

CAPITAL PROFILE REPORT

PROFILE NAME:	WASTE SERVICES IIS INFRASTRUCTURE DELIVERY	FUNDED
PROFILE NUMBER:	CM-81-2045	PROFILE STAGE: Approved
DEPARTMENT:	Integrated Infrastructure Services	PROFILE TYPE: Composite
LEAD BRANCH:	Infrastructure Delivery	LEAD MANAGER: Jason Meliefste
PARTNER:	Waste Services	PARTNER MANAGER: Denis Jubenville
BUDGET CYCLE:	2023-2026	ESTIMATED START: January, 2023
		ESTIMATED COMPLETION: December, 2026

Service Category:	Utilities	Major Initiative:
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GROWTH	RENEWAL	PREVIOUSLY APPROVED:	20,955
50	50	BUDGET REQUEST:	-
		TOTAL PROFILE BUDGET:	20,955

PROFILE DESCRIPTION

The composite profile CM-81-2045 provides a level of funding for Waste Services capital projects that are intended to be delivered by Integrated Infrastructure Services - Infrastructure Delivery Branch in the 2019 - 2022 capital budget cycle. The approach is consistent with Administration's implementation of the Project Development & Delivery Model (PDDM) as well as the Capital Project Governance Policy C591 that was adopted by Council in April 2017.

Adherence to both the PDDM process and Policy C591 will ensure that sufficient information is prepared in advance of the capital budget process to support informed investment decisions, provide adequate resources for planning and design to ensure appropriate level of planning and design is incorporated into budget submissions and provide an overall framework to guide the management of Waste Services' capital projects.

As PDDM has previously been adopted by Council, this capital funding request establishes funding prioritization for Waste Services projects anticipated to enter the project delivery stage within a checkpoint system with strategic controls on budget and schedule. The PDDM approach is a gated process for capital projects to ensure that projects are properly developed before they are funded for delivery.

While approval for funding in this profile is required to establish the initial 2023-2026 capital budget and projected utility rate increases over the 4 year period, approved funding for this profile does not indicate final budget or funding for any specific capital project.

This capital funding request provides information at a concept level that pertains to the budget for projects that are anticipated to be delivered during the 2023-2026 budget cycle. Details of the individual projects listed in this profile, including budget and scheduling will be further disclosed once the project has reached checkpoint 3 and a detailed business case has been developed for approval from Utility Committee and Council.

This profile requires funding for Waste Services capital projects that are intended to be delivered by Integrated Infrastructure Services - Infrastructure Delivery Branch in the 2023-2026 capital budget cycle. The four year capital projection for this profile is approximately \$96 million. A high level list of projects and estimated budget allocations is listed in Appendix A.

PROFILE BACKGROUND

The PDDM is a framework to manage all capital infrastructure projects and represents the best practices in project management from the industry and comparable municipalities. It aims to achieve the following outcomes:

- (1) Better information to make capital investment decisions
- (2) Improved project schedule and budget estimates through increased level of design to ensure realistic expectations are set prior to project tendering and construction
- (3) Systematic evaluation of projects against the initial project business case and scope.

This profile sets the 2023-2026 budget for Waste Services for projects that are anticipated to reach checkpoint 3 in the PDDM process. Once a project reaches this stage, a detailed standalone business case will be developed and brought to Utility Committee and Council for approval.

This approval will result in a capital budget adjustment that transfers budget from this profile to the newly created standalone profile. Until this transaction occurs, no funds are authorized to be spent on the delivery of a capital project.

CAPITAL PROFILE REPORT

PROFILE JUSTIFICATION

Urgency of Need

The need to effectively deliver capital projects is essential for Waste Services to achieve its commitment to deliver quality sustainable waste management services to the City of Edmonton as well as effectively meet the changing needs of its customers. Projects that are anticipated to reach the third checkpoint in the PDDM process within this budget cycle have been identified and prioritized based on strategic criteria such as environmental impact, health and safety and alignment with Branch and Corporate goals. Delivery of these concept level projects within this profile will be fundamental to Branch operations and will help to ensure continued delivery of sustainable waste collection and processing services.

As Waste Services capital budget is supported by the utility rate, business cases for both planning and delivery phases of approved capital projects within the PDDM approach are required in order to have funds allocated to the composite profile and determine the utility rates required to support the capital budget. While approval for funding in this profile is necessary to determine capital budget and utility rates, approved funding for this profile does not indicate final budget or funding for any specific capital project.

Anticipated Outcomes

In alignment with the PDDM approach, Waste Services will realize the achievement of branch goals through working with Integrated Infrastructure Services to effectively manage the delivery of capital projects. Effective asset management will ensure that Waste Services has the resources to achieve its objectives by aligning its vision, mission and strategic plan with daily activities to achieve its goals. Waste Services envisions the following outcomes:

Better information to make capital investment decisions: Through a structured and integrated process, administration will ensure that projects identified as priorities by Waste Services receive robust evaluation of alternatives and scope identification. Through the PDDM process, project maturity is regularly assessed to ensure that projects are ready to advance to the next stage of development.
Improved project schedule and budget estimates: Following industry best practices, a control budget and schedule is established on the basis of a completed design to ensure realistic expectations are set with IIS prior to tendering and construction.
Reliable facilities and infrastructure that enable sustainable waste management in a cost effective manner.
High levels of customer service delivered in both an efficient and effective way through leading-edge waste processing facilities that use current and emergent technology to enable high rates of diversion of waste from landfill.
Facilities that can be operated in a safe manner, protecting employees, customers and contractors.
Capitalize on opportunities to reduce cost to operate and process waste in an environmentally and fiscally responsible way.

Scope

The scope of this business case includes the detailed design, construction and project closeout stages, which subsumes work after completing Checkpoint 3 through Checkpoint 4 (Authorization for Construction expenditure) and Checkpoint 5 (Authorization for closeout) for all authorized Capital projects being led by IIS on behalf of Waste Services.

Checkpoint 4: Final check before the project goes to tender, to verify the project is ready to be tendered and develop a refined control budget. This will include an assessment of readiness and a final scope review. If the project is within the approved scope, schedule, and budget, an Internal Control Budget, Control Schedule and Authorization for Expenditure will result. If it is not, it will either be forwarded for a Change Request or will be sent back for revision. Approved projects are authorized to spend up to their control budget levels.

Checkpoint 5: This checkpoint is to verify that the project is ready for the final closeout within Integrated Infrastructure Services. Closeout will ensure that the scope has been met satisfactorily and that all closeout activities have been completed.

Out of Scope

Project planning and design phase of the PDDM approach is out of scope for this business case. (This includes Checkpoint 1 (Project initiation), Checkpoint 2 (Authorization for Design Expenditure) and Checkpoint 3 (Approval for Capital Budget) of the PDDM approach.

Critical Success Factors

Critical success factors include:

- Efficient, consistent and accurate communication between Waste Services and IIS
- Regular check-ins with the Waste Services Branch Leadership team to align with the strategic direction and branch goals
- Accurate and sufficient data and cost analyses to support high level budget estimate and informed decision makings for the projects
- On time, on budget delivery of capital projects within the PDDM approach.

STRATEGIC ALIGNMENT

Projects following the PDDM approach for Waste Services align with the following strategic goals of City of Edmonton:

Healthy City/Urban Places/Regional Prosperity/Climate Resilience

City of Edmonton's Waste Management Policy C527 and Waste Management Utility Fiscal Policy C558A as well as the Capital Project Governance Policy C591. This profile also aligns with Waste Services integrated 25-year strategic outlook that will help to ensure Edmontonians receive maximum economic and environmental benefits while minimizing the cost increases of managing solid waste.

ALTERNATIVES CONSIDERED

This is a capital funding request and does not present any alternatives for consideration. In this process, multiple checkpoints occur prior to the budget approval for the delivery of a single project, including a detailed business case, ensuring that budget and schedule adjustments may be made prior to the tender process.

CAPITAL PROFILE REPORT

COST BENEFITS

Tangible: Improved efficiency in project management Increased adherence to budget and schedule estimates Improved ability to forecast capital expenditure thus allowing for more certainty in utility rates Intangible: Structured process to evaluate readiness, scope and prioritization Increased project accountability Increased project awareness and controls Closer integration of City departments More efficient and consistent procurement process.

KEY RISKS & MITIGATING STRATEGY

RISK- PDDM is a gated process and the additional steps required in this new process may increase timelines or compromise scheduled completion dates

MITIGATION- Waste Services will work closely on the project team with IIS and other parties to ensure project planning process is started in advance, timely review and approval is occurring and schedules are adhered to.

RISK-Emerging priorities may cause delay

MITIGATION-The conceptual project list can be changed. Regular project team meetings will ensure integration & implementation of planned projects & respond to emergent projects.

RESOURCES

Projects will be managed by the Infrastructure Delivery Branch. Where outside resources are required the tender process will be managed by IIS. Subject matter expertise will be contributed by Waste Services from current staff complement. There will be no addition to the current approved FTE required.

CONCLUSIONS AND RECOMMENDATIONS

The capital funding request outlines the overall budget requirement for projects anticipated to move into the Project Delivery phase for the 2023-2026 budget cycle for a total of approximately \$20,502,237. Projects moving into the delivery phase will have detailed business cases and budget adjustment will be requested from Utility Committee and Council. Waste Services recommends continuing to follow the PDDM approach and release funds for project delivery phase for all capital projects handled by IIS. This will lead to higher control on the scope, schedule, budget and delivery.

CHANGES TO APPROVED PROFILE

2024 Spring SCBA (#24-12, Council Item 7.8): To optimize use of its cash, the Waste Utility has decided to fund 2022 and 2023 costs of these profiles, with Retained Earnings in lieu of Self-Liquidating Debentures. This allows the Utility to forego borrowing at high interest rates while using excess cash. This was not brought forward in November 2023's SCBA report to ensure full 2023 costs could be captured and avoiding bringing a similar cost transfer forward for this profile twice.

2025 Spring SCBA (Council Item 7.4, #25-12): The Edmonton Waste Management Centre (EWMC) Water Distribution System Upgrade project has reached Checkpoint 3 of the Project Development & Delivery model. The Business case was approved in Oct 2024 and a new standalone profile is required with a total estimated cost of \$17,251,258. Of these costs, \$476,071 was incurred in 2024 and prior years under "CM-81-0005 Waste Services IIS Infrastructure Planning & Design" and will be transferred to the standalone in an administrative adjustment. The new funding requested for this profile is \$16,775,187 and it will be funded from the "CM-81-2045 Waste Services IIS Infrastructure Delivery" and "CM-81-0005 Waste Services IIS Infrastructure Planning & Design" profiles.

2025 Fall SCBA (#25-32, 1.2): Excess funds of \$2.5M from CM-81-2005 Waste Containers is proposed to be transferred to CM-81-2045 Waste Services IIS Infrastructure Delivery to complete projects such as EWMC site paving and Ambleside Eco Station egress in this budget cycle.

CAPITAL PROFILE REPORT

PROFILE NAME: **Waste Services IIS Infrastructure Delivery**
 PROFILE NUMBER: **CM-81-2045**
 BRANCH: **Infrastructure Delivery**

FUNDED
 PROFILE TYPE: **Composite**

CAPITAL BUDGET AND FUNDING SOURCES (000's)

	Prior Years	2025	2026	2027	2028	2029	2030	2031	2032	2033	Beyond 2033	Total
APPROVED BUDGET												
Approved Budget												
Original Budget Approved	96,029	-	-	-	-	-	-	-	-	-	-	96,029
2019 Cap Administrative	1,292	-	-	-	-	-	-	-	-	-	-	1,292
2019 Cap Council	-57,794	-	-	-	-	-	-	-	-	-	-	-57,794
2019 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-	-
2020 Cap Council	-23,747	-	-	-	-	-	-	-	-	-	-	-23,747
2020 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-	-
2021 Cap Council	2,620	-	-	-	-	-	-	-	-	-	-	2,620
2021 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-	-
2021 Cap Release to Corp Pool	-1,141	-	-	-	-	-	-	-	-	-	-	-1,141
2022 Cap Budget Request for Next Cycle	9,074	6,326	5,103	-	-	-	-	-	-	-	-	20,502
2022 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-	-
2023 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-	-
2024 Cap Council	-	-	-	-	-	-	-	-	-	-	-	-
2024 Cap Capital Budget Adj (one-off)	-2,866	-	-	-	-	-	-	-	-	-	-	-2,866
2024 Cap Carry Forward	-6,767	6,767	-	-	-	-	-	-	-	-	-	-
2025 Cap Council	-	-11,343	-2,596	-	-	-	-	-	-	-	-	-13,939
Current Approved Budget	16,699	1,750	2,507	-	-	-	-	-	-	-	-	20,955
Approved Funding Sources												
Self-Liquidating Debentures	10,151	1,750	2,507	-	-	-	-	-	-	-	-	14,408
Waste Mgt Retained Earnings	6,548	-	-	-	-	-	-	-	-	-	-	6,548
Current Approved Funding Sources	16,699	1,750	2,507	-	-	-	-	-	-	-	-	20,955

BUDGET REQUEST	2025	2026	2027	2028	2029	2030	2031	2032	2033	Beyond 2033	Total
Budget Request	-	-	-	-	-	-	-	-	-	-	-

REVISED BUDGET (IF APPROVED)	2025	2026	2027	2028	2029	2030	2031	2032	2033	Beyond 2033	Total
Revised Budget (if Approved)	16,699	1,750	2,507	-	-	-	-	-	-	-	20,955
Requested Funding Source											
Self-Liquidating Debentures	10,151	1,750	2,507	-	-	-	-	-	-	-	14,408
Waste Mgt Retained Earnings	6,548	-	-	-	-	-	-	-	-	-	6,548
Requested Funding Source	16,699	1,750	2,507	-	-	-	-	-	-	-	20,955

CAPITAL BUDGET BY ACTIVITY TYPE (000's)

REVISED BUDGET (IF APPROVED)	Activity Type	Prior Years	2025	2026	2027	2028	2029	2030	2031	2032	2033	Beyond 2033	Total
	Construction	16,415	1,750	2,507	-	-	-	-	-	-	-	-	20,672
	Design	-2,866	-	-	-	-	-	-	-	-	-	-	-2,866
	Other Costs	3,150	-	-	-	-	-	-	-	-	-	-	3,150
	Total	16,699	1,750	2,507	-	-	-	-	-	-	-	-	20,955

OPERATING IMPACT OF CAPITAL

Type of Impact:

Branch:																
	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE
Total Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CAPITAL PROFILE REPORT

PROFILE NAME: **EWMC WATER DISTRIBUTION SYSTEM UPGRADE**
 PROFILE NUMBER: **25-81-2056**
 DEPARTMENT: **Integrated Infrastructure Services**
 LEAD BRANCH: **Infrastructure Delivery**
 PARTNER: **Waste Services**
 BUDGET CYCLE: **2023-2026**

FUNDED

PROFILE STAGE:	Approved
PROFILE TYPE:	Standalone
LEAD MANAGER:	Nicole Wolfe
PARTNER MANAGER:	Denis Jubinville
ESTIMATED START:	May, 2025
ESTIMATED COMPLETION:	December, 2027

Service Category:	Utilities	Major Initiative:	
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GROWTH	RENEWAL	PREVIOUSLY APPROVED:	17,251
50	50	BUDGET REQUEST:	-
		TOTAL PROFILE BUDGET:	17,251

PROFILE DESCRIPTION

The Edmonton Waste Management Centre (EWMC) Water Distribution System Upgrade project can close the gaps in firewater protection that exist across the site and improve the overall reliability of the water supply system, which is currently a risk to operations and has been demonstrated on multiple occasions in recent years. With new operational demands on the water distribution system compared to its initial installation, this project will allow the site to evaluate, correctly size, and install its process and firewater infrastructure to meet current and future demands while also increasing the reliability of the system with additional site supply lines. Reliability will also be increased by reducing risks associated with line failures at the pressure-reducing valves (PRVs) that currently exist. The scope of this work will increase the site hydrant coverage to comply with design requirements for existing and new assets.

This project would design and deliver "Scenario 2" described in the business case to install a new 300 mm supply line to increase site water reliability. It would also install the nine upgrades outlined in the Preliminary Design Report. The project outcome will upgrade the site coverage of process and firewater to cover all operational blocks and meet firewater design codes. The project would improve operational efficiency by installing a truck fill station and reduce cross contamination associated with improper filling protocol using fire hydrants and improve water usage reconciliation. The project would also improve reliability by upgrading the PRV reliability, bypass lines, and protections that exist at each water supply main coming into the EWMC.

The purpose of this project is to upgrade and ensure that the water distribution system pipes are adequately sized to meet the process water and fire flow demand requirements for the existing and anticipated growth in water demands. Identified in design, the system upgrades and expansion will include approximately 3,227 m of new water mains including upsizing of 172 m of existing water mains. Also, a total of 20 additional fire hydrants are required to meet the 300 L/s fire flow, required by the EPCOR's Design and Construction Standards.

PROFILE BACKGROUND

In 2021, Waste Services retained Stantec to provide engineering services to develop and calibrate the existing water distribution system model for the EWMC. The previous water distribution system model was developed for the site in 2013, and with the current and anticipated future needs at the EWMC, it was determined a new model was required to ensure all water needs are met. The study's objective was to ensure that the water distribution system pipes are adequately sized to meet the process water and fire flow demand requirements for the existing and future water demands. Based on these analyses, it was determined that the 300 L/s fire flow requirement could not be met, and system upgrading is required to ensure adequate and reliable water supply is available to all EWMC sites and facilities.

PROFILE JUSTIFICATION

The water distribution system has not been updated since its installation. The site operation model, design codes as well as operational and reliability concerns warrant a system review.

This project will upgrade and improve the site water distribution infrastructure to meet the current and projected needs of the site users, improve monitoring and reliability of site water supply, and increase the level of firewater protection for existing assets. It will also address the water supply requirements for future assets at the EWMC.

STRATEGIC ALIGNMENT

Please refer to Section 4 of the Business Case which demonstrates project alignment to the 25 Year Waste Strategy, Waste Services 2022-2025 Business Plan, The City Plan, ConnectEdmonton, Waste Services Utility Fiscal Policy C558C, Climate Resilience Policy C627A, and Infrastructure Asset Management Policy C598.

ALTERNATIVES CONSIDERED

The water distribution system upgrading requirements were analyzed based on the maximum day demand plus 300 L/s fire flow requirements for the extended system. The maximum day demand includes 31.9 L/s of demand for future facilities and 16.8 L/s demand for the extended system which includes new water mains to service the Landfill Gas Management Facility, the RTS and the truck fill station. The following existing system upgrade scenarios have been analyzed:

- Upgrade Scenario 1 – This scenario includes upgrades recommended in the May 2022 study, featuring a new 250 mm diameter supply main.
- Upgrade Scenario 2 – This scenario is the same as Scenario 1, increasing the 250 mm supply main diameter to 300 mm.

CAPITAL PROFILE REPORT

COST BENEFITS

The estimated capital cost for the current scope is \$17.25M (excluding GST), financed within the Waste Services 2023-26 capital budgets. Among which, \$812,529 is estimated spending through 2024 to continue the design. In 2025 and 2026, the bulk of the spending will be for the construction and commissioning. This is based on a Class 3 Cost Estimate with a cost accuracy of -20% to +30%. Please refer to Section 8 of the Business Case for benefits.

KEY RISKS & MITIGATING STRATEGY

Risks and their mitigating strategies are fully outlined in Section 10 of the business case, which include such risks as: Delivery Phase funding can't be utilized to procure water service infrastructure prior to the Funding Approval at Checkpoint #4 may result in the project delay to meet Waste Services original expected completion date of Q4 2027, delays in procurement of equipment and construction contractor may result in a delay of project delivery, and impact of contaminated soil and environmental/regulatory approval requirements.

RESOURCES

The project is being led through Development and Delivery phases by Open Spaces Planning and Design (OSPD) and Neighbourhood and Open Spaces Infrastructure Delivery (NOSID) sections within IIS Department. Please refer to section 9 of the Business Case for full description of resources required.

CONCLUSIONS AND RECOMMENDATIONS

It is recommended to proceed with Scenario 2 as it meets all current servicing requirements.

This scenario also includes a significant provision for future demand increase at minimal cost offset although at present there are no plans for any significant expansion of operations. Also, if required in future, significant additional supply can be attained by upsizing the existing 200 mm supply line. A new standalone profile of \$16.44 million will be requested in the Spring 2025 Waste Services Supplementary Capital Budget Adjustment (SCBA), by transferring budget from composite profile CM-81-2045 and CM-81-0005 to progress this project through the delivery phase.

CAPITAL PROFILE REPORT

PROFILE NAME: **EWMC Water Distribution System Upgrade**
 PROFILE NUMBER: **25-81-2056**
 BRANCH: **Infrastructure Delivery**

FUNDED
 PROFILE TYPE: **Standalone**

CAPITAL BUDGET AND FUNDING SOURCES (000's)

APPROVED BUDGET		Prior Years	2025	2026	2027	2028	2029	2030	2031	2032	2033	Beyond 2033	Total
	Approved Budget												
	Original Budget Approved	-	-	-	-	-	-	-	-	-	-	-	-
	2024 Cap Capital Budget Adj (one-off)	476	-	-	-	-	-	-	-	-	-	-	476
	2025 Cap Council	-	11,679	5,096	-	-	-	-	-	-	-	-	16,775
	Current Approved Budget	476	11,679	5,096	-	-	-	-	-	-	-	-	17,251
Approved Funding Sources													
	Self-Liquidating Debentures	-	11,343	5,096	-	-	-	-	-	-	-	-	16,439
	Waste Mgt Retained Earnings	476	336	-	-	-	-	-	-	-	-	-	813
	Current Approved Funding Sources	476	11,679	5,096	-	-	-	-	-	-	-	-	17,251

BUDGET REQUEST													
Budget Request		-	-	-	-	-	-	-	-	-	-	-	-

REVISED BUDGET (IF APPROVED)													
	Revised Budget (if Approved)		476	11,679	5,096	-	-	-	-	-	-	-	-
Requested Funding Source													
	Self-Liquidating Debentures	-	11,343	5,096	-	-	-	-	-	-	-	-	16,439
	Waste Mgt Retained Earnings	476	336	-	-	-	-	-	-	-	-	-	813
	Requested Funding Source	476	11,679	5,096	-	-	-	-	-	-	-	-	17,251

CAPITAL BUDGET BY ACTIVITY TYPE (000's)

REVISED BUDGET (IF APPROVED)	Activity Type	Prior Years	2025	2026	2027	2028	2029	2030	2031	2032	2033	Beyond 2033	Total
	Construction		-	11,679	5,096	-	-	-	-	-	-	-	-
Design		476	-	-	-	-	-	-	-	-	-	-	476
Total		476	11,679	5,096	-	-	-	-	-	-	-	-	17,251

OPERATING IMPACT OF CAPITAL

Type of Impact: Material & Equipment

Branch:	2027				2028				2029				2030			
	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE
Waste Services	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Impact	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-