**Subject**: Request for Additional Funds for Quarry Road Landfill Leachate Management System Upgrades

**Report to:** Public Works Committee

**Report date:** Tuesday, April 8, 2025

## Recommendations

1. That the gross capital budget for the Quarry Road Landfill Leachate Management System Upgrades **BE INCREASED** by $761,500 and that the increase **BE FUNDED** from the Capital Variance Project – Waste Management.

## Key Facts

- This report seeks Council's approval to increase the gross capital budget for Project 10GL1325 (Quarry Road Landfill - Site Improvements) by $761,500 to support the completion of the project and allow the award of 2024-T-165 Quarry Road Landfill Leachate Management System Upgrades to the lowest bidder.
- The engineering design and estimate process was completed in 2022, with budget adjustments made in both 2022 and 2023. Despite these adjustments, all bid submissions exceeded the budget. The higher tender amounts can be attributed to several factors, including revisions to the electrical drawing package during the tendering process to upgrade the main line to the property.
- The current approved capital budget for this initiative is $3,385,000. With the approval of the proposed capital budget adjustment of $761,500, funded through the Capital Variance Project (CVP) – Waste Management, the total project budget will increase to $4,146,500.
- The purpose of this project is to upgrade the treatment of landfill leachate from the closed Quarry Road Landfill Site, thereby protecting the quality of downstream surface water.
- Per the Budget Control By-Law section 6.5(c)(iii), Council approval is required for Capital Variance requests greater than $250,000.
- The Ministry of Environment, Conservation and Parks Niagara District Office has expressed an interest in having this project completed in a timely manner.

## Financial Considerations

The approved gross capital budget for the Quarry Road Landfill project (Project 10GL1325) is $3,385,000. The project includes environmental assessment, design, and construction of the upgraded leachate management system at the Quarry Road Landfill.

As of February 25, 2025, a total of $3,313,259 has been expended and committed to this project, of which $2,340,485 was committed to allow for the award of 2024-T-165 Quarry Road Landfill Leachate Management System Upgrades. The lowest compliant bid submission received was $3,051,538 (including non-recoverable HST) which results in a budget shortfall of $711,053 for this tender. Additionally, there are further project related costs estimated at $122,188 (including non-recoverable HST) to complete the project which will be allocated to construction, project contingency, and staff costs incurred for project management.

Therefore, the estimated remaining costs to complete the leachate management system upgrades are $833,241 which will bring the total revised project cost to $4,146,500 (including non-recoverable HST). As a result, a gross capital budget increase of $761,500 is being requested to cover the remaining estimated costs, funded from the CVP – Waste Management. A full breakdown of costs can be found in Appendix 1 to Report PW 18-2025 – Total Estimated Project Cost.

As of February 25, 2025, the uncommitted balance in the CVP – Waste Management is approximately $1,786,400, which is sufficient to support the requested adjustment of $761,500. In accordance with Section 6.5(c)(iii) of the Budget Control By-Law, Council approval is required for Capital Variance requests exceeding $250,000.

## Analysis

The purpose of this project is to upgrade the treatment of landfill leachate from the closed Quarry Road Landfill Site (refer to Appendix 2), thereby protecting the quality of downstream surface water.

The current treatment system is a sub-surface constructed wetland where leachate and leachate-impacted water passes through gravel beds. The roots of wetland vegetation planted on the surface of the beds absorb the pollutants from the leachate, reducing their impact to the downstream surface water.

The processed water discharging from the wetland system into the adjacent creek does not meet the effluent quality criteria for iron and zinc set by the Ministry of the Environment, Conservation and Parks (MECP). As a consequence, there is a buildup of orange-coloured rust staining on the creek bed.

The Region and the MECP discussed steps to address the wetland treatment system inefficiency when it was first discovered in 2018. It was agreed that the Region would conduct an Environmental Assessment (EA) to explore and evaluate alternative treatment technologies. The EA was initiated in 2019 and completed in 2021, with the preferred solution being the replacement of the current wetland system with an ozone treatment system. The new system would oxidize contaminants into particulate form, and these particulates would then be removed through a series of filter canisters before discharging the treated water into the creek. Following completion of the EA, pilot-scale field studies were conducted on-site to confirm that this preferred option would reduce iron and zinc levels to meet the discharge criteria.

In 2024 staff initiated a competitive procurement for the upgraded treatment system (2024-T-165 Quarry Road Landfill Leachate Management System Upgrades). Four compliant submissions were received with Gedco Excavating Ltd. being the lowest compliant bidder at a price of $2,998,760 excluding HST (equating to $3,051,538 including non-recoverable HST).

Staff are requesting a budget increase of $761,500 to award the tender, which is necessary to protect the creek and ensure compliance with the effluent criteria established by the Ministry of the Environment, Conservation and Parks.

## Alternatives Reviewed

Do not approve the increase in funds resulting in the cancellation of the Tender (Not Recommended)

The contractor will be unable to construct the infrastructure upgrades. As a result, the Region would be out of compliance with the landfill ECA and Ontario Environmental Protection Act.

## Relationship to Council Strategic Priorities

Funding to advance the award of 2024-T-165 will provide upgraded infrastructure to successfully minimize risk to the environment in support of the following Council priorities.

Council Priority: Green and Resilient Region

(https://www.niagararegion.ca/priorities/default.aspx) mandate to protect and nurture an environment-friendly Niagara. Mitigating landfill leachate impacts to the adjacent creek will improve surface water quality along the Niagara Escarpment, enhancing the natural environment.

Council Priority: Effective Region

(https://www.niagararegion.ca/priorities/default.aspx) mandate to boost efficiency in Regional services. The current leachate treatment system is ineffective at mitigating all of the leachate impact to the adjacent creek. The upgrade to the leachate management system will increase treatment efficiency through continuous improvement and modernized processes to mitigate landfill impacts.

## Other Pertinent Reports

Not applicable.

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## Appendices

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| Appendix 1 | Total Estimated Project Cost |
| Appendix 2 | Key Plan |