

Presented To:	Operations Committee
Presented:	Monday, Oct 21, 2013
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Type:	Managers' Reports

For Information Only

Gatchell Outfall Emergency Work and EA Status

Recommendation

For Information Only. Report to Council in accordance with the CGS Purchasing By-law, Section 22 - Emergency Purchases.

Finance Implications

Emergency Costs:

Costs related to the 2013 Emergency Work were approximately \$415,000.00. The previous capital budget allocation for the detailed design of this trunk sewermain was utilized to complete the emergency work.

EA & Geotechnical / Monitoring Costs:

Costs (previous and future) to complete the EA are approximately \$500,000.00, which include:

- 1) EA Study by RV Anderson Associates Ltd. =\$125,000
- 2) Geotechnical Study to Support the EA & On-going creek bank monitoring by AMEC Environment & Infrastructure = \$375,000

The previous capital budget allocation for the detailed design of this trunk sewermain was also utilized to fund the deficits in the EA and Geotechnical accounts.

A final report will be presented to Council including a breakdown of the emergency and related costs, once known.

Estimated Future Costs:

The 2014-2018 Wastewater Capital budget submission includes for the detailed design / contract administration and construction of the long term solution (as determined by the EA), including:

- 1) Detailed Design, Contract Administration & Inspection (2014) = \$1,000,000
- 2) Construction (2015) = \$5,000,000

Signed By

Report Prepared By

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Digitally Signed Oct 10, 13

Division Review

Nick Benkovich
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Recommended by the Department

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Recommended by the C.A.O.

Doug Nadorozny
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Background

In late April 2013, citizens reported a notable slippage of the north bank of Junction Creek along the newly constructed walking trail, just east of Kelly Lake Road.

City staff attended the site and confirmed that the trunk sanitary sewer that is located under the trail (along the creek bank) had not been impacted. Staff then began to review immediate risks and alternative solutions for creek bank stabilization. During the weeks following the initial inspection, the bank continued to move and the sanitary sewer was at risk of catastrophic failure. This would have impacted the sanitary service to the residents of Gatchell and caused an environmental spill of sewage to the creek. As well, the newly constructed trail along the sewer easement was closed for safety reasons, with signs posted and security fencing installed.

The City initiated an operational contingency plan which included bypass pumping of the wastewater around the impacted area (requiring 24 hour surveillance) and placing stabilization materials along the impacted creek bank. Access to the site was graciously afforded by Centis Tile and Terrazzo, Remacan Industries and CanWelBroadleaf.

Geotechnical experts monitored the bank for movement. The sanitary sewer main was inspected using Closed Circuit Television (CCTV) equipment through the impacted section. On June 22, 2013, it was confirmed that the creek bank had stopped moving and the sewer functionality had not been impacted. The bypass pumping system was then turned off, with the piping remaining in-place for the future if required. The trail was repaired and re-opened on August 2, 2013. Bank monitoring is currently on-going. A more extensive monitoring system is being reviewed, which is intended to provide indication of a problem before a catastrophic failure occurs. This system will remain in-place until a long term solution for the replacement of the sanitary sewer is implemented. Security fencing also remains on-site and will be utilized if deemed necessary by the bank slope monitoring results.

Class EA Study:

In May 2007, the north bank of Junction Creek, upstream of Kelly Lake Road experienced a slope failure. This exposed and caused a break in a portion of the City's trunk sanitary sewermain, known as the Gatchell Outfall Sewer. Emergency repairs were implemented to maintain sanitary sewer service to the residences and businesses in the Gatchell area as well as a portion of Copper Street serviced by this section of sewer.

It was determined that permanent repairs to the failed section of sewer would be extremely complex and costly. The City concluded to undertake a Municipal Class EA to identify, evaluate, and confirm the preferred long-term solution for the replacement of this section of the Gatchell Outfall Sewer. The City retained R.V. Anderson Associates Limited to complete the EA and also retained AMEC Environment & Infrastructure to complete a geotechnical investigation to support the EA. As AMEC was already completing the geotechnical investigation for the EA, they were also retained to review immediate risks and alternative solutions for creek bank stabilization at the time of the 2013 bank failure. As well, they are performing the on-going monitoring of the creek bank, until a long term solution for the replacement of the sanitary sewer is implemented.

Historical records confirm that the construction of the trunk sanitary sewer along the creek bank experienced many challenges during its original installation due to poor soils. Replacement of this sewermain requires much consideration due to the added complexity of adjacent land use changes and more stringent approvals processes since the original construction. The evaluation matrix for the EA alternatives is currently being updated to include consideration for the newly constructed walking trail. The anticipated completion date for the EA Study is late 2013. The detailed design for the preferred solution will occur during 2014 and it is anticipated that construction will commence in 2015.