

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON FEBRUARY 21, 2018</b>
<b>FROM:</b>	<b>KELLY SCHERR, P.ENG. MANAGING DIRECTOR OF ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER</b>
<b>SUBJECT</b>	<b>SINGLE SOURCE PURCHASE OF ONE TURBO BLOWER FOR THE GREENWAY WASTEWATER TREATMENT PLANT</b>

<b>RECOMMENDATION</b>
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That on the recommendation of the Managing Director of Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the single source purchase of an APG-Neuros blower for the Greenway wastewater treatment plant under Section 14.4 e) and g) of the City's Procurement of Goods and Services Policy.:

- (a) the price submitted by APG-Neuros of \$415,000, excluding HST, for the supply of one blower and associated components **BE ACCEPTED**;
- (b) the financing for these acquisitions **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 for the work to be done relating to this project; 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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Civic Works Committee - August 29, 2017 - Single source electrical and mechanical services for the turbo blower installations at the Greenway Wastewater Treatment Plant as reported to Civic Works Committee

Civic Works Committee - August 22, 2016 - Single Source Purchase of Turbo Blowers for the Greenway Wastewater Treatment Plant as reported to Civic Works Committee

Civic Works Committee - April 28, 2014 - Supply of Turbo Blower Systems for Vauxhall, Adelaide and Oxford Wastewater Treatment Plants as reported to Civic Works Committee

## 2015-19 STRATEGIC PLAN

This project supports the Wastewater Business Plan and the Strategic Plan with respect to building a sustainable city-robust infrastructure through investments in energy reduction.

### **Corporate Energy Conservation and Demand Management (CDM) Plan**

The City's CDM Plan seeks to reduce the Corporation's annual energy consumption by 10 percent, or 30 million equivalent kilowatt-hours (ekWh), from 2014 levels by 2020. The turbo blowers installed at the Greenway, Adelaide, Oxford and Vauxhall plants, along with the organic Rankine cycle system purchased for Greenway, will provide 37% of the City's 30 million ekWh goal. Aeration blowers normally have the highest energy requirement in a wastewater treatment plant.

## BACKGROUND

### **Purpose**

To seek Council approval to purchase one additional turbo blower and associated components from APG- Neuros for section three of the Greenway wastewater treatment plant. This will be a single source purchase under Section 14.4 e) and g) of the city's Procurement of Goods and Services Policy.

### **Context**

The City purchased five APG –Neuros blowers for Greenway in 2016, with 75% funding through the Clean Water and Wastewater Fund (CWWF). A recent optimization study has identified an additional 30% of treatment capacity in Greenway section three, which will require additional blower capacity. The blower recommended for purchase will help provide the required aeration capacity, and is also eligible for funding under the 75% funding through the Clean Water and Wastewater Fund. The quoted priced provide by the vendor for this blower is the same as the one quoted in the 2016 request for proposal.

## DISCUSSION

In 2013 the City completed an evaluation of available turbo blower suppliers, with consideration given to a study conducted by the Ontario Clean Water Agency and a technical review and recommendation by Stantec Consulting, showing APG-Neuros with the lowest life-cycle cost. Based on this review, five blowers were purchased in 2014 for the Adelaide, Oxford, and Vauxhall treatment plants with a verified average simple payback of 15 months. Six blowers were purchased in 2016 for the Greenway plant based on available energy savings, incentives and CWWF funding.

Following these upgrades, it was determined that additional treatment capacity and redundancy could be provided by adding a seventh blower. Replacement of the blower would also result in energy savings, provide additional treatment capacity and provide system redundancy. The addition of the seventh blower to the Greenway blower replacement project will result in an expected payback of 11 months overall, based on anticipated energy savings, incentives and CWWF funding

## Project Funding

This project was approved under the CWWF program for \$3,098,000. The current commitments against this project total \$2,847,762, leaving an available balance of \$250,239. In order to realize the maximum energy efficiencies and the extra capacity as discussed above, an additional expenditure of approximately \$589,000 will be required for the purchase and installation of another blower and actuators. This brings the total cost of the project to \$3,437,000; however, there is currently only \$3,098,000 approved for CWWF funding for this project. This leaves a shortfall of \$339,000.

There are provisions within the CWWF agreement to amend sub-project budgets within the total funding envelope. Administration is currently drafting a budget amendment from Infrastructure Ontario to move any available funds from other projects to cover the above increased costs on this project. In the likely event that this amendment is approved, the remaining municipal portion of the funding will be released to reserves.

<b>CONCLUSIONS</b>
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The purchase and installation of an additional turbo blower at Greenway will allow the plant to treat more flow in three section and maximize the current CWWF funding for this project.

## Acknowledgements

This report was prepared within the Wastewater Treatment Operations Division by Mark Spitzig, Operations Manager.

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

Attach: Appendix "A" – Sources of Financing

CC. John Freeman – City of London  
Jason Davies- City of London  
Maxime Chartrand- APG-Neuros