

CAPITAL PROFILE REPORT

PROFILE NAME: **WASTE SERVICES VEHICLES & EQUIPMENT**
 PROFILE NUMBER: **CM-81-2048**
 DEPARTMENT: **Utilities**
 LEAD BRANCH: **Waste Services**
 PROGRAM NAME:
 PARTNER:
 BUDGET CYCLE: **2019-2022**

FUNDED

PROFILE STAGE:	Approved
PROFILE TYPE:	Composite
LEAD MANAGER:	Denis Jubinville
PARTNER MANAGER:	
ESTIMATED START:	January, 2019
ESTIMATED COMPLETION:	December, 2022

Service Category:	Utilities	Major Initiative:
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GROWTH	RENEWAL	PREVIOUSLY APPROVED:	35,734
3	97	BUDGET REQUEST:	10,830
		TOTAL PROFILE BUDGET:	46,564

PROFILE DESCRIPTION

This profile requests funding for Waste Services Vehicles and Equipment under the CM-81-2048 composite profile. The Waste Services has a fleet of over 400 units of vehicles and equipment used in the collection of waste and recyclables as well as processing these materials at the Edmonton Waste Management Centre. Some of the equipment are considered specialty equipment, such as shredders, compost turners, and tub grinders while other equipment are typically heavy duty vehicles such as waste collection vehicles, highway tractors and trailers.

Vehicles and equipment deteriorate as they age even with regular preventive maintenance and operating cost per kilometer increases over time. Replacing the vehicles and equipment, as scheduled, does not only improve availability but also results in lower operating cost per kilometer. Replacement can be done by purchasing new units or where possible, by refurbishment/rehabilitation to extend the useful life. These options were investigated to arrive at the best possible solution.

Waste Services requests approximately \$60.2 million replacement and growth funding over the next four-year capital plan for the replacement of equipment and vehicles as they reach the end of their useful life. This business case requests funds to replace and refurbish/rehabilitate equipment as they age and wear. With the replacement of equipment and vehicles as scheduled, additional customer needs can be met within the budget period.

Alternatives shortlisted to address the funding requirements are as follows:

- Alternative 1: Replace vehicles and equipment as they reach the end of their expected useful life with new ones and purchase growth vehicles
- Alternative 2: Replace vehicles and equipment as they reach the end of their expected useful life with new ones, rehabilitate some vehicles/equipment to extend their useful life and purchase growth vehicles
- Alternative 3: Replace vehicles and equipment as they reach the end of their expected useful life with new ones, lease some vehicles and equipment, and purchase growth vehicles

Taking into full consideration the alternatives evaluated in this business case and their impact on the financial well being of the Waste Services, residential rates and public service, Alternative 2: Replace vehicles and equipment as they reach the end of their expected useful life with new ones, rehabilitate some vehicles/equipment to extend their useful life and purchase growth vehicles, is recommended for the acquisition of growth and replacement vehicles.

PROFILE BACKGROUND

The economic and operating life of most of the Sustainable Waste Processing (SWP) heavy duty vehicles is between 5 and 15 years. The replacement of vehicles ensures higher fleet availability and newer technology to meet all new emission, fuel use and efficiency standards. SWP equipment is maintained on site, where possible. Some equipment is refurbished at least once based on its use, condition, and operating time. Another refurbishment may be performed in some circumstances before the equipment is replaced. Refurbish/replace decisions are made in collaboration with Fleet and Facility Services. As of September 2018, Waste Collection fleet availability is at 83.9% while the SWP fleet availability is at 89.8%. The four-year capital plan for vehicles and equipment, which must be funded through rates, identifies 216 vehicles required for replacement (including ten trailers that were deferred from 2018). The level of funding requested will enable WS to continue to meet its commitment to provide sustainable waste management services as set out in the Waste Management Policy C527 and align with Waste Services integrated 25-year strategic outlook.

PROFILE JUSTIFICATION

Urgency of Need

Fleet replacements are required on an ongoing basis to replace aging equipment (especially those still operating past their useful lives). Curbside collection requires one tandem truck per 4,800 households to collect waste and one tandem truck per 9,600 households to collect recyclables. Multi-unit bin collection requires one front loader per 9,350 households to collect waste and one front loader per 14,500 households to collect recyclables. Edmonton's population is expected to increase by about 2% annually during this budget period with an estimated 9,000 additional households per year. A review of the waste collection fleet indicated that while it is necessary to replace vehicles that have reached the end of their useful life, Waste Services is expected to be able to continue to provide full collection with the existing fleet.

Anticipated Outcomes

In addition to the fundamental outcome of optimizing existing capital assets while effectively delivering services to residents, Waste Services envisions the following outcomes:

Maintain high level of customer service – 90% satisfaction rating

Maintain an effective fleet – meet availability KPI targets in partnership with Fleet and Facility Services

Maintain effective fleet lifecycle management - Achieved by maintaining equipment in serviceable and reliable condition without excessive repair costs or down times

Scope

The profile is required to provide the funding for replacement of vehicles and equipment required for the daily operations of the Waste Collections and Sustainable Waste Processing Services.

Out of Scope

Light duty equipment leased by Corporate Procurement and Supply Services

Fixed or non-mobile equipment

Future initiatives to increase diversion rate (example: source separation and grass ban)

Critical Success Factors

Timely acquisition of required vehicles and equipment

Availability of Fleet Services engineering and procurement expertise

Adherence to vehicles and equipment replacement and maintenance plan

Assumptions

Equipment pricing may be significantly impacted by the market

Inflation for the budget period is assumed at 1.9% as per the average Corporate assumption for 2019-2022

20% contingency is added to absorb minor scope changes and contract price adjustments, market volatility and tariff

Vehicles/equipment useful life was assumed as between five to 15 years

Costs to purchase, rehabilitate and lease as well as units to be rehabilitated (including their extended life) and leased, were provided by Waste Collections Services, Sustainable Waste Processing Services, and Fleet and Facility Services

O&M costs for leased vehicles are not included in leasing costs

Number of units to purchase were provided by Waste Collections Services and Sustainable Waste Processing Services and reviewed by Fleet and Facility Services

Only incremental operating and maintenance costs were considered in the financial analysis

Automated collection system, which is still being studied as part of future strategic initiatives is not considered in this business case.

STRATEGIC ALIGNMENT

WS will work collaboratively under Council's Strategic Plan and the Corporate Business Plan to ensure the strategic direction of the Branch is in alignment with that of the corporation, Council and citizens. In addition to the corporate alignment structure, this composite profile will align with the City of Edmonton's WM Policy C527 and Waste Management Utility Fiscal Policy C558A. This profile also aligns with WS Integrated 25-Year Strategic Outlook that will ensure citizens receive maximum economic and environmental benefits while minimizing the cost increases of managing solid waste.

ALTERNATIVES CONSIDERED

Alternatives shortlisted to address the funding requirements are as follows:

Alternative 1: Replace vehicles and equipment as they reach the end of their expected useful life with new ones and purchase growth vehicles

Alternative 2: Replace vehicles and equipment as they reach the end of their expected useful life with new ones, rehabilitate some vehicles/equipment to extend their useful life and purchase growth vehicles

Alternative 3: Replace vehicles and equipment as they reach the end of their expected useful life with new ones, lease some vehicles and equipment, and purchase growth vehicles

Page of 14 to 21 of the attached business case listed the detailed financial and impact analysis of the alternatives

COST BENEFITS

Tangible Benefits:

Increased efficiency and reliability with lesser manual labour

Reduced maintenance costs and downtime due to newer vehicles

Improved safety

Intangible Benefits

Increased or maintained customer satisfaction

Better vehicle conditions

Financial Costs

Please refer to pages 19 to 21 of the attached business case for the comparative capital costs for alternatives

KEY RISKS & MITIGATING STRATEGY

- Risk1: Health and customer issues if waste are not collected in a timely manner. Mitigation: Timely procurement
2: Higher costs due to imposition of higher US tariff. Mitigation: Lock in prices prior to new imposition and source required parts and equipment outside of US
3: Some vehicles to be purchased may not be required anymore as new waste strategy is implemented. Mitigation: Update procurement strategy to reflect Council decisions
4: The vehicles and equipment are not replaced on time; Mitigation: Opt for s/t lease
5: Higher costs due to higher US tariff. Mitigation: Lock in prices prior to new imposition & source required parts and equipment outside US
6: Procurement delay for specialized equipment. Mitigation: Start early in looking for vendors to supply specialized equipment

RESOURCES

No additional resources are required for the implementation. This project will be led by the Equipment Supervisor. For new specialty equipment, a Project Engineer, in collaboration with the operating group, will develop equipment specifications and an RFP for purchase direct from vendors.

CONCLUSIONS AND RECOMMENDATIONS

Taking into full consideration the alternatives evaluated in this business case and their impacts on the financial well-being of the Waste Services, residential rates and public service, Alternative 2 (Replace new and Rehabilitate/Refurbish vehicles and equipment to extend useful life) is recommended for the acquisition of vehicles and equipment. Financial analysis shows that Alternative 2 yields the most optimal net present value of outflow of (\$53,556,885) at 5.4% discount rate. This profile will provide funding for replacement vehicles and equipment requirements of Waste Services. This funding is critical to meet Waste Services commitment of providing and delivering sustainable waste management services.

CHANGES TO APPROVED PROFILE

2019 Fall SCBA #19-32/2.3-2 Recosting: Budget reduction (\$9,710K) to this profile is recommended resulting from re-prioritization of capital requirements and reallocation of existing assets from the Commercial Collections business line due to planned wind-down.

2021 July 26 #21-14 (CFO): A Budget Adjustment is requested for the transfer of \$900K in Self Liquidating Debentures (Waste) funding from Profile CM-81-2045: Waste Services IIS Infrastructure Delivery to Profile 20-81-2052: Refuse Derived Fuel Facility Enhancements. This adjustment is required to accommodate the re-design and re-work of some building components i.e. pile size & additions, steel beam locations and sizes, the redesign of the new dust extraction system and the addition of supplemental fire rating of the exterior wall of the existing IPTF facility.

2021 Utility Fall SCBA (#21-32, 3.2-1): This scope change is required to increase the budget for capital profile "CM-81-2045 - Waste Services IIS Infrastructure Delivery" by \$3.15 million to account for the item noted in the December 9, 2021 City Council report CO00837 Eco Station Update (Private). This scope change request will be fully funded with a transfer from existing capital profile "CM-81-2048 - Waste Services Vehicles and Equipment", resulting in no rate impact to the ratepayers.

CAPITAL PROFILE REPORT

PROFILE NAME: **Waste Services Vehicles & Equipment**
 PROFILE NUMBER: **CM-81-2048**
 BRANCH: **Waste Services**

FUNDED
 PROFILE TYPE: **Composite**

CAPITAL BUDGET AND FUNDING SOURCES (000's)

	Prior Years	2022	2023	2024	2025	2026	2027	2028	2029	2030	Beyond 2030	Total
APPROVED BUDGET	Approved Budget											
	Original Budget Approved	46,309	13,905	-	-	-	-	-	-	-	-	60,214
	2019 Cap Council	-9,575	-135	-	-	-	-	-	-	-	-	-9,710
	2019 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-
	2020 Cap Council	-3,688	-2,771	-	-	-	-	-	-	-	-	-6,459
	2020 Cap Carry Forward	-	-	-	-	-	-	-	-	-	-	-
	2021 Cap Council	-	-3,150	-	-	-	-	-	-	-	-	-3,150
	2021 Cap Capital Budget Adj (one-off)	-900	-	-	-	-	-	-	-	-	-	-900
	2021 Cap Carry Forward	-10,845	10,845	-	-	-	-	-	-	-	-	-
	2022 Cap Administrative	-	-4,260	-	-	-	-	-	-	-	-	-4,260
Current Approved Budget	21,301	14,433	-	-	-	-	-	-	-	-	-	35,734
Approved Funding Sources												
Waste Mgt Retained Earnings	21,301	14,433	-	-	-	-	-	-	-	-	-	35,734
Current Approved Funding Sources	21,301	14,433	-	-	-	-	-	-	-	-	-	35,734

BUDGET REQUEST	Budget Request	-	-	5,100	5,730	-	-	-	-	-	-	-	10,830
	Revised Funding Sources (if approved)												
	Waste Mgt Retained Earnings	-	-	5,100	5,730	-	-	-	-	-	-	-	10,830
Requested Funding Source	-	-	5,100	5,730	-	-	-	-	-	-	-	-	10,830

REVISED BUDGET (IF APPROVED)	Revised Budget (if Approved)	21,301	14,433	5,100	5,730	-	-	-	-	-	-	-	46,564
	Requested Funding Source												
	Waste Mgt Retained Earnings	21,301	14,433	5,100	5,730	-	-	-	-	-	-	-	46,564
Requested Funding Source	21,301	14,433	5,100	5,730	-	-	-	-	-	-	-	-	46,564

CAPITAL BUDGET BY ACTIVITY TYPE (000's)

	Activity Type	Prior Years	2022	2023	2024	2025	2026	2027	2028	2029	2030	Beyond 2030	Total
REVISED BUDGET (IF APPROVED)	Fleet Equipment	21,301	14,433	5,100	5,730	-	-	-	-	-	-	-	46,564
	Total	21,301	14,433	5,100	5,730	-	-	-	-	-	-	-	46,564

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-