AGENDA ITEM NO: 7.1

MEETING DATE: August 15th, 2023

STAFF REPORT – COVER SHEET

SUBJECT:	Drainage Model and Storm Asset Evaluation Study	DATE:	August 4th, 2023
DEPARTMENT:	Engineering	PREPARED BY:	Doug Mossey

1. SUMMARY OF ISSUE:

The City of Chilliwack invited Expressions of Interest from proponents to provide engineering consulting services for the City's Drainage Model and Storm Asset Evaluation Study Project. Five (5) compliant Expressions of Interest were received by the stipulated closing time.

A decision to advance three (3) proponents to the Request for Proposal (RFP) stage is required.

2. RECOMMENDATION:

That Council authorize staff to forward the Request for Proposal (RFP) documents to the following selected proponents to provide consulting services for City Drainage Model and Storm Asset Evaluation Study.

1. Stantec Consulting Ltd.
2. Urban Systems Ltd.
3. ISL Engineering and Land Services Ltd.

Kara Jefford, Director of Engineering

3. FINANCE COMMENTS:

Funding is allocated within the 2023 Financial Plan for this project.

Glen Savard, Director of Finance

4. CHIEF ADMINISTRATIVE OFFICER'S RECOMMENDATION/COMMENTS:

Supports recommendation.

per Chris Crosman, CAO

STAFF REPORT ON
DRAINAGE MODEL AND STORM ASSET STUDY – RFP PROPONENT SELECTION

PREPARED BY:	Kristian Biela	DATE:	August 4th, 2023
POSITION:	Senior Engineering Technologist	DEPARTMENT:	Engineering

1. DEFINITION OF ISSUE:

The City of Chilliwack invited Expressions of Interest from proponents to provide engineering consulting services for the City Drainage Model and Storm Asset Evaluation Study Project. Five (5) compliant Expressions of Interest were received by the stipulated closing time.

A decision to advance three (3) proponents to the Request for Proposal (RFP) stage is required.

2. BACKGROUND:

2.1 The City's stormwater infrastructure is comprised of approximately 400km of storm sewers, 5500 manholes, 8000 catch basins, 80 detention tanks and many other assets About 20% of the storm infrastructure is now over 70 years old and another 20% is of unknown age.

2.2 The City owns and maintains models for both the water and sanitary sewer systems, but does not have a stormwater model to make informed decisions on stormwater projects, to identify conveyance limitations, and to determine flood mitigation solutions

2.3 The City currently completes inspections of storm sewers on an as-needed basis, either due to blockages and failures within the storm system or due to future paving of roads in order to identify opportunities for storm repairs.

2.4 The City currently completes storm sewer upgrades through capital projects collected by DCC funding. The City does not currently have a dedicated operating budget for the replacement and maintenance of the existing storm pipe network.

2.5 Due to the above factors, there is a general lack of data and knowledge surrounding the condition, capacity, resilience, and service level of Chilliwack's storm infrastructure system. The requirement for a stormwater hydrologic and hydraulic model, along with a storm asset evaluation study, has been identified to collect more data and knowledge on the adequacy of the storm network to make informed decisions for capital planning and flood mitigation.

2.6 The City has allocated $200,000 for the Project in the 2023 Financial Plan.

2.7 The proponent's services will include:

i. Task 1: Stormwater Dual Drainage Model
   a. Develop a hydraulic and hydrologic model of key drainage infrastructure and major creek systems
   b. Install flow monitoring devices to be used for model calibration
   c. Conduct a gap analysis and collect survey data of the existing system
   d. Conduct a modelling analysis to determine capacity issues and recommend key upgrades to the storm network.

ii. Task 2: Storm Asset Evaluation Study
   a. Desktop assessment of the storm infrastructure inventory network
   b. Service life estimates and condition assessments
   c. Annualized storm pipe renewal length
   d. Annual budget needed for storm infrastructure renewal
   e. Funding opportunities and recommendations for a stormwater utility
   f. Risk assessments and consequences
   g. Comprehensive 10 year and 25 year strategic capital plans
   h. CCTV program recommendations.

2.8 The Storm Model will be used by staff and consultants for various purposes, including:
   i. System performance assessment
   ii. Capital planning
   iii Rehabilitation and replacement
   iv. Simulation scenarios for various conditions
   v. Land development and system expansion assessments
   vi. Preliminary designs
   vii. Forecasting and real-time simulations for dynamic system interventions
   viii Operation and maintenance optimization
   ix Confirming anecdotal drainage issues
   x. Climate change scenarios
   xi. Future water quality modelling.

2.9 The Storm Asset Evaluation will assist staff to:
   i. Understand the condition of the existing storm infrastructure network
   ii. Define financial requirements needed to maintain the storm system
   iii. Understand risks and consequences associated with underfunded storm assets
   iv. Determine funding sources and opportunities, including proposing a storm utility
   v. Create a storm sewer CCTV program
   vi. Create strategic capital plans
   vii. Account for climate change projections
   viii. Sustainably manage the storm sewer infrastructure system.

2.10 The schedule for the project is as follows:

Stage 2

Issue RFPs to Selected Proponents for Stage 2	August 21st, 2023
Request for Proposal Closing	September 20th, 2023 at 3:00 pm
Staff Report to Council /Acceptance	October 10th, 2023
Substantial Completion	December 31st, 2024

3. FACTORS:

3.1 Five (5) proponents submitted Expressions of Interest:

1. Stantec Consulting Ltd.
2. Urban Systems Ltd
3. ISL Engineering and Land Services Ltd.
4. Binnie and Associates Ltd.
5 WSP Canada Inc.

3.2 A three (3) member evaluation committee evaluated each document based on the following criteria:

a. Proponent's Experience (30%)
b. Project Personnel (20%)
c. Team Cohesiveness (10%)
d. General Project Approach (30%)
e. Schedule and Commitment (10%)

3.3 The results of the evaluation committee point ranking are as follows:

Proponent Teams	*Evaluation Points*	*Ranking*
Stantec Consulting Ltd.	82.5	1
Urban Systems Ltd.	82.2	2
ISL Engineering and Land Services Ltd.	79.3	3
Binnie and Associates Ltd.	75.0	4
WSP Inc.	74.7	5

(Total available evaluation points = 100)

3.4 The evaluation committee ranked the RFEI submittals based on information and details provided on relevant projects that the proponent team members have completed. The three lead proponents will be invited to submit proposals under the next stage, Request for Proposals (RFPs).

3.5 After careful analysis of the submittals, the committee selected the top three firms based on the evaluation criteria.

3 6 When the proposals are received from the three selected finalists, the evaluation committee will review them and subsequently recommend to Council the preferred proponent to carry out the work

4. RECOMMENDATION & SUBSTANTIATION:

That Council authorize staff to forward Request for Proposal (RFP) documents to the following selected proponents to provide consulting services for the City Drainage Model and Storm Asset Evaluation Study

1. Stantec Consulting Ltd.
2. Urban Systems Ltd.
3. ISL Engineering and Land Services Ltd

Substantiation:
The Project will ensure City staff are equipped with the tools to make informed decisions regarding the storm infrastructure network, identify the financial requirements to implement upgrades and maintenance and provide the City with flood resilience through strategic planning.