



City of  
**Peterborough**

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**To:** Members of the Committee of the Whole

**From:** W.H. Jackson, Director of Utility Services

**Meeting Date:** February 6, 2016

**Subject:** Report USEP17-001  
Establishment of a Budget for the Repair of Digester #4

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## **Purpose**

A report to recommend the establishment of a budget for the repair of Digester #4 at the Wastewater Treatment Plant.

## **Recommendations**

That Council approve the recommendations outlined in Report USEP17-001 dated February 6, 2017, of the Director of Utility Services as follows:

- a) That a 2017 Capital Budget in the amount of \$2,034,000 be created for the design, tender and contract administration for the repair of Digester #4 at the City of Peterborough Wastewater Treatment Plant; and
- b) That funding for the capital budget referenced in Recommendation a) come from the funds remaining in the 2015 Capital Budget for repairs to Digester #3.

## **Budget and Financial Implications**

Based on estimated prices, the budget required to provide consulting services to design, tender and administer the repair of Digester #4 as well as the actual repair are shown in Table 1. The repair of Digester #4 will be funded from the Wastewater Reserve Fund which will have \$1,162,914.00 remaining after the draw for this project.

Table 1: Estimated Costs to Design, Tender, Contract Administer and Repair Digester #4.

Line	Description	Amount
1	Digester Repair	\$1,300,000
2	Engineering and Contract Administration	\$ 260,000
3	Contingency	\$ 240,000
4	HST Payable by the City	\$ 31,680
5	<b>Total Estimated Project Cost (Net of HST rebate)</b>	<b>\$ 1,831,680</b>

The cost of \$1,831,680 net of HST rebate will be funded from funds available from the 2015 Capital Budget for repairs to Digester #3.

## Background

### Brief Description of the Work

The Wastewater Treatment Plant (WWTP) has four digesters. Two digesters (#1 and #2) are old and need replacing. Digester #2 is off-line because the roof leaks and methane gas can escape to the atmosphere. A further report on the disposition of these digesters will be forthcoming later in 2017.

The other two digesters (#3 and #4) are the mainstays of the treatment regime at the WWTP and are used both as primary and secondary digesters. Digester #3 is presently undergoing extensive repair and rehabilitation and is expected to be back in service the last quarter of 2017. Only Digesters #1 and #4 are in service at this time.

Digester #4 was built in 2000. This digester was recently cleaned and some rehabilitation work was performed but because of the need to bring this digester back on stream quickly so that the works on Digester #3 could be undertaken, and because of budget constraints, the gas proofing of Digester #4 was not completed. It was anticipated that a budget request to undertake this work would be submitted with the 2018 draft budget. Although the gas proofing was scheduled for 2018, the sooner this is done the better because gas proofing protects the inside walls from prematurely aging thereby extending the life expectancy. Therefore, any advance on the scheduling of this work is to the overall benefit of the facility.

### Availability of Funding

Council, at its meeting of November 9, 2015 established a budget of \$6,590,000 for the design, tender, contract administration and repair of Digester #3. Further, Council, at its meeting of April 4, 2016 in considering Report USEP16-002 approved the award of RFP P-28-15 to MTEW Consultants Inc. for the detailed design and contract administration for the rebuild of Digester #3 at a cost of \$551,401.82 net of HST rebates. The tender for the rehabilitation of Digester #3 (\$2,266,856.64 net of HST rebates) has come in significantly under budget. The reasons for this were because:

- The budget was created before the full extent of the repair to the roof of Digester #3 was known. When the final design was done, it turned out the roof does not need to be fully replaced; and
- The pricing provided by the contractors was very competitive and below what had been estimated.

The additional required work for Digester #4 was scheduled to be included in the 2018 Capital Budget but because the total project cost to repair Digester #3 has come in \$3,771,741.54 below the budgeted amount, this presents an ideal opportunity to transfer funds and get the necessary work done on Digester #4 earlier than expected.

### **Estimated Cost of Work**

A preliminary cost analysis has been undertaken as shown in Table 1 of this report. This analysis is based on recent information and, accordingly, is believed to be representative of the funding required to undertake the proposed works.

### **Timelines**

The WWTP needs both Digesters #3 and #4 operating together. At the least, one digester must be operational at all times. Accordingly, work on Digester #4 cannot begin until the present rehabilitation of Digester #3 is complete and Digester #3 is back on line.

It is anticipated that Digester #3 will be fully operational by the last quarter of 2017. It is therefore proposed that the tender for works on Digester #4 be issued in the second or third quarter of 2017 with the actual work to begin once Digester #3 is up and running.

It is expected that work on Digester #4 will take approximately six months to complete.

### **Summary**

Funding unexpectedly came available to allow the completion of rehabilitation work on Digester #4 earlier than anticipated. This will allow both of the mainstay digesters at the WWTP to be fully rehabilitated and back in full operation almost a year to two years ahead of schedule.

Submitted by,

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