services - Stormwater Reserve Fund (Development Charges) (Note 1)	1,000,000	514,464	278,415	207,121
Total Financing	$1,000,000	$514,464	$278,415	$207,121

Financial Note:

Contract Price	$273,600
Add: HST @13%	35,568
Total Contract Price Including Taxes	309,168
Less: HST Rebate	-30,753
Net Contract Price	$278,415

Note 1: Development charges have been utilized in accordance with the underlying legislation and the approved 2019 Development Charges Background Study and the 2021 Development Charges Background Study Update.

Jason Davies
Manager of Financial Planning & Policy

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