



Staff Report for Committee of the Whole Meeting

Date of Meeting: June 7, 2023

Report Number: SRPI.23.056

Department: Planning and Infrastructure
Division: Infrastructure and Engineering Services

Subject: Request for In-Year Budget Increase for the
West Beaver Creek Pond Capital Project

Purpose:

To authorize an in-year budget increase for capital project budget as well as an increase in funding.

That Council authorize the City Treasurer to apply the required budget amendment to the existing approved capital project arising from the tender process for the West Beaver Creek Pond A (SWMF 27-2) rehabilitation construction project.

Recommendation(s):

- a) That Council authorize and increase the amount of the City's capital project West Beaver Creek Pond A (SWMF 27-2) Rehabilitation. account P/000560, by \$890,000, from \$3,777,500 to \$4,667,500;
- b) That the capital project budget increase be funded from the following sources:
 - i. That \$270,000.00 of the increase be funded through the Sanitary Sewer Repair and Replacement Reserve Fund;
 - ii. \$620,000.00 from the Water Quality Protection Reserve Fund;
- c) That staff continue with the award of this contract to the low bidder.

Contact Person:

Bob Levesque, Director, Infrastructure Delivery Division, extension 2947

Mohammad Kashani, Manager, Design and Construction, Infrastructure Delivery Division, extension 5479

Report Approval:

Submitted by: Kelvin Kwan, Commissioner of Planning and Infrastructure

Approved by: Darlene Joslin, City Manager

All reports are electronically reviewed and/or approved by the Division Director, Treasurer (as required), City Solicitor (as required), Commissioner, and City Manager. Details of the reports approval are attached.

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Background:

The project is required to maintain legislative compliance and restore the asset to a functioning state of good repair

The West Beaver Creek Pond A (SWMF 27-2) is currently experiencing operational concerns that render it non-compliant with current Provincial approval/legislation. Furthermore, the erosion of the primary outlet berm poses a significant risk to the sanitary sewer line. To address these concerns, this rehabilitation project has been prioritized to restore the proper functioning of the pond and reinforce the outlet berm's integrity. The construction tender for the rehabilitation of the stormwater management pond located at the north-west corner of Highway 7 and West Beaver Creek Road referred to as West Beaver Creek Pond A (SWMF 27-2) closed on April 4, 2023. The lowest bid received was higher than the available budget. Industry wide construction cost inflation is occurring in southern Ontario making it difficult to meet budgets based on 2022 market conditions. The base contract exceeds the 2023 approved capital budget by \$338,537. To award this contract, an additional \$890,000 is required which will allow for the inclusion of the typical contingency of 10%.

The lowest bid received was 9% higher than the approved available budget

The Request for Quotation (RFQ- 2310116) to rehabilitate the West Beaver Creek Pond A (SWMF 27-2) was issued on March 2, 2023, and closed on April 4, 2023. Early tenders usually receive competitive pricing. Twenty-five (25) plans from the open market request for quotation were taken and five (5) bids were submitted. Three (3) bids that met the qualifications were evaluated. All three (3) bids evaluated were compliant with the Procurement By-Law.

The construction budget available for this project is \$3,777,500 and the final 2023 engineer's estimate of the construction cost is \$3,441,050.

However, all three (3) bids we received were higher than the available construction budget. The lowest bid was \$4,116,042, which is 20% higher than the engineer's estimate which is prepared either by considering the estimate of a recently awarded contract cost or either by considering the actual required performance of work including current competitive market costs of labor, equipment, material, production quality and rates etc.

Construction cost inflation, increases in material and labour costs, as well as shortages in materials and labour, mainly cause the variance between the lowest bid and the budget

The engineer's estimate was based on historical data from similar projects. After analyzing the lowest bid, it was found that the unit prices in the lowest bid were mostly higher than those in the engineer's estimate. The cost increase is primarily due to inflation in construction costs, increases in material and labour costs, as well as shortages in materials and labour.

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The disruption in the global supply chain is also actively driving up the prices of construction materials

The Ontario Sewer & Watermain Construction Association's notice dated May 6, 2021 (Attachment #2), states that global supply chain disruptions have led to a surge in construction material costs, primarily due to a shortage of raw materials and an increase in product demand. This has resulted in unpredictable delivery times and significant fluctuations in material prices. Going forward, municipalities must adjust their budgets and expectations to account for material payment adjustments and delivery delays.

Urgent concerns over construction inflation and its impact on Ontario's public infrastructure projects

On March 18, 2022, the Ontario Sewer & Watermain Construction Association sent a letter (Attachment #3) to the Premier of Ontario expressing urgent concern about the current inflationary environment for construction materials and labour.

The global pandemic and a resurgent economy have led to high demand for common construction materials, coupled with production issues, transportation constraints, and port capacity, resulting in record high prices for key materials such as fuel, steel, and lumber. This skyrocketing trend in the price of fuel and input costs has already led to serious supply-chain impacts for aggregate-dependent industries such as concrete and asphalt production.

Financial/Staffing/Other Implications:

An additional \$890,000 budget is required for the construction to rehabilitate the storm water management pond including structural repairs to protect an existing sanitary sewer crossing

The additional funding breakdown of the \$890,000 is provided below:

- \$620,000 from Water Quality Protection Reserve Fund for the storm component.
- \$270,000 from the Sanitary Repair and replacement Reserve Fund for the sanitary component.

The total available budget for the construction phase is \$3,777,500 as detailed in Table 1 below.

Table 1 – Available Budget (P/000560) and Lowest Bid

Source	Amount
2023 Construction Budget (P/000560.02)	\$3,561,600
Remaining 2021/22 Design Budget (P/000560.01)	\$215,900
Total Available Budget	\$3,777,500

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Table 2 below summarizes the total estimated construction costs including contingency and all other required associated costs. Typically, projects of this scope and complexity carry a contingency of 10%.

Table 2 – Total Estimated Construction Cost

	Amount
Lowest Bid	\$4,116,042
1.76% non-recoverable HST	\$72,443
	\$4,188,487
10% Contingency	\$418,900
Geotechnical Consultant Fee (estimate)	\$60,000
Total Estimated Construction Cost (rounded)	\$4,667,500

Table 3 summarizes the extra funds needed, which amount to \$890,000. These funds will cover a 10% contingency and other expenses outlined in Table 3. If approved, the funds will be added to the project budget, in accordance with the Capital Budget Financial Monitoring Policy's Section 2. The additional funds will be used to address unforeseen issues, pay geotechnical consultant fees, and cover miscellaneous expenses.

Table 3 – Required Additional funds

	Amount
Total Available Budget	\$3,777,500
Total Estimated Construction Cost	\$4,667,500
Required Additional Funds	\$890,000

Relationship to Council's Strategic Priorities 2020-2022:

Balancing Growth and Green

By rehabilitating West Beaver Creek Pond A (SWMF 27-2) the City is balancing growth and green by considering current stormwater management needs and criteria while conserving and protecting our water resources, improving our natural heritage and urban forest and managing invasive species. The rehabilitated facility will reduce the risk of flooding and erosion while improving the water quality of the stormwater before it enters into the natural valleyland systems. Additionally, by rehabilitating the existing waterbody to the north of the West Beaver Creek Pond A (SWMF 27-2), the City is enhancing the habitat for native species and species at risk, while managing invasive species.

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Furthermore, during the detailed design it was ensured that the least amount of earthworks and tree removals were required to rehabilitate the facility while providing greater nature enhancements and tree plantings.

Climate Change Considerations:

Climate change is expected to significantly impact stormwater management. As identified in the City's 2020 Climate Change Framework, changing climate conditions such as intense rainfall, more ice storms and more freeze-thaw cycles will have real impacts and consequences for the City and its residents. This project is renewing the City's stormwater infrastructure which will make it more resilient and will contribute to climate change adaptation by reducing the risk of flooding and erosion.

Conclusion:

- The lowest bid received for the tender is higher than the available budget.
- The construction cost inflation is caused by industry-wide material and labor cost increases, as well as material and labor shortages.
- To complete the project, an additional \$890,000 budget increase is required, including a 10% contingency, as outlined in Section 2 of the Capital Budget Financial Monitoring Policy.

Attachments:

The following attached documents may include scanned images of appendixes, maps and photographs. All attachments have been reviewed and made accessible. If you require an alternative format please call the contact person listed in this document.

- Attachment #1 – Location Map
- Attachment #2 – Ontario Sewer & Watermain Construction Association memo dated May 6, 2021
- Attachment #3 – Ontario Sewer & Watermain Construction Association letter dated March 18, 2022

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Report Approval Details

Document Title:	SRPI.23.056 Request for In-Year Budget Approval and Increase for the Beaver Creek Pond Capital Project.docx
Attachments:	- Attachment 1 - Location Map.pdf - Attachment 2 - OSWC Memo.pdf - Attachment 3 - OSWC letter to Premier.pdf
Final Approval Date:	May 9, 2023

This report and all of its attachments were approved and signed as outlined below:

Bob Levesque - May 8, 2023 - 1:02 PM

Shirley Tu on behalf of Gigi Li - May 8, 2023 - 2:48 PM

Paolo Masaro - May 9, 2023 - 9:09 AM

Kelvin Kwan - May 9, 2023 - 1:31 PM

Darlene Joslin - May 9, 2023 - 1:55 PM