

Landfill Optimization Project Components – Project Scope Adjustment

ISSUE

Due to higher than anticipated pricing, Administration is requesting approval to transfer budget from Projects No P.02051.03 (Surface Water Management Improvements) and P.02051.07 (Landfill Final Cover) to existing Project No P.02051.05 (Landfill Liner Expansion) which will be re-scoped to include all landfill Stage E construction.

RECOMMENDATION

1. That the project scope of Project P.02051.05 be adjusted to include all Stage E construction work including Final Cover, Landfill Gas System Expansion, and Surface Water Management;
2. That the budget of Project No. P.02051.05 be increased by \$4,770,000 to a total capital budget of \$10,010,000 by transfers from Project No. P.02051.07 of \$4,420,000 and Project No. P.02051.03 of \$350,000; and
3. That the landfill liner scope, approved for 2023, be completed in 2024, subject to funding approvals during the 2024/2025 Multi Year Business Plan and Budget.

BACKGROUND

The [Landfill Optimization report](#) was approved by City Council in August 2011. A key part of the approach outlined in the report was the Integrated Landfill Management Plan (ILMP), which outlines the necessary construction work required for the landfill to reach its full capacity. The ILMP breaks down the necessary work into Stages which the site would progress through until closed. The site has progressed to Stage E of the ILMP, which includes Final Cover, Landfill Gas System Expansion, and Surface Water Management.

Funding for Project No P.02051 Landfill Optimization has been previously approved in capital budgets since 2012, with the primary source of funding being the Landfill Replacement Reserve, which collects funding based on the annual tonnes of waste disposed each year at the facility to pay for ongoing capital work needed to complete work identified in the ILMP and fund a replacement facility.

In 2021, the City of Saskatoon (City) received funding under the Investing in Canada Infrastructure Program (ICIP) for landfill gas expansion. This funding was broken into two parts, the landfill gas collection system, and the landfill gas power generation facility operated by Saskatoon Light and Power. The funds for the landfill gas collection system were broken up further into multiple Landfill Optimization project components that would address all construction of landfill gas infrastructure within those project areas. Projects No P.02051.05 and P.02051.07 both received some of this ICIP funding.

During the 2022/2023 Multi Year Business Plan and Budget, City Council approved scope and funding for the Landfill Optimization Project (P.02051) which included construction of Stage D and E work that requires the construction of new liner systems to complete the final footprint expansion of the site and construction of Stage E landfill final cover.

DISCUSSION/ANALYSIS

As per Policy C03-036, the Multi-Year Business Plan and Budget Policy, City Council’s approval for all changes in capital project scope is required. Due to the overlapping scope of landfill gas system construction, final cover construction, and surface water management, the Administration is recommending that all components within the Landfill Optimization Project be combined to allow more flexibility in project delivery.

The Administration tendered the Final Cover and Landfill Gas Collection System component of the work, which was expected to cost \$5.3 Million, and the tender closed approximately \$3.5 Million higher than expected. A preliminary analysis demonstrated that the primary reason for the increase is due to material and hauling costs. While there may be opportunities to reduce some of these costs as the project progresses, considering all factors, the Administration is recommending adjusting the budget so that the tender can be awarded, as rescoping is not feasible and it is not expected costs will reduce in 2024 should the work be deferred.

FINANCIAL IMPLICATIONS

The requested restructuring of this project will not result in additional funds requested in 2023; however, due to increasing costs, additional funds will be required in 2024. Rather, Administration is requesting to reallocate funds and adjust timing of work to address site readiness and increased costs of construction. A summary of the changes requested is provided in Table 1 below.

Project Component	Approved Budget to Date	Budget Following Reallocation
P.02051.03 - Surface Water Management	\$350,000	\$0
P.02051.05 - Stage E Construction	\$5,240,000	\$10,010,000
P.02051.07 - Final Cover (Stage E)	\$4,420,000	\$0
Total	\$10,010,000	\$10,010,000

As a result of site readiness and the transfers as requested above, the Landfill Demolition and Liner work will be postponed to 2024. Administration will bring forward a request for this work based on current market prices as part of the 2024/2025 Business Plan and Budget Deliberations process. These changes will not affect the City’s ICIP funding, as the scope of the combined projects remains the same and the critical completion deadlines will not be impacted.

ENVIRONMENTAL IMPLICATIONS

Completion of Stage E landfill gas infrastructure will increase annual GHG reductions by 30,000 tonnes CO₂e, which represents 14% of the City’s emissions as reported in the 2021 GHG emission inventory. Upon completion of the Stage E Construction work and

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other associated landfill gas system upgrades, the system is expected to destroy 80,000 tonnes CO_{2e} per year, which represents 37% of the City's emissions as reported in the 2021 GHG emission inventory.

OTHER IMPLICATIONS

There are no privacy, legal, or social implications identified.

NEXT STEPS

Subject to City Council approval, Administration will proceed with the construction tender award, and construction will begin in June 2023.

Report Approval

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