

DECISION/DIRECTION NOTE

Title: Windsor Lake Water Treatment Plant Capital Reserve Fund
Replacement of High Zone Pumping Station Emergency Diesel Generator

Date Prepared: January 23, 2020

Report To: Committee of the Whole

Councillor & Role: Councillor Ian Froude, Public Works and Sustainability Lead

Ward: Not ward specific

Decision/Direction Required:

To seek a decision on proceeding with a purchase from the Capital Reserve Fund to replace the existing High Zone Pumping Station Emergency Diesel Generator at the Windsor Lake Water Treatment Plant.

Discussion – Background and Current Status:

The Windsor Lake Water Treatment Plant (WTP) Capital Reserve Fund is being requested to be used for the supply and install of a new High Zone Pumping Station emergency diesel generator along with necessary controls equipment. The existing generator has been in service for over thirty (30) years and was initially designed to provide backup power to the first treatment facility at the site. Major repairs over recent years combined with the fact that spare parts for the generator and control panel are no longer readily available have significantly reduced reliability and warrant the replacement of this unit. This equipment is critical in that it provides emergency backup power to the High Zone Pumping Station which supplies treated water to the Airport Heights service area.

From a climate change consideration, consumption of diesel fuel is anticipated to be lower for a modern and properly sized emergency diesel generator.

The total estimated cost to replace this equipment, including engineering design and installation, is \$500,000.00 + HST.

The High Zone Pumping Station emergency diesel generator was not originally included in the Capital Reserve Fund list of critical equipment developed in 2015. However, this equipment does meet the qualifications of the Fund in that the generator is a critical water treatment asset which exceeds the replacement threshold of \$25,000. It is the intention of the Water & Wastewater Division to review the list of critical equipment included in this Fund every five (5) years to add/remove equipment where necessary, while adjusting for market value at the time. This plan is scheduled to be reviewed again in 2020.



Key Considerations/Implications:

1. Budget/Financial Implications

Funding has been identified within the Windsor Lake WTP Capital Reserve Fund to support this equipment replacement project. A detailed breakdown of 2016-2019 contributions less purchases made through this Program is provided as follows:

0000-36889 Reserve for Windsor Lake WTP Equipment Replacement

2016 Contribution	\$350,000.00
2017 Contribution	\$350,000.00
Less: UPS Replacement	\$(68,920.75)
2018 Contribution	\$350,000.00
Less: Secondary Cell #1 Membrane Modules	\$(88,636.09)
2019 Contribution	\$350,000.00
Less: SCADA Server Upgrades	\$(169,065.55)
Balance	\$1,073,377.61

2. Partners or Other Stakeholders

N/A

3. Alignment with Strategic Directions/Adopted Plans

- **Strategic Plan 2019-2029 Goal: A Sustainable City**

Development of a Capital Reserve Fund at the Windsor Lake WTP provides the ability to replace critical equipment in a timely and appropriate manner, avoiding unplanned maintenance and unexpected costs.

4. Legal or Policy Implications

N/A

5. Engagement and Communications Considerations

N/A

6. Human Resource Implications

N/A

7. Procurement Implications

The estimated timeframe for the replacement emergency diesel generator and controls equipment is approximately 6 months.

8. Information Technology Implications

N/A

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9. Other Implications

N/A

Recommendation:

The High Zone Pumping Station emergency diesel generator is an essential piece of equipment which is necessary to provide redundancy of power availability for the continuous supply of treated water to the Airport Heights service area. It is recommended that funding be made available through the Capital Reserve Fund to support the purchase and installation of this equipment.

Prepared by/Signature:

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Signature: _____

Approved by/Date/Signature:

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Signature: _____

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