

## Report to Civic Works Committee

**To:** Chair and Members  
Civic Works Committee

**From:** Kelly Scherr, P.Eng., MBA, FEC  
Deputy City Manager, Environment & Infrastructure

**Subject:** Emergency Repair of Centrifuges at Greenway Wastewater Treatment Plant

**Date:** September 10, 2024

## Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions **BE TAKEN** with respect to the emergency repair of the centrifuges at the Greenway Wastewater Treatment Plant:

- a) The purchase orders issued for emergency repairs to the centrifuges at Greenway Wastewater Treatment Plant under Section 14.2 of the Procurement of Goods and Services Policy at a total cost of \$325,017.49 (HST excluded), **BE CONFIRMED**;
- b) The financing for this project **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendix 'A';
- c) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations; and
- d) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project.

## Executive Summary

### Purpose

This report informs Council of multiple purchase orders that were issued to complete emergency repairs on dewatering centrifuges at Greenway Wastewater Treatment Plant.

### Context

Dewatering is an integral part of the solids handling facility at Greenway that services all five wastewater treatment plants in the City of London. Returning the damaged centrifuges to active service is an urgent priority to maintain reliable solids processing for the City.

## Linkage to the Corporate Strategic Plan

This report supports the 2023-2027 Corporate Strategic Plan by contributing to the following outcome:

- Climate Action and Sustainable Growth
  - London's infrastructure and systems are built, maintained, and operated to meet the long-term needs of the community.

## Analysis

### 1.0 Background Information

#### 1.1 Purpose

The purpose of this report is to inform Council of a decision by administration to award

multiple purchase orders for the repair of three sludge dewatering centrifuges at the Greenway Wastewater Treatment Plant. The essential role of the centrifuges in the wastewater treatment process is described in this report, as is the nature of the procurements undertaken.

## **2.0 Discussion and Considerations**

### **2.1 Greenway WWTP Sludge Dewatering and Centrifuge Failures**

The Greenway Wastewater Treatment Plant is the City's largest treatment plant. It is also the location of a centralized solids handling facility that processes the waste sludge removed from wastewater at all five City wastewater treatment plants in preparation for disposal. This final stage of the treatment process is essential for the safe and effective operation of the treatment facilities to ensure the protection of public health and the environment.

The City has two options for solids disposal available. The primary mode of disposal involves the incineration of waste solids, with landfilling of the inert ash by-product as the final disposal. The secondary mode involves utilizing a chemical stabilization process that allows for either the beneficial re-use of those waste solids as an agricultural fertilizer or landfilling, depending on land availability and solids characteristics. The secondary mode is what has been set up as the primary disposal mode during the incinerator re-build currently underway.

Specific to the emergency nature of the centrifuge repairs, both the primary and secondary modes of solids disposal rely on the dewatering centrifuges. It is not possible for the City to dispose of waste solids without functioning dewatering centrifuges. Greenway has three (3) centrifuges installed, two (2) duty capable of handling daily loads and one (1) standby in case of failure. Once a single centrifuge is taken out of service, the risk is elevated for Greenway operations. Repair times can be lengthy (4 months or more), meaning any subsequent failure of the remaining two centrifuges during this period of time leaves the City unable to dewater enough sludge to meet process demands.

The City conducts annual and 3-year preventive maintenance cycles on each centrifuge, but premature failures can still occur that create this high risk situation for Wastewater Treatment Operations.

### **2.3 Purchasing Process and Establishing Vendor of Record**

In this situation, a routine inspection of centrifuge #11 in November 2023 identified an imminent risk of failure. The decision was made at that time to invoke Clause 14.2 of the Procurement of Goods and Services Policy to allow for the purchase order for the repairs to be made immediately.

#### **"14.2 Procurement in Emergencies**

For the purposes of this section, "Emergency" means an event or occurrence that the City Manager or Deputy City Manager deem as an immediate threat to:

- Public health;
- The maintenance of essential City services; or
- The welfare and protection of persons, property, or the environment; and the event or occurrence necessitates the immediate need for goods or services to mitigate the emergency and time does not permit for a competitive procurement process.

Where the procurement cost to mitigate the Emergency is anticipated to exceed \$50,000, the emergency procurement shall be reported by the responsible Deputy City Manager to Committee and City Council (including the source of financing) at the next scheduled meeting following the event."

The unit was removed from service immediately and sent to Flottweg Canada for service. That repair was completed by late February 2024.

Unfortunately, before centrifuge #11 could be repaired and returned to service, centrifuge #12 experienced a bearing failure, requiring it to be removed from service as well, leaving the City with only one functional centrifuge. The decision was again made to invoke Section 14.2 of the Policy in order to initiate that repair as soon as possible. That repair was able to be completed at Greenway by Flottweg technicians, but the lead time for parts meant centrifuge #12 was not returned to service until April 17, 2024. Finally, shortly after centrifuges #11 and #12 were returned to service, centrifuge #13 failed. Fortunately that rebuild was completed offsite but was able to be completed prior to the incinerator shutdown in August.

Of note in this situation, the ability to repair the City's centrifuges has been restricted to a single vendor, who is also the original equipment manufacturer: Flottweg Canada.

### **3.0 Financial Impact/Considerations**

As described, there were three separate repairs required. The repair of centrifuge #11 cost \$99,190.70, plus HST, the repair of centrifuge #12 cost \$90,256.88, plus HST and the repair of centrifuge #13 cost \$135,569.91, plus HST.

While the unexpected nature of the repairs warranted treating this situation as an emergency procurement, this type of work is accounted for and funding is available in the current multi-year budget.

## **Conclusion**

Sludge incineration is an essential part of the City's wastewater solids disposal strategy. Incinerator shut-downs are costly occurrences. When those shut-downs are unplanned the level of operational risk to wastewater treatment processes is greatly increased. By invoking the emergency procurement measures available under the Procurement of Goods and Services Policy, Wastewater Treatment Operations was able to return critical equipment to normal operation without impacting service delivery.

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Director, Water, Wastewater and Stormwater

**Recommended by:** Kelly Scherr, P. Eng., MBA, FEC  
Deputy City Manager, Environment & Infrastructure

Appendix 'A' Source of Financing

cc: Steve Mollon, Senior Manager, Procurement and Supply  
Alan Dunbar, Manager III, Financial Planning and Policy  
Zeina Nsair, Financial Business Administrator, Finance and Corporate Services