Agenda Item # Page #

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON DECEMBER 19, 2011**
FROM:	**RON STANDISH, P. Eng. DIRECTOR, WASTEWATER AND TREATMENT PLANNING, ENVIRONMENTAL AND ENGINEERING SERVICES**
SUBJECT:	**APPOINTMENT OF CONSULTING ENGINEER FOR FUNCTIONAL AND DETAILED DESIGN OF THE DINGMAN CREEK STORMWATER MANAGEMENT EROSION CONTROL WETLAND FACILITY (ES2682)**

RECOMMENDATION

That, on the recommendation of the Director, Wastewater and Treatment, Planning, Environmental and Engineering Services, the following actions **BE TAKEN** with respect to the appointment of a consultant for the functional and detailed design of the Dingman Creek Stormwater Management (SWM) Erosion Control Wetland Facility (ES2682):

(a) the Mayor and the City Clerk **BE AUTHORIZED** to execute an updated agreement with the Consultant - Delcan Corporation (Consultant) 1223 Michael Street, Suite 100, Ottawa, Ontario Canada, K1J 7T2 to increase the contract by $448,000 excluding HST, in order to undertake the Phase 2 functional and detailed design for the said project in accordance with Section 15, Clause 15.2(g) 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 consulting fees for the project identified in (a), above, **BE IN ACCORDANCE** with the estimate, on file, which are based upon the Fee Guideline for Professional Engineering Services, 2006, recommended by the Ontario Society of Professional Engineers;

(d) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this work;

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

(f) 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

ETC on October 19, 2009 – Appointment of Consulting Engineer for Functional and Detailed Design of the Dingman Creek Stormwater Management Erosion Control Wetland Facility (ES2682)

ETC on July 10, 2009 – Municipal Class Environmental Assessment Study Recommendations for Proposed Dingman Creek Stormwater Management Erosion Control Wetland Facility

ETC on May 26, 2008, – Appointment of Consulting Engineer for Municipal Class Environmental Assessment Study for a Wetland Facility in the Dingman Creek

ETC on August 22, 2005 – Dingman Creek Subwatershed Study Update: Conclusions and Recommendations.

ETC on February 10, 2003 – Stormwater Management and Drainage Projects ES-2480 Appointment of Consulting Engineer for Subwatershed Study Update for Dingman Creek.

Agenda Item # Page #

BACKGROUND

Purpose:
To appoint the engineering consultant for Phase 2 of the functional and detailed design of the Dingman Creek SWM Erosion Control Wetland in accordance with the recommendations of the Schedule 'B' Municipal Class Environmental Assessment (EA) completed in September 2009.

Context:
Delcan completed the Dingman Creek Subwatershed Study Update (DCSSU) which was subsequently adopted by City Council in 2005. The DCSSU refined the SWM criteria and environmental targets established by the 1995 Dingman Creek Subwatershed Study to maintain and enhance the functions and features of the water resources, ecological, and Natural Heritage Systems. Among the recommended works were three regional on-line SWMFs: two flood control facilities and one erosion control facility. The proposed works are all subject to the requirements of the Municipal Class EA process under the Environmental Assessment Act.

The City of London retained the Delcan Corporation in May 2008 to conduct a Schedule 'B' Municipal Class EA study for the Dingman Creek Stormwater Management Erosion Control Wetland (Dingman Wetland) in accordance with the recommendations and objectives of the Council adopted DCSSU, applicable SWM criteria, and environmental targets. The main objectives of the Dingman Wetland EA study were to evaluate viable options for the recommended erosion control facility as an efficient and cost effective solution to reclaim/remediate the Dingman Creek water resources system, minimize erosion deficiencies, and improve the conveyance and sediment transportation capacity of the creek. The cost of this Class EA study was $236,000. This Municipal Class EA study was completed and accepted by the public and all approval agencies on September 10, 2009.

The Dingman Erosion Control Wetland (DECW) serves an area of 17,200 ha with on-going erosion problems in the main channel. The overall strategy for flood and erosion control identified in the 2005 subwatershed update includes the DECW, which is to help manage mostly rural upstream runoff. When the facility is completed, future development, with additional storage provided off-line, will be able to proceed while maintaining the 1995 conditions in the Creek.

The DECW is the only dedicated facility for erosion control for the Dingman subwatershed with an estimated construction of more than $9.2 M. A number of factors of this project are very innovative, and not typical-related, to the following:

- this SWM Dingman Wetland is designed to function as a SWM Green Infrastructure (the City's second SWM Green Infrastructure);
- the wetland functions are intended to be reclaimed and restored which have been lost mostly due to the agricultural practices;
- the extensive geo-morphological work has been conducted during the Class EA and Phase 1 of the Functional Design to mimic/reproduce the previous, more ecological, conditions and the size of the wetland is very substantial (23 ha);
- the SWM Wetland is functioning in concert with the Dingman Creek system as a whole and the performances are optimized which incorporates the extensive and complex SWM modeling;
- the municipal drain functions are also incorporated to be included in the wetland design, a required realignment of 600 m of the Bannister Johnson Drain;
- support the Southwest Area Plan and VMP storm/drainage and SWM erosion control servicing by providing the SWM erosion control storages within this proposed Dingman Wetland and improving the Dingman Creek Channel conveyance capacity.

The recommended Alternative 3 included the remediation SWM works to eliminate the existing erosive conditions, maintain and enhance the water resources and ecological systems, and allow future development within the subwatershed (see Appendix 'B'). Alternative 3 is a combination of two major recommendations:

Agenda Item # Page #

Recommendation	Purpose	Components
1. Engineered SWM wetland	To prevent future erosion; combined with off-line SWM storages across the Dingman Creek subwatershed, the wetland helps manage the timing of upstream flows.	• Main Creek channel with off-line spill channels • Naturalized floodplain wetland and wooded swamp ecosystem to provide fish and wildlife habitat
2. Spot restoration of Dingman Creek	To reclaim/restore currently eroded sections of the Dingman Creek.	• Combination of bank treatments, channel modifications, and riparian plantings

It being noted that upon successful completion of the functional and detailed design work the City anticipates recommending the award of the construction supervision and administration portion of the project to this consultant;

Discussion:
The Municipal Class EA study recommended that the functional and detailed design of the Dingman Wetland proceed in two phases:

Phase 1 (Substantially Completed)

1) Complete detailed fluvial geomorphologic and water resources modeling of the Dingman Creek Main Channel for the reach downstream of the proposed wetland and confirm the erosion control channel strategy developed in the approved DCSSU.

2) Confirm the land requirements for the Dingman Wetland and strategically manage land purchase requirements by:
    - Utilizing the City lands adjacent to the Wonderland Pumping Station;
    - Considering the future pumping station expansion; and
    - Limiting the potential to landlock adjacent lands.

3) Proceed with the land purchase of the Dingman Wetland.

The first two items were completed in November 2010 and land purchase is in progress.

Phase 2 (Current Phase)
Finalize functional design, complete the detailed design of the Dingman Wetland and confirm the total estimated Growth and Non-Growth cost allocations, upon completing the land purchase for this facility.

In accordance with the report to the Environment and Transporation Committee report dated October 19, 2009, PEESD recommends Delcan undertake Phase 2 of the functional and detailed design for the Dingman Wetland. Once Phase 2 is sucessfully completed, it is PEESD's intention to recommend to Council that Delcan be awarded the Contract Administration and Supervision of the project when it is time for these works to be constructed. The basis for this recommendation is that Delcan was awarded and completed an extensive subwatershed study update (DCSSU) in 2005 and subsequently completed the Dingman Wetland Municipal Class EA in 2008. Delcan has very significant background knowledge for this area, and has a high level of competency as the design consultant and construction administrator for in-stream channel works as demonstrated by their work on the City's Stoney Creek main channel remediation project completed in 2008. Delcan's proposal and work program meets the schedule and delivery requirements to complete the functional and detailed design by July 2012. Assignment of this next phase of work is as per Council's Procurement of Goods and Services Policy, section 15, clause 15.2(g). Also, it should be noted that the City anticipates recommending the award of the construction supervision and administration portion of the project to this consultant.

Agenda Item # Page #

The engineering fees for this project are as follows:

1	the Municipal Class EA Study	$236,000	Awarded as a stand alone project
2	Phase 1 functional design	$225,000	Awarded as the first of 2 phases
3	Phase 2 functional design	$448,000	Recommended for award
	total Ph 1 & 2	**$673,000**	

DECW is designed for erosion control storages for the entire Dingman Subwatershed lands for approximately 17,200 ha with an estimated total cost of approximately $9.2 M. The above-noted cost represents approximately 10% of the total projected cost that corresponds to the project's average cost of this magnitude and is considered to be a good economical cost assessment target.

Conclusions:
Through a review of Delcan's proposal, staff considers this consultant to have demonstrated an understanding of the City's requirements for this project and will provide value to the City. Therefore, it is recommended that Delcan be authorized to complete the functional and detailed design for the Dingman Wetland to the upset limit of $448,000 including contingency excluding HST all in accordance with the recommendations of the Municipal Class EA study.

Acknowledgements:
This report was prepared within the Planning, Environmental Engineering Services Department within the Stormwater Management Unit by Billy Haklander, Environmental Services Engineer.

SUBMITTED BY:	**RECOMMENDED BY:**
BERTA KRICHKER, M.Eng., F.E.C., P. Eng. **MANAGER OF STORMWATER** **STORMWATER MANAGEMENT UNIT**	**RON STANDISH, P.ENG.** **DIRECTOR, WASTEWATER AND TREATMENT – PLANNING, ENVIRONMENTAL AND ENGINEERING SERVICES**

REVIEWED & CONCURRED BY:
PAT MCNALLY, P.ENG. **EXECUTIVE DIRECTOR OF PLANNING, ENVIRONMENTAL AND ENGINEERING SERVICES**

December 13, 2011

/BH

Attach: Appendix "A" – Sources of Financing
Appendix "B" – Location Map

Cc: John Braam-City Engineer
Mary Goss-Budget Analyst
Delcan Corporation