

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MONDAY, JUNE 7, 2017</b>
<b>FROM:</b>	<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL &amp; ENGINEERING SERVICES &amp; CITY ENGINEER</b>
<b>SUBJECT:</b>	<b>CLEAN WATER AND WASTEWATER FUND SINGLE SOURCE PURCHASE OF INLET SCREENS FOR THE ADELAIDE AND POTTERSBURG WASTEWATER TREATMENT PLANTS</b>

<b>RECOMMENDATION</b>
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That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the Single Source purchase of Inlet Screens for the Adelaide and Pottersburg Wastewater Treatment Plants under Sections 7.4 and 14.4 e) of the Procurement of Goods and Services Policy:

- (a) the price submitted by Claroglobal of \$985,820.00 including contingency and excluding HST, for the supply of four (4) inlet screens and ancillary equipment **BE ACCEPTED**; it being noted that this is a single source purchase in accordance with Sections 7.4 and 14.4 (e) of the City of London's Procurement of Goods and Services Policy;
- (b) the financing for this acquisition **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 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 or Purchase Order; and,
- (e) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

<b>PREVIOUS REPORTS PERTINENT TO THIS MATTER</b>
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CWC report of 2016-10-04, item 8, Infrastructure Canada Phase 1-Project Requests-Clean Water and Wastewater Fund

<b>2015-19 STRATEGIC PLAN</b>
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This project supports the Strategic Plan with respect to Building a Sustainable City-Robust Infrastructure, through improvements in wastewater infrastructure.

<b>BACKGROUND</b>
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**Purpose**

The purpose of this report is to seek Municipal Council approval for a single source purchase of four (4) inlet screens and ancillary equipment from Claro Inc. for installation at the Adelaide and Pottersburg plants, based on the performance of similar screens at the City's Vauxhall Wastewater Treatment Plant. Approval for this purchase is requested in accordance with sections 7.4 and 14.4 e) of the Procurement of Goods

and Services Policy, being a specific product is specified for essential functionality purposes (with consideration for operating and maintenance costs) to avoid unacceptable risk, and the required goods and/or services are to be supplied by a particular supplier having special knowledge, skills, expertise or experience.

## **Context**

Claro Step Screens were installed at the Vauxhall plant in 2013 and have shown enhanced removals of solids and grease over other screen installations in the City. Since submitting this project for approval under the CWWF, City staff and Claro representatives have been working on the sizing and design for similar screens at the Adelaide and Pottersburg plants.

# **DISCUSSION**

## **Clean Water and Wastewater Fund**

The first phase of funding for the Clean Water and Wastewater Fund (CWWF) is a 2 year - \$2 Billion Government of Canada investment to meet immediate priorities for clean water and wastewater to support a cleaner and healthier environment for communities. CWWF focuses on investing in projects that:

- Rehabilitate and optimize water, storm water and wastewater related infrastructure;
- Improve asset management approaches including pilots and studies;
- Plan for future upgrades to wastewater treatment and collection infrastructure;
- Include new construction projects like naturalized systems.

The City of London has successfully received funding from the CWWF for the purchase of inlet screens for the Adelaide and Pottersburg Wastewater Treatment Plants.

## **Project Description**

Debris in a wastewater treatment plant influent can cause process backups and broken or plugged equipment. Inlet screens are normally installed in a plant headworks to remove this material before it can cause damage or compromise plant processes. These screens typically consist of a series of evenly spaced bars placed in the influent streams which are manually or automatically raked to remove the debris; all of the debris is normally removed in one cleaning cycle. The step screens installed at the Vauxhall plant allow a mat to form on the screen surface which filters out grease and smaller particles from the process stream. Step screens only remove a small portion of the mat below the surface during a cleaning cycle allowing continued enhanced filtration of the influent stream.

Removing grease in the inlet screens allows it to be contained in odour proof bags along with the removed debris; the traditional grease removal process is a downstream process that involves the use of vacuum trucks and can present noise and odour issues. Problems related to rags in wastewater treatment plant influent are increasing with the use of non-dispersible wipes which, along with the proper disposal of grease, has been the subject of ongoing national educational campaigns.

The Adelaide pumping station is prone to an accumulation of rags and grease due to its large wet well and relatively low flow. Currently the only way to control the buildup is to pump the station down and transfer the material directly to the plant, which routinely plugs pumps and results in the accumulation of large rag balls on process equipment. Removal of these accumulations may involve a confined space entry and the associated safety risks. Grease collects on tank surfaces and is usually removed through the use of skimmers. Any grease or debris reaching the final clarifier tanks cannot be collected and may be discharged with the treated plant effluent.

The Pottersburg plant experiences similar problems as Adelaide. However, Pottersburg

only has one automatically cleaned screen which increases the potential for a plant bypass should the screen fail.

Annually the City spends approximately \$20,000 for contracted grease removal and another \$40,000 in staff time related to the removal of grease and debris from these plants in contrast to only \$13,000 total at the Vauxhall plant. Installation of the Claro screens at Adelaide and Pottersburg will help reduce these costs and provides process, odour, environmental and safety related benefits.

Representatives from Claro were contacted in mid-October to confirm the step screens could be used in the existing channels with minimal modifications. Based on their preliminary work and site visits with City staff, Claro has provided equipment layouts and pricing in preparation for the approval of CWWF funding. Under this project two automated screens will be upgraded at the Adelaide plant along with one automated and one manually cleaned screen at Pottersburg.

<b>CONCLUSIONS</b>
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It is anticipated that the Adelaide and Pottersburg wastewater treatment plants will experience benefits similar to those at the Vauxhall Plant following the installation of the Claro screens. This equipment will be purchased and installed under Phase 1 of the CWWF.

**Acknowledgements**

This report was prepared with the help of Kirby Oudekerk, P.Eng. Environmental Services Engineer and Mark Elliott CET. Senior Technologist, both of the Wastewater Treatment Operations Division.

<b>PREPARED BY:</b>	<b>REVIEWED AND CONCURRED BY:</b>
<b>GEORDIE GAULD, DIVISION MANAGER WASTEWATER TREATMENT OPERATIONS</b>	<b>JOHN LUCAS, P. ENG. DIRECTOR, WATER AND WASTEWATER</b>
<b>RECOMMENDED BY:</b>	
<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>	

Attach: Appendix "A"- Sources of Financing

cc: Claro Inc, 3065, rue Peugeot, Suite 100, Laval, QC H7L 5C4, Canada