

City of Edmonton
Waste Services Utility
2020 Utility Rate Filing

November 1, 2019

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Executive Summary

Waste Services is progressing toward a more environmentally sustainable future that provides Edmontonians with maximum economic and environmental benefits while ensuring rate increases remain stable and consistent. With a focus on waste reduction, priorities and initiatives will be directed toward programs and services that support the minimization of materials going to landfill and move the Utility toward the 90 percent diversion goal set by Council.

Over the past two years, Waste Services has reviewed its internal processes with the goal of refining overall financial management of the Utility. This review placed greater emphasis on delivering strategic program changes, thoughtful replacement of damaged and underperforming assets using focused prioritization and realignment of capital plan and capital spend, a review of forecast customer counts including realignment of revenue with the service provided, and review of the Utility's landfill liabilities. Capital investment process capitalizes on the strengths of corporate partners and aligns with the corporate Project Development and Delivery Model (PDDM). Waste Services, working with the Corporate Program and Services Review, initiated a review of the non-regulated lines of business and gained Council approval to wind-down the Commercial Collections business line, and is in the process of investigating the outsourcing of the Construction and Demolition Recycling line of business.

The focus over the next three years will be on strategic program changes stemming from the approval of the 25-year Comprehensive Waste Management Strategy. These programs will set the City on a path of transformational change, starting with the adoption of a Zero Waste Framework. The framework focuses on activities that promote prevention, reduction and reuse of materials with a greater emphasis on circular economy innovations. The aim with this framework will be to continuously improve the waste system and expand performance indicators to capture the full social, environmental and performance impacts of the system to measure successful waste reduction beyond diversion. Program and service changes will include citywide source separation of waste in all sectors, development of an organics processing solution and a strong focus on waste reduction initiatives.

Significant factors affecting Waste Services over the next three years include:

- Introduction of strategic program changes focused on household separation of organic waste and changes to curbside collection of grass, leaf and yard waste.
- Formal final closure of the Clover Bar Landfill, including an increase of \$24.1 million to the landfill liability.
- Volatility of the markets for recycled commodities processed by the Materials Recovery Facility.

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- Full integration of new technology such as the Anaerobic Digestion Facility and the Refuse Derived Fuel Facility to support waste diversion.
- Continued review and evaluation of the capital requirements to ensure the capital program is prioritized and optimized to support implementation of the 25-year strategy.
- Initiating a benchmarking study to validate the reasonableness of Shared Service costs allocated to the Utility.
- Increased customer base due to growth of single unit and multi-unit residential areas.
- Development of an asset management strategy to ensure infrastructure rehabilitation is prioritized, pursued proactively and funded appropriately.

Waste Services continues to strive towards achieving the financial indicators set out in Waste Management Utility Fiscal Policy C558A. The policy was adopted by City Council in 2014 and is reflective of the foundational vision, principles and goals captured in City Council's Strategic Plan 2019-2028. Over the next three years, Waste Services expects to maintain stable and consistent rate increases of 2.5 percent despite additional cost to implement the citywide Source Separated Organics Program and additional requirements to fulfill landfill obligations. This will be achieved through increases in operational efficiencies and prioritization of capital projects. Other financial indicators are trending positively as well. Specifically, Waste Services will meet the requirement of generating sufficient net income to cover operating expenses in each year, the debt to net asset ratio decreases from a projected 80.7 percent in 2019 to 77.6 percent by 2022, the target cash balance is met in each year to support the Waste Services capital spending plan and FTE counts will remain at 2019 levels.

In the 2019 rate filing, Waste Services established a regulatory asset to allow the Utility to collect expenses related to the structural failure of the Edmonton Composting Facility (ECF) from ratepayers. The costs are being recovered from ratepayers over 12 years to minimize the rate impact and to maintain stable, consistent rate increases. In the 2020 rate filing, impairments related to the ECF equipment of \$5 million and estimated decommissioning costs of \$12 million have been incorporated as additions to the previously approved deferral account balances. The amortization expense attributed to the regulatory asset has been included in the revenue requirement for 2020 and subsequent years.

1.0 Introduction

Waste Services plays an integral role in the day-to-day lives of Edmontonians and provides efficient waste management services for the City. The Utility collects, processes and disposes of waste for almost 400,000 residential households and some non-residential customers. To meet the needs of a growing City, Waste Services will continue to focus on sustainable and innovative waste management solutions that diverts waste from landfill.

With the approval of the 25-year Comprehensive Waste Management Strategy in September 2019, the City is on a path of transformational change. This starts with the adoption of a Zero Waste Framework where greater emphasis will be placed on activities that promote waste prevention, waste reduction, reuse of materials and circular economy innovations. Program development and changes to the City's processing of waste will fundamentally transform service delivery and impact how waste is sorted in households, as all sectors, including residential, multi-unit and Industrial, Commercial and Institutional move to source separation of organics. The Utility will begin collecting residential source separated organic waste from residents beginning in 2020. The full rollout of the source separated organics program is anticipated to be complete by the end of 2021. Waste reduction programming will be a key component of the Utility's strategy and will include restrictions on single-use plastics and disposables.

As part of the Waste Strategy, Waste Services will start implementing program and service changes focused on waste reduction including, but not limited to:

- Citywide source separation of waste, including in the Industrial, Commercial and Institutional sector.
- Development of an organics processing solution that seeks to utilize organics material with potential output of renewable natural gas and compost.
- Maximizing the market potential of refuse derived fuel and the exploration of additional market opportunities.
- Enforcement of volume limits on residual waste to encourage residents to separate organic and recyclable materials.
- Innovation through the Alberta Clean Energy Technology Accelerator (ACETA) to support circular economy and reduction of greenhouse gas emissions.

Additionally, Waste Services will focus on engagement with multi-unit stakeholders and the Industrial, Commercial and Institutional sector requiring both to move to source separation of organics, introducing restrictions on single-use plastics and other single-use disposables as part of the waste reduction programming and moving forward with changes to the commercial business lines, including the wind-down of Commercial Collections and securing an operational partner for the Construction and Demolition Recycling Facility. These program changes ensure fiscal accountability and

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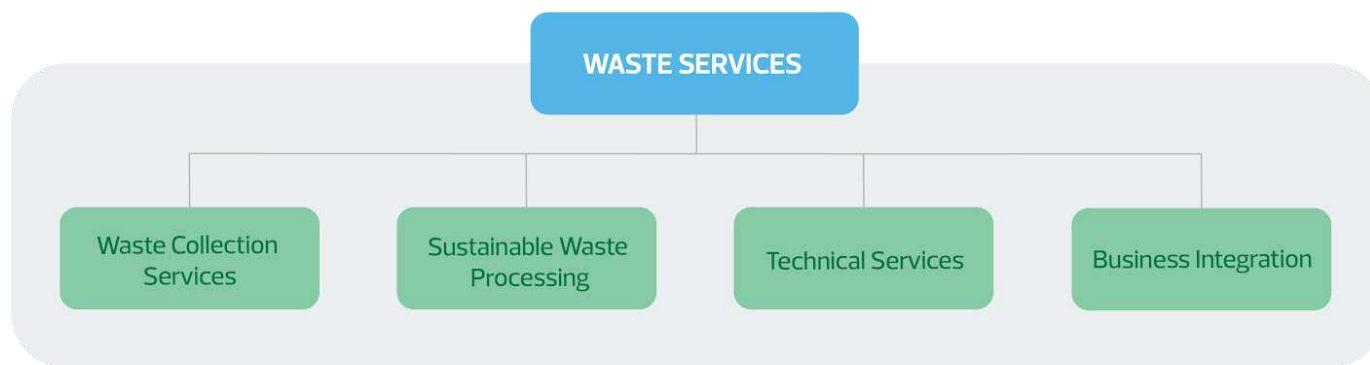
continuous business improvements while ensuring stable and consistent rates for residents. Waste Services is confident that through education, partnerships and expanded opportunities for environmental stewardship, the City of Edmonton will continue to be at the forefront of sustainable waste management and value recovery.

With all of these changes, Waste Services will continue to provide waste management services for the City of Edmonton, taking into consideration the needs of residents, the preservation of natural resources, the protection of the environment and the financial capabilities of the City.

2.0 Organizational Structure

Waste Services’ organizational structure is fully aligned to the Corporate Business Plan and consists of four sections (Figure 1). Additionally, a new Asset Management area has been created and is responsible for life cycle management of waste processing facilities and infrastructure assets. This area is developing an asset management strategy and guides activities to maximize asset service life while minimizing life cycle cost, and will align with the City’s approved Infrastructure Strategy.

Figure 1: Waste Services Organizational Structure



Waste Collection Services

Waste Collection Services provides efficient and effective waste collection and drop-off services including an Assisted Waste Collection program for residents with mobility restrictions. Residents have access to a number of facilities where large items can be dropped off for recycling, reuse or disposal including Eco Stations, Community Recycling Depots, Big Bin Events and the Reuse Centre.

Sustainable Waste Processing

Sustainable Waste Processing receives and sorts residential and non-residential waste at the Edmonton Waste Management Centre, a unique collection of advanced processing and research facilities. This integrated site, located on 233 hectares, is designed to process more than 500,000 tonnes of waste per year. Facilities and operations are either owned and operated by the City or run on a contract basis. The focus of these facilities is to recover valuable resources and to minimize the amount of waste going to landfill.

Technical Services

Technical Services is dedicated to the engineering, technical support, innovation and environmental compliance of waste processing and collection operations. The area provides oversight for capital projects and large operational investments to ensure waste operations are compliant, effective and efficient. They also manage regulatory compliance and the Clover Bar Landfill post-closure operations.

Business Integration

Business Integration is responsible for defining Branch strategy, facilitating operational direction, resource allocation, financial governance and Branch-wide alignment to corporate directives. Key areas of focus include performance management, monitoring and reporting, contract management, workforce development, utility rate filing and billing. This area is also responsible for the Branch's communications, education, outreach and volunteer programs that keep residents engaged in sustainable waste practices and waste reduction efforts.

3.0 Methodology and Key Assumptions

The following subsections provide the methodology and key assumptions for the Waste Services Utility. The 2020 Rate Filing is based on the August 31, 2019 Forecast incorporating significant changes up to September 30, 2019. The assumptions used to develop this Rate Filing include City Council approved corporate budget guidelines and forecasts from the City’s Chief Economist.

- **Housing Starts and Consumer Price Index**

	2020	2021	2022
Housing Starts	7,754	7,557	7,462
Consumer Price Index	1.9%	1.9%	1.9%

- **Employee Benefits**

The 2020-2022 Operating Budget amounts were calculated by the City of Edmonton’s Capital and Operating Budget System (COBS) which allocates benefit dollars by employee. The 2020 Rate Filing includes an update for any recent benefit rate increases for the Local Authorities Pension Plan, Canada Pension Plan, Employment Insurance, Major Medical and Dental Plan, Group Life Insurance and Health Care Spending Account.

- **Cost of Debt**

Debt servicing calculations use the cost of debt rate forecast provided by the City’s Corporate Budget Office and are based on actual Alberta Capital Finance Authority borrowing rates up to the third quarter of 2019. The rates are calculated to be mid-year estimates. An additional 0.25 percent increment is added per year starting in 2020.

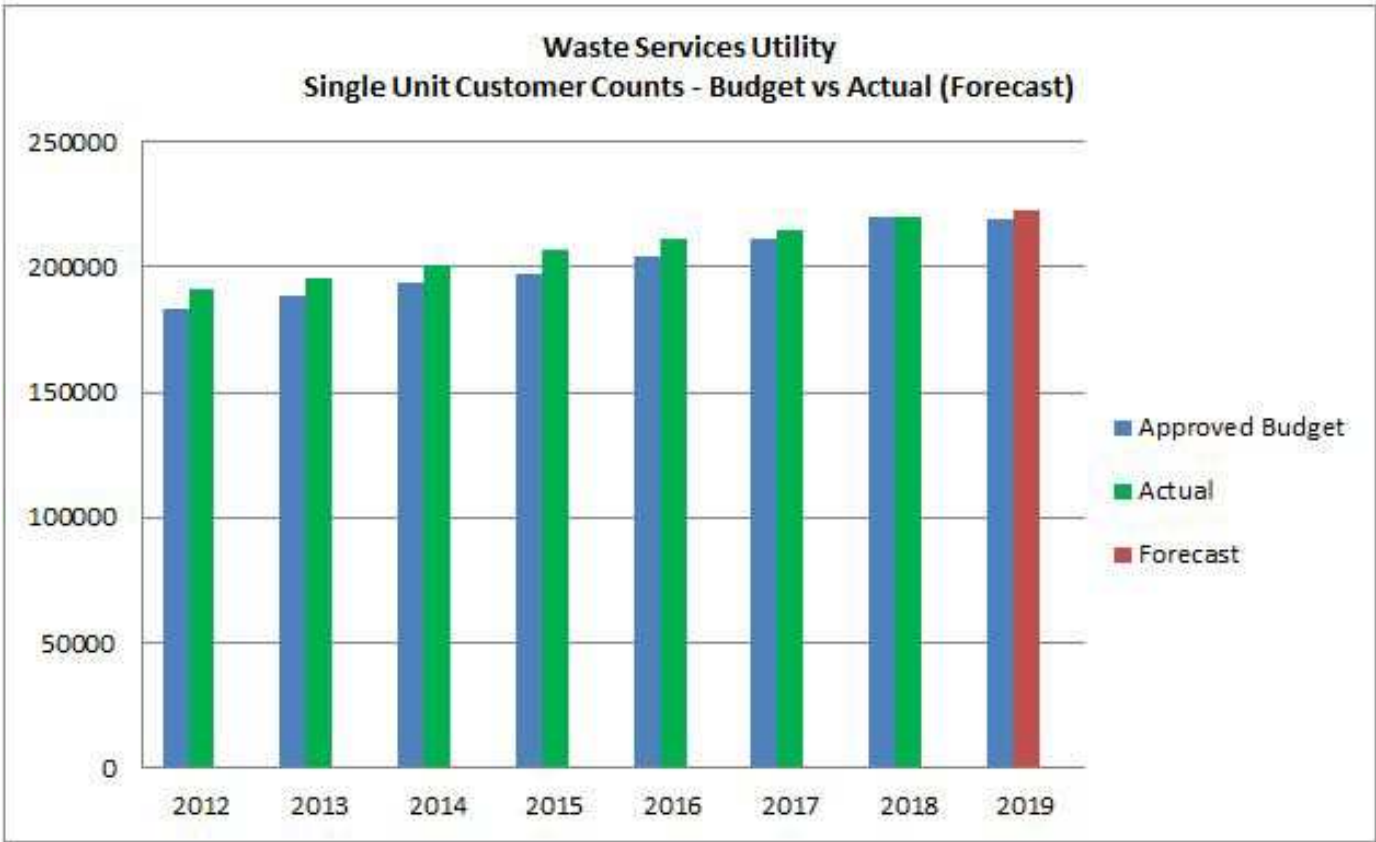
Term	2020	2021	2022
5 Year	2.10%	2.35%	2.60%
10 Year	2.20%	2.45%	2.70%
15 Year	2.38%	2.63%	2.88%
20 Year	2.52%	2.77%	3.02%
25 Year	2.61%	2.86%	3.11%

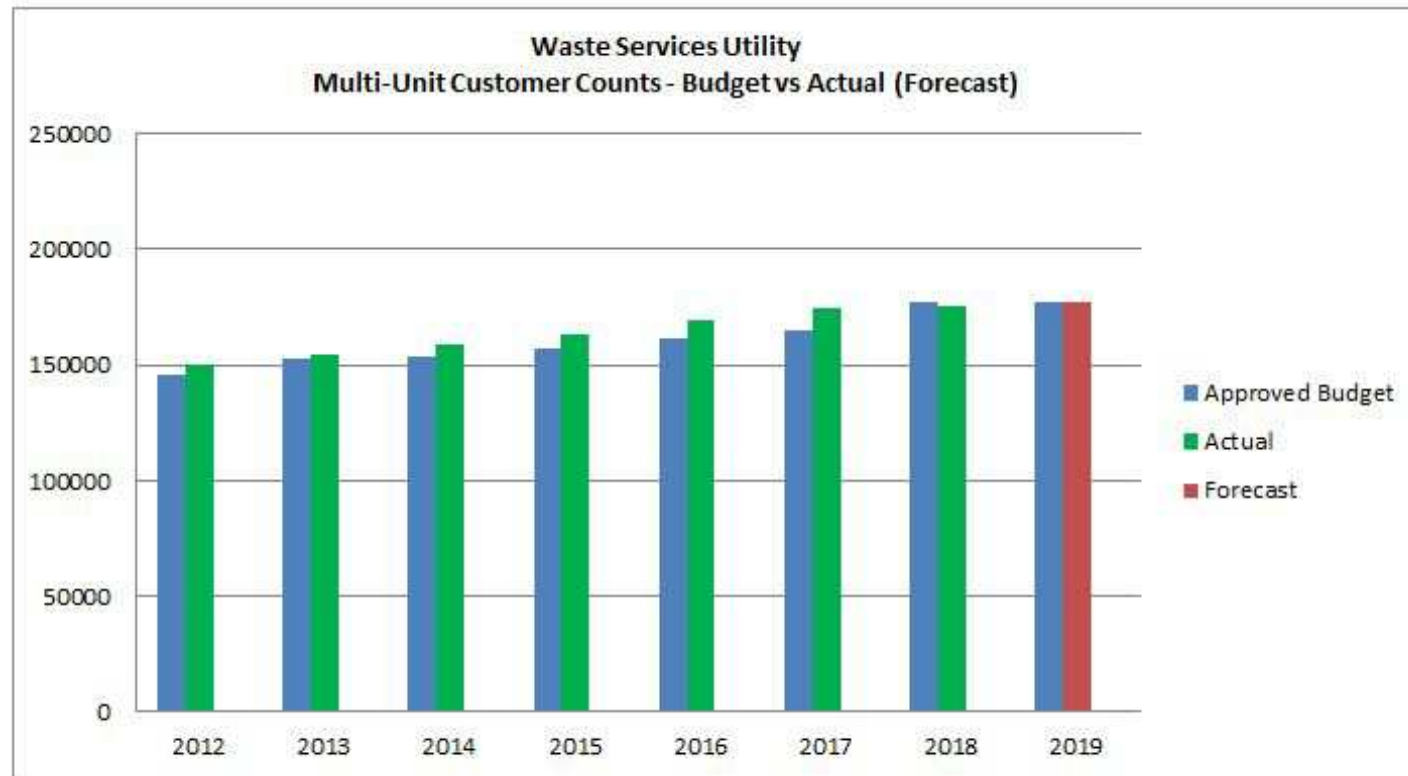
Other assumptions used include the following:

- Waste Services Utility Staff Vacancy - unless otherwise stated, the typical expected staff vacancy is four percent for all staff.
- Full-time Equivalent - a full-time equivalent (FTE) is defined as the hours (and associated personnel costs) one full time employee would work in a year. For example, if a position is funded for one year, it is equivalent to 1.0 FTE, whereas a position funded for six months is equivalent to 0.5 of an FTE. Funding for a new position may be adjusted in the first year to reflect the timing between approval of a new position and hiring, with full funding for the position beginning the following year.
- Customer Growth - Beginning with the 2018 Rate Filing, Waste Services changed its approach to the estimation of the proposed and forecast single unit and multi-unit customer counts. The customer counts are now based on historical trends and the anticipated household starts as projected by the City’s Chief Economist. The proposed customer billing base is represented in the figures below:

	2018 Actual	2019 Forecast	2020 Proposed*	2021 Forecast	2022 Forecast
Single Unit	219,973	222,385	226,602	230,760	234,890
Multi-Unit	175,519	177,493	177,476	177,411	177,323

** Includes the reclassification of approximately 9,533 customers from Multi-Unit to Single Unit.*





As part of the 2017 Cost of Service Study (COSS), a review of customer accounts occurred. Through this review up to 27,000¹ households (townhouses, duplexes, etc) were identified as receiving service as if they were a single unit customer but were being charged the multi-unit rate. In 2019, the Waste Services Bylaw was updated to allow for customers to be charged in alignment with their service type. Waste Services undertook an analysis of these accounts to determine the appropriate classification. The analysis has been completed for 35 percent of these households (9,500 units) and this rate filing incorporates the reclassification of these units from the multi-unit rate to the single unit rate beginning in 2020. To avoid rate shock for these customers, Waste Services intends to adjust the rates from the multi-unit rate to the single unit rate over a period of five years. The remaining 17,500 units will be reviewed in 2020 and any resulting adjustments will be incorporated in the Utility’s next rate filing.

¹ While the unit count was 24,895 in the 2017 COSS, as many as 27,000 units are expected by 2021.

4.0 Operational Performance

The four performance goals below summarize Waste Services’ performance measures and align with the 2020-2022 Business Plan.

GOAL	PERFORMANCE MEASURE	ACTUALS	FORECAST	TARGETS		
		2018	2019	2020	2021	2022
Customer Excellence	Overall Satisfaction with Eco Stations	No survey conducted	94%	94%	94%	94%
	Overall Satisfaction with Residential Collection Service	No survey conducted	90%	91%	91%	91%
	Number of Missed Collections per 10,000	2	2	2	2	2
Operational Excellence	Single Unit Residential Diversion Rate	36%	41% ²	50% ³	64%	66%
	Kilograms of Waste Collected per Capita	251	260	255	250	245
	Kilograms of Recycling Collected per Capita	41	48	49	51	52
	Number Reportable Environmental Incidents	21	20	20	20	20

² Due to the closure of the Edmonton Composting Facility and the delay in full commissioning of the Anaerobic Digestion Facility, this forecast will not be met.

³ The 2020 target may be affected by unanticipated delays in the approval and/or procurement of the interim organics solution.

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GOAL	PERFORMANCE MEASURE	ACTUALS	FORECAST	TARGETS		
		2018	2019	2020	2021	2022
Financial Accountability	Annual Net Income (\$000s)	18,134	15,269	6,571	8,363	13,096
	Stable Rates	2.3%	2.5%	2.5%	2.5%	2.5%
	Debt to Net Assets Ratio	81.7%	80.7%	78.1%	78.0%	77.6%
	Cash Position (\$000s) ⁴	74,091	86,709	58,788	24,573	12,518
Organizational Excellence	Engagement Survey Employee Response Rate	71%	N/A	78%	N/A	80%
	Percentage Turnover per 100 FTEs	5.1%	5.5%	5.5%	5.5%	5.5%
	Lost Time Injury Frequency Rate	4.35	20% less than last year	20% less than last year	20% less than last year	20% less than last year

⁴ Higher cash position is required to fulfill obligations for the Clover Bar Landfill and Bremner Lagoon liabilities. Closure activities for the Clover Bar Landfill are expected to be completed by 2022.

5.0 Landfill Closure and Related Liabilities

The Utility’s landfills include a Class II and Class III landfill which are currently being prepared for complete closure and reclamation in accordance with operating approval from Alberta Environment and Parks (AEP). The Clover Bar Landfill (Class II) reached full capacity and was closed in August 2009, while the Class III landfill, originally established for the 1987 tornado debris, ceased operations in 2008.

Pursuant to the Alberta Environmental Protection and Enhancement Act, the Utility is required to fund the closure of its landfill site and provide for post-closure care of the site. Closure and post-closure activities include the final clay cover, landscaping, surface and groundwater monitoring, leachate control, landfill gas management and visual inspection. The minimum period for post-closure care is 25 years and the landfill closure and post-closure care plans are based on engineering assessment of current ground conditions, leachate levels, geology, and various other environmental and regulatory conditions. The costs to close and maintain solid waste landfill sites are based on estimated future expenses, adjusted for inflation and discounted to current dollars. These costs are reported as a liability on the Statement of Financial Position. Future events, such as changes to regulatory requirements, may result in changes to the estimated cost and will be recognized prospectively as an adjustment to the reported liability, when applicable.

The following table summarizes the expected costs over the 25-year reclamation period, discounted to current dollars:

Activity	Expected Cost (\$000s)
Class II Closure	\$ 13,295
Class III Closure	2,189
Leachate Management	18,900
Landfill Gas Management	9,768
Stormwater Management	5,703
Total Estimated Liability	\$ 49,855
Current Funded Liability	\$ 25,705
Unfunded Liability	\$ 24,150

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The landfill liability is estimated to be \$49.8 million in current dollars. The Utility's current liability is \$25.7 million resulting in a required increase of \$24.1 million. The 2020 Rate Filing, includes a provision to collect \$1.3 million annually, starting in 2020, over the next 25 years to fully fund the liability of \$49.8 million. Collecting the required sum over the full term of the post-closure activities will minimize the impact to ratepayers and allow the Utility to maintain stable, consistent rate increases.

Landfill closure activities are anticipated to be completed by 2022 amounting for \$25.6 million out of the total estimated cost of \$49.8 million. The remaining \$24.2 million is anticipated to be spent over a period of 25 years starting in 2023 for landfill post-closure activities.

Of the Utility's existing cash, \$25.7 million is restricted for the Landfill Liability and will be used to fund closure costs up to 2022. The collection of \$1.3 million annually through rates will be apportioned as restricted cash to fund the liability and cover future disbursements for post-closure care costs over the remainder of the 25-year plan. As part of its future rate filing and year end annual report, the Utility will provide ongoing reporting on the apportioned cash balance used to fund the liability including reporting on disbursements made in a given year for closure and post-closure activities.

Significant changes to cost estimates in the future may result in a future adjustment to the landfill liability and subsequently the annual landfill provision.

6.0 Financial Rate Impacts

The financial rate impacts below represent the incremental change from the previous year. The resulting rate impacts reflect the services and processes required to support the Waste Services Utility’s mission, values and strategic initiatives. The rate impacts have been grouped into three categories: Operating Impacts, Capital Impacts on Operating and Other Impacts.

	2019 Approved	2020 Proposed	2021 Forecast	2022 Forecast
Operating Impacts	\$ 1.83	\$ 3.25	\$ 0.26	\$ 0.36
Capital Impacts on Operating	0.82	0.39	0.99	0.40
Other Impacts				
Non-rate revenue	0.50	0.98	0.22	(0.02)
Increase Customer Base	(0.57)	(0.58)	(0.58)	(0.59)
City of Edmonton Short Term Loan	(0.33)	-	-	-
Rate of Return	(1.10)	(2.86)	0.31	1.09
SUBTOTAL	(1.50)	(2.46)	(0.05)	0.48
TOTAL RATE IMPACTS	\$ 1.15	\$ 1.18	\$ 1.20	\$ 1.24

Operating Impacts

The increase in Operating Impacts from the 2019 budget includes an increase to external services due to population growth and additional one-time and ongoing costs related to the rollout of the Source Separated Organics Program. This includes temporary staff, additional materials, goods and supplies and external services.

Capital Impacts

The decrease in the capital impact for 2020, relative to the 2019 budget, is mainly driven by delays to the “in-service” date of assets versus the dates anticipated, resulting in reduced amortization and lower interest costs from reduced borrowing in 2019.

Other Impacts

- Non-rate Revenue impact is the result of decreased revenue from biosolids and commodity market decline on the sale of recyclable materials.
- Based on current economic conditions and housing starts, the customer base is forecast to grow in 2020. This growth allows regulated revenue to be allocated over a larger base therefore controlling the per unit Residential Customer Rate increase. The greater number of residential waste collection pick-ups will generate higher regulated revenue which will be used to offset the associated residential waste collection operational costs.
- To address non-regulated program losses and achieve target cash balances, the Waste Services Utility was given authorization through the 2015 Operating Budget process to draw on a short-term loan from the City of Edmonton beginning in 2015. This ensures non-regulated losses are covered by the loan as opposed to regulated revenues and assists in reducing non-regulated rate increases. This rate file assumes non-regulated losses will be covered by the short-term loan from the City of Edmonton.
- Approval of the Waste Management Utility Fiscal Policy C588A resulted in changes to the rate revenue calculation. A requirement for Pay As You Go (PAYG) funding is now included as part of the rate revenue calculation to ensure sufficient cash is generated to meet the Utility's current and future capital needs. The Rate of Return is calculated to achieve a Net Income position to meet cash and/or PAYG targets. This places greater emphasis on long-term planning and the financial sustainability of the Utility.

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7.0 Financial Indicators & Risk Allowance

The Waste Management Utility Fiscal Policy C558A was adopted by City Council on September 23, 2014. The updated policy focuses on four Financial Indicators used to monitor the financial health of the Utility as illustrated below:

	Actual 2018	Budget 2019	Forecast 2019	Proposed 2020	Forecast								
					2021	2022	2023	2024	2025	2026	2027	2028	
1 Rate Sufficient to Meet Expenditures and Cash Flow													
Net Income (\$000s)	\$ 18,134	\$ 12,317	\$ 15,269	\$ 6,571	\$ 8,363	\$ 13,096	\$ 16,456	\$ 17,796	\$ 18,918	\$ 20,194	\$ 21,229	\$ 24,194	
<i>Target: Positive Net Income</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
2 Cash Position (\$000s)													
Pay As You Go Requirement	7,890	19,861	8,237	10,472	6,174	8,539	8,387	13,648	18,695	29,945	35,461	36,170	
Risk Allowance	3,122	3,366	3,366	3,272	3,555	3,637	2,938	2,815	2,589	3,215	3,343	3,593	
Target Cash Position	11,012	23,227	11,603	13,744	9,729	12,176	11,325	16,463	21,284	33,160	38,804	39,763	
Actual Cash Balance	74,091	53,471	86,709	58,788	24,573	12,518	18,240	25,749	32,311	44,344	48,784	52,253	
<i>Actual Cash >= Target</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
<i>Cash Over Target (\$000s)</i>	63,079	30,244	75,106	45,044	14,844	342	6,915	9,286	11,027	11,184	9,980	12,490	
3 Residential Customer Rate Impacts													
<u>Single Unit</u>													
Monthly Billing Increase	\$ 1.03	\$ 1.15	\$ 1.15	\$ 1.18	\$ 1.20	\$ 1.24	\$ 1.22	\$ 1.18	\$ 1.17	\$ 1.08	\$ 0.83	\$ 0.83	
<i>Impact of Customer Rate</i>	2.3%	2.5%	2.5%	2.5%	2.5%	2.5%	2.4%	2.3%	2.2%	2.0%	1.5%	1.5%	
Monthly Unit Rate	\$ 45.93	\$ 47.08	\$ 47.08	\$ 48.26	\$ 49.46	\$ 50.70	\$ 51.92	\$ 53.10	\$ 54.27	\$ 55.35	\$ 56.18	\$ 57.01	
<u>Multi Unit</u>													
Monthly Billing Increase	\$ 0.67	\$ 0.75	\$ 0.75	\$ 0.77	\$ 0.78	\$ 0.81	\$ 0.79	\$ 0.77	\$ 0.76	\$ 0.70	\$ 0.54	\$ 0.54	
<i>Impact of Customer Rate</i>	2.3%	2.5%	2.5%	2.5%	2.5%	2.5%	2.4%	2.3%	2.2%	2.0%	1.5%	1.5%	
Monthly Unit Rate	\$ 29.85	\$ 30.60	\$ 30.60	\$ 31.37	\$ 32.15	\$ 32.96	\$ 33.75	\$ 34.52	\$ 35.28	\$ 35.98	\$ 36.52	\$ 37.06	
<i>Target: Stable, consistent rate increases</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
4 Financing of Capital Investments													
Debt to Net Assets Ratio	81.7%	75.4%	80.7%	78.1%	78.0%	77.6%	77.7%	78.9%	76.8%	74.1%	69.9%	64.9%	
<i>Target: May vary between 50% and 70%</i>	No	No	No	No	No	No	No	No	No	No	Yes	Yes	

General Comments for Financial Indicators

Target: Rates Sufficient to Meet Expenditures

The proposed and forecasted years all meet the requirement of generating sufficient net income to cover operating expenses.

Target: Cash Position

The target cash position for Waste Services provides for capital funding to meet Pay As You Go (PAYG) requirements for the next fiscal year plus a risk allowance to mitigate exposure, such as volatility of the markets for recyclable commodities, as outlined in the Waste Management Utility Fiscal Policy C558A. As the Utility moves to citywide implementation of source separation of organics and invests in necessary upgrades for the Material Recovery Facility (MRF) and Refuse Derived Fuel Facility (RDF) to improve efficiency, the PAYG requirement is expected to remain high at \$10.5 million in 2020. The calculation of the risk exposure includes the following identified risks (in thousands of dollars):

	2019 Approved	2020 Proposed	2021 Forecast	2022 Forecast
Recyclable Market	\$ 475	\$ 475	\$ 475	\$ 475
Landfill gas, 3rd party	500	500	500	500
REVENUE RISKS	975	975	975	975
Anaerobic Digestion Facility	250	475	-	-
Leachate Removal and Treatment	500	-	-	-
Operational Impacts Agreements/Strategic Changes	1,641	1,822	2,580	2,662
EXPENDITURE RISKS	2,391	2,297	2,580	2,662
TOTAL RISK ALLOWANCE	3,366	3,272	3,555	3,637

The allowance for Leachate Removal and Treatment attempted to mitigate the risk associated with legacy issues with the Clover Bar Landfill including the removal, treatment and containment of leachate. The Utility sought and received approval from AEP to treat leachate through EPCOR's Wastewater Treatment Plant and as a result the 2020 risk allowance has been removed.

The allowance for operational impacts and strategic changes include provision for unknown operational risks associated with the citywide cart rollout and implementation of source separated organics.

After accounting for the PAYG requirements and risk allowance, the cash balance is positive in all years due in part to the short-term loan from the City of Edmonton which will be utilized in 2019 to cover non-regulated losses and due to the significant cash reserves held for both the Landfill Post Closure Liability and the Bremner Lagoon Liability.

Target: Low, Stable and Consistent Rate Increases

As the Utility moves toward financial sustainability, achieving stable and consistent rate increases has been given a high priority. The target will be achieved with a proposed 2.5 percent increase in 2020 through 2022 before declining gradually to 1.5 percent in 2027 and beyond.

Target: Debt to Net Assets Ratio

The Utility has recommitted itself to enhanced asset management and thoughtful replacement of damaged and underperforming assets through ongoing prioritization of capital projects. When coupled with significant strategic program changes in 2020 to 2022, this heightened focus on increasing the productivity of all of Waste's assets results in the target for the Debt to Net Asset Ratio being achieved in 2027.

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8.0 Utility Summary Schedule

(in thousands of dollars)

Line #	Reference	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast	
1	Operations and Maintenance	Schedule 9.0	\$ 172,553	\$ 184,676	\$ 179,664	\$ 179,470	\$ (194)	(0.1%)	\$ 178,758	\$ (712)	(0.4%)	\$ 180,419
2	Amortization of Non-Contributed Assets	Schedule 10.0	22,308	23,900	22,284	24,214	1,930	8.7%	27,757	3,543	14.6%	29,199
3	Debt Interest	Schedule 10.0	9,274	9,466	8,981	9,159	178	2.0%	9,600	441	4.8%	9,648
4	Intra-municipal Recoveries	Schedule 9.8	(4,437)	(5,339)	(4,603)	(4,697)	(94)	2.0%	(4,741)	(44)	0.9%	(4,789)
5	Grants	Schedule 9.0	1,500	4,600	3,600	1,000	(2,600)	(72.2%)	-	(1,000)	(100.0%)	-
6	Amortization of Regulatory Asset	Schedule 9.0	-	1,309	1,309	3,249	1,940	148.2%	3,249	-	-	3,249
TOTAL EXPENSES			201,198	218,612	211,235	212,395	1,160	0.5%	214,623	2,228	1.0%	217,726
7	Non-Rate Revenue	Schedule 11.1	39,302	41,892	35,684	20,930	(14,754)	(41.3%)	17,584	(3,346)	(16.0%)	17,792
8	Rate Revenue	Schedule 11.0	180,030	189,037	190,820	198,036	7,216	3.8%	205,402	7,366	3.7%	213,030
TOTAL REVENUES			219,332	230,929	226,504	218,966	(7,538)	(3.3%)	222,986	4,020	1.8%	230,822
NET INCOME/(LOSS)		Schedule 13.0	\$ 18,134	\$ 12,317	\$ 15,269	\$ 6,571	\$ (8,698)	(57.0%)	\$ 8,363	\$ 1,792	27.3%	\$ 13,096

Line 1 - Operations and Maintenance

The decrease in operations and maintenance from the 2019 Forecast primarily reflects expected cost reductions related to Biosolids due to the closure of the ECF, and anticipated reduction in hauling and landfill costs due to the commissioning of Anaerobic Digestion Facility. The cost reductions are partially offset by additional costs to implement the Source Separated Organics program, increased power charges required for the Refuse Derived Fuel Facility and Anaerobic Digestion Facility, and anticipated cost increases due to customer growth.

Line 2 - Amortization of Non-Contributed Assets

Increases in amortization are driven in part by the upcoming commissioning of new facilities including the Groundwater Diversion System and the Anaerobic Digestion Facility as well as carts and equipment for the Source Separated Organics Program.

Line 6 - Amortization of Regulatory Asset

A deferral account was approved in the Utility's 2019 Rate Filing to allow the Utility to recover the incurred Edmonton Composting Facility expenses through customer rates over the next 12 years in order to minimize the rate impact and to maintain stable and consistent rates increases.

Amortization of the regulatory asset represents the amount of deferral account balance recovered through utility rates in a given period. The increase from 2019 to 2020 represents additions to the deferral account for the Edmonton Composting Facility demolition cost and additional write-down of unsalvageable equipment resulting from the closure of the facility. Please refer to schedule 10.2 for additional details.

Line 7 - Non-Rate Revenue

Decrease in non-rate revenue includes a reduction in Organics revenue from the closure of the Edmonton Composting Facility; decrease in both Commercial Collection and C&D revenue as a result of the strategic decision to exit both non-regulated business lines; and decrease in grant revenue as all project milestones are expected to be fully achieved by the end of 2020.

Line 8 - Rate Revenue

Increase in rate revenue is primarily driven by Pay As You Go requirements to support capital, additional requirement to fund landfill liability, deferral account increases related to ECF decommissioning and equipment write-down, and additional requirements to implement the Source Separated Organics program.

Further detailed analysis of proposed expenditures and revenues are provided in subsequent schedules.

9.0 Operations and Maintenance

(in thousands of dollars)

Line #	Reference	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast
1	Personnel	\$ 50,587	\$ 50,061	\$ 49,289	\$ 50,568	\$ 1,279	2.6%	\$ 52,079	\$ 1,511	3.0%	\$ 51,906
2	Materials, Goods & Supplies	3,725	9,407	3,770	4,649	879	23.3%	5,263	614	13.2%	5,537
3	External Services	75,509	83,998	86,752	83,935	(2,817)	(3.2%)	81,416	(2,519)	(3.0%)	83,639
4	Fleet Services	18,620	17,464	18,486	17,497	(989)	(5.3%)	16,488	(1,009)	(5.8%)	16,530
5	Shared Services	10,669	9,616	9,616	9,901	285	3.0%	10,035	134	1.4%	9,179
6	Intra-municipal Services	4,423	5,012	4,761	4,820	59	1.2%	5,162	342	7.1%	5,202
7	Utilities	4,540	7,161	5,327	6,210	883	16.6%	6,419	209	3.4%	6,524
8	Other Expenses	4,480	1,957	1,663	1,890	227	13.7%	1,896	6	0.3%	1,902
	TOTAL O&M EXPENSES	172,553	184,676	179,664	179,470	(194)	(0.1%)	178,758	(712)	(0.4%)	180,419
9	Intra-municipal Recoveries	(4,437)	(5,339)	(4,603)	(4,697)	(94)	2.0%	(4,741)	(44)	0.9%	(4,789)
	RECOVERIES	(4,437)	(5,339)	(4,603)	(4,697)	(94)	2.0%	(4,741)	(44)	0.9%	(4,789)
10	Amortization of Non-Contributed Assets	22,308	23,900	22,284	24,214	1,930	8.7%	27,757	3,543	14.6%	29,199
11	Amortization of Regulatory Asset	-	1,309	1,309	3,249	1,940	148.2%	3,249	-	-	3,249
12	Debt Interest	9,274	9,466	8,981	9,159	178	2.0%	9,600	441	4.8%	9,648
	EXPENSES BEFORE ONE-TIMES	199,698	214,012	207,635	211,395	3,760	1.8%	214,623	3,228	1.5%	217,726
13	Grants	1,500	4,600	3,600	1,000	(2,600)	(72.2%)	-	(1,000)	(100.0%)	-
	NET EXPENSES	\$ 201,198	\$ 218,612	\$ 211,235	\$ 212,395	\$ 1,160	0.5%	\$ 214,623	\$ 2,228	1.0%	\$ 217,726

Line 13 - Grants

Grants reflected are flow through, received from Alberta Innovates Energy and Environment Solutions and disbursed to the owner of the Edmonton Waste to Biofuels and Chemical Facility upon achievement of contractual milestones. The net operating impact of these grants is zero with the offset in grant revenue (Schedule 11.1). A final grant of \$1 million is expected in 2020 upon achievement of the final milestone.

Please refer to the schedule for each line for more details.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

9.1 Personnel

(in thousands of dollars)

Line #	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast
1 Wages	\$ 41,537	\$ 36,776	\$ 36,092	\$ 37,452	\$ 1,360	3.8%	\$ 38,800	\$ 1,348	3.6%	\$ 38,393
2 Overtime	803	948	1,420	1,259	(161)	(11.3%)	1,361	102	8.1%	1,374
3 Allowances and Benefits	8,247	12,337	11,777	11,857	80	0.7%	11,918	61	0.5%	12,139
TOTAL PERSONNEL	\$ 50,587	\$ 50,061	\$ 49,289	\$ 50,568	\$ 1,279	2.6%	\$ 52,079	\$ 1,511	3.0%	\$ 51,906

Personnel costs include Wages, Overtime, Employment Allowances and Benefits. The City of Edmonton's Capital and Operating Budget System (COBS) utilizes the City's payroll system as the source for the personnel budget for both wages and benefits, thereby providing a reliable and consistent source of information. Vacant positions are set at mid-range with family benefits. Included in the 2020 Proposed Budget is an assumption of a vacancy discount of four percent for all positions.

Line 1 - Wages

The change in wages from 2019 Forecast primarily reflects increases related to temporary staff required for the Source Separated Organics Program rollout in 2020-2021.

Line 2 - Overtime

Overtime is expected to increase over the 2019 budget due to temporary requirements related to the Source Separated Organics Program rollout in 2020-2021.

Line 3 - Allowances and Benefits

Benefits mainly consist of Local Authorities Pension Plan (LAPP), Canada Pension Plan, Employment Insurance, Major Medical and Dental Plan, Group Life Insurance and Health Care Spending Account.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

9.2 Materials, Goods & Supplies

(in thousands of dollars)

Line #	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast
1 Collection Services	\$ 383	\$ 1,065	\$ 815	\$ 1,493	\$ 678	83.2%	\$ 2,097	\$ 604	40.5%	\$ 2,358
2 Organics	534	1,311	299	305	6	2.0%	305	-	-	305
3 Integrated Processing & Transfer Operations	191	2,526	161	164	3	1.9%	164	-	-	164
4 Haul and Landfill Operations	17	20	16	16	-	-	16	-	-	16
5 Construction and Demolition Facility	306	593	522	-	(522)	(100.0%)	-	-	-	-
6 Other	2,294	3,892	1,957	2,671	714	36.5%	2,681	10	0.4%	2,694
TOTAL MATERIALS, GOODS & SUPPLIES	\$ 3,725	\$ 9,407	\$ 3,770	\$ 4,649	\$ 879	23.3%	\$ 5,263	\$ 614	13.2%	\$ 5,537

Line 1 - Collection Services

The increase in Collection Services from 2019 Forecast includes additional cost to support phased implementation of the Source Separated Organics Program starting in 2020 including additional costs for the Excess Waste Program and Big Bin Events.

Line 5 - Construction and Demolition Facility

The decrease in Construction and Demolition (C&D) costs from the 2019 Forecast reflects Council's direction to exit the City's current C&D business line and to secure an operational partner for the facility.

Line 6 - Other

The increase in Other from the 2019 Forecast includes hired equipment and direct material for the Aggregate Program.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

9.3 External Services

(in thousands of dollars)

Line #	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast
1	\$ 22,967	\$ 28,966	\$ 26,646	\$ 28,025	\$ 1,379	5.2%	\$ 28,022	\$ (3)	(0.0%)	\$ 28,360
2	9,268	8,582	8,992	8,620	(372)	(4.1%)	8,622	2	0.0%	8,625
3	16,856	13,459	16,373	13,980	(2,393)	(14.6%)	14,470	490	3.5%	14,762
4	6,490	7,815	6,565	7,133	568	8.7%	7,286	153	2.1%	7,399
5	13,775	11,294	16,907	14,520	(2,387)	(14.1%)	12,920	(1,600)	(11.0%)	13,373
6	1,652	2,953	2,758	-	(2,758)	(100.0%)	-	-	-	-
7	4,151	4,122	4,100	4,100	-	-	4,100	-	-	4,100
8	350	6,807	4,411	7,557	3,146	71.3%	5,996	(1,561)	(20.7%)	7,020
TOTAL EXTERNAL SERVICES	\$ 75,509	\$ 83,998	\$ 86,752	\$ 83,935	\$ (2,817)	(3.2%)	\$ 81,416	\$ (2,519)	(3.0%)	\$ 83,639

Line 1 - Waste Collection Services

Collection Services external contracts include single and multi-unit residential garbage and recycling collection as well as costs for contracted equipment, services at Eco Stations and other Collection Services programs.

Contract work is anticipated to increase due to population growth and increased waste volume. Current contracts are adjusted annually using a cost index that includes CPI, fuel and labour to better reflect annual changes in direct operating costs. In addition, the increase includes additional cost to support phased implementation of the Source Separated Organics Program starting in 2020 including additional costs for assisted waste collection, and grass, leaf and yard waste collection.

Line 2 - Materials Recovery Facility

The Materials Recovery Facility (MRF) sorts and processes recyclables collected through the blue bag and recycling depot programs. A reduction from the 2019 Forecast is the result of a planned upgrade to the plant, resulting in anticipated lower operating costs.

Line 3 - Organics

The Anaerobic Digestion Facility is anticipated to be commissioned in 2020, allowing for an additional 48,000 tonnes of organic material to be composted resulting in increased operational costs. These costs will be offset by projected savings from the closure of the Edmonton Composting Facility (ECF). Starting in 2020 and ending in 2022, net savings from the closure of the ECF have been incorporated.

Line 4 - Integrated Processing & Transfer Operations (IPTF)

Feedstock for the Waste to Biofuels and Chemicals Facility is prepared at the Refuse Derived Fuel facility, located within the IPTF, resulting in higher contract costs for the IPTF. Waste Services pays a contractually agreed upon fee to the Waste to Biofuels and Chemicals Facility for the conversion of feedstock into alcohol fuels. The fee includes a tipping fee for the delivery of acceptable feedstock to the facility. Most of the increased costs incurred by the IPTF Operations and Biofuels Facility contract will be offset by a reduction in the costs of hauling and landfill, as demonstrated in Line 5 - Haul and Landfill Operations.

Line 5 - Haul and Landfill Operations

Hauling and Landfill Operations represents the contract fees for all of Waste Services Utility operations. Several factors influencing this decrease in the budget from 2019 Forecast include additional tonnage going to the Waste to Biofuels and Chemicals Facility through the Refuse Derived Fuel Facility and a reduction in hauling related to the additional tonnage processed upon commissioning of the Anaerobic Digestion Facility.

Line 6 - Construction and Demolition Facility

The Construction and Demolition Facility was operated by City staff with significant additional contracted services including the provision of labour, equipment maintenance services and supplements to the Utility's operations to meet peak demands in grinding and crushing of wood. The wood grinding operation required extensive contract work to mitigate the risk of fire and to prepare feedstock for the Waste to Biofuels Facility. The decrease in Construction and Demolition (C&D) costs from the 2019 Forecast reflects Council's direction to exit the City's current C&D business line and to secure an operational partner.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

Line 7 - Customer Billing Services

Waste Services has a contract with EPCOR for the provision of customer billing and collection services. The 2020 through 2022 costs are based on negotiated contract amounts. EPCOR is in the process of replacing their current billing system with a modern cloud based system that will provide a more streamlined billing service. As a key stakeholder, Waste Services had direct input into the billing system design related to Waste Utility bills.

Line 8 - Other

Other contract costs include Community Relations and Program Management, Administrative Services, and other facilities such as Eco Stations, Edmonton Waste Services Centre Operations, Advanced Energy Research Facility, Research & Development and Environmental. In addition, operating costs to support the Source Separated Organics Program related to education and outreach, social marketing, digital strategy and communications are included.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

9.4 Fleet Services

(in thousands of dollars)

Line #	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast	
1	Fleet Reserve Contribution	\$ 65	\$ 86	\$ 86	\$ 81	\$ (5)	(5.8%)	\$ 77	\$ (4)	(4.9%)	\$ 77
2	Fuel	4,487	4,153	4,205	4,222	17	0.4%	4,191	(31)	(0.7%)	4,232
3	Direct Charge & Repairs	14,068	13,225	14,195	13,194	(1,001)	(7.1%)	12,220	(974)	(7.4%)	12,221
	TOTAL FLEET SERVICES	\$ 18,620	\$ 17,464	\$ 18,486	\$ 17,497	\$ (989)	(5.3%)	\$ 16,488	\$ (1,009)	(5.8%)	\$ 16,530

As Fleet Services recovers 100 percent of branch costs, a portion of indirect branch overhead is charged to Waste Services. The indirect overhead is allocated through work order fees, vendor work charges and fuel surcharges. The remaining overhead costs are recovered through shop rates on shop labour hours. Indirect overhead includes branch administration, training, engineering, procurement, safety, client relations and facility and equipment maintenance. Estimates for Fuel and Direct Charges & Repairs are estimated by Fleet Services in consultation with Waste Services and aligned with Fleet Services four-year operating budget.

Waste Services Utility is moving towards management of their vehicle and equipment replacement which has resulted in a decrease to the reserve contribution to the Fleet Services Replacement Reserve. This results in Waste Services purchasing vehicles through its own capital program rather than through Fleet Services. As older equipment purchased by Fleet gets replaced, the remaining reserve contribution will continue to decline.

The decrease in Direct Charge & Repairs from 2019 Forecast reflects anticipated normal level of repairs due to replacement of aging fleet in 2020.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

9.5 Shared Services

(in thousands of dollars)

Line #		2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast
1	Corporate Allocation (Central Management)	\$ 1,545	\$ 1,697	\$ 1,697	\$ 2,002	\$ 305	18.0%	\$ 2,155	\$ 153	7.6%	\$ 2,080
2	Communications & Public Engagement	478	479	479	480	\$1	0.2%	482	2	0.4%	436
3	Financial Services	2,175	2,071	2,071	1,968	(103)	(5.0%)	1,865	(103)	(5.2%)	1,589
4	Safety	86	118	118	149	31	26.3%	181	32	21.5%	192
5	Customer Information Services	557	559	559	563	4	0.7%	565	2	0.4%	511
6	Human Resources	1,013	1,019	1,019	1,020	1	0.1%	1,027	7	0.7%	931
7	Law	280	284	284	287	3	1.1%	291	4	1.4%	265
8	Corporate Procurement and Supply Services	445	496	496	547	51	10.3%	598	51	9.3%	585
9	Information Technology	2,146	2,120	2,120	2,095	(25)	(1.2%)	2,071	(24)	(1.1%)	1,846
10	Real Estate & Housing	697	773	773	790	17	2.2%	800	10	1.3%	744
11	Facilities and Landscape Infrastructure	1,247	-	-	-	-	-	-	-	-	-
	TOTAL SHARED SERVICES	\$ 10,669	\$ 9,616	\$ 9,616	\$ 9,901	\$ 285	3.0%	\$ 10,035	\$ 134	1.4%	\$ 9,179

The City of Edmonton employs a Shared Services model whereby support services required for the operations of all City businesses are provided through centralized areas of expertise. This approach takes advantage of efficiencies gained through economies of scale and opportunities to provide more robust systems and services (e.g. technology related services). The Waste Management Utility Fiscal Policy C558A requires that the Utility operate under a full cost approach thus requiring the Utility to pay for its portion of shared services.

As part of the City's 2019-2022 Operating Budget development, Shared Service providers performed a review of their costs and the shared service allocation model, resulting in updates to the cost allocation drivers. This resulted in several changes to the allocation of shared service costs from the service providers to the Utility. One new service provider (Employee Services) was also added to the shared service pool. Waste Services will initiate a benchmarking study to validate the reasonableness of Shared Service costs allocated to the Utility. The increase in Central Management from 2019 Forecast is due to the transfer of 2.0 FTEs from Waste Services to IIS - Facility Planning and Design.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

9.6 Intra-Municipal Services

(in thousands of dollars)

Line #		2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast
1	Communications & Public Engagement	\$ 974	\$ 963	\$ 963	\$ 727	\$ (236)	(24.5%)	\$ 727	-	-	\$ 727
2	Financial Services	67	67	67	67	-	-	67	-	-	67
3	Human Resources	317	136	136	136	-	-	135	(1)	(0.7%)	135
4	Law	283	56	56	56	-	-	364	308	550.0%	371
5	Corporate Procurement and Supply Services	270	364	364	364	-	-	363	(1)	(0.3%)	363
6	Transportation Operations	82	83	83	83	-	-	83	-	-	83
7	Facilities and Landscape Infrastructure	42	1,758	1,758	1,870	112	6.4%	1,871	1	0.1%	1,871
8	Other	2,388	1,585	1,334	1,517	183	13.7%	1,552	35	2.3%	1,585
	TOTAL INTRA-MUNICIPAL SERVICES	\$ 4,423	\$ 5,012	\$ 4,761	\$ 4,820	\$ 59	1.2%	\$ 5,162	\$ 342	7.1%	\$ 5,202

Intra-Municipal Services are charges for on-demand services provided through other City of Edmonton programs which are not incorporated in shared services charges. These are direct charges for services such as dedicated support for communication and engagement initiatives, on demand building repairs and maintenance, posting of vacant positions to job sites and security services for special events.

In 2019, as part of the strategic review of Waste Services Operations, a review of the key intra-municipal services was performed including clarifying resources, deliverables and approximate costs associated with the services. As a result of the review, costs for Communications and Public Engagement have been reduced starting in 2020. Waste Services continues to work with its Corporate partners to perform additional review and, where appropriate, work to establish service level agreements.

Line 1 - Communications & Public Engagement

The decrease in direct charges from 2019 Forecast reflects the reduction in resource requirements and related cost for Communications and Public Engagement as part of the review of intra-municipal services performed by Waste Services.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

Line 7 - Facilities and Landscape Infrastructure

During the City's 2019-2022 Operating Budget process, Facilities and Landscape Infrastructure was transferred from being a shared service provider to an on-demand service provider. The increase in costs for 2020 is related to the transfer of 1.0 FTE from Waste Services to Facility Services.

Line 8 - Other

The increase in Other from 2019 forecast is related to the transfer of 1.0 FTE from Waste Services to DCMO office to support OH&S.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

9.7 Utilities

(in thousands of dollars)

Line #	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast
1 Power	\$ 3,098	\$ 4,791	\$ 3,123	\$ 4,268	\$ 1,145	36.7%	\$ 4,478	\$ 210	4.9%	\$ 4,583
2 Natural Gas	1,036	1,798	1,750	1,372	(378)	(21.6%)	1,372	-	-	1,372
3 Water	86	171	136	159	23	16.9%	159	-	-	159
4 Other	320	401	318	411	93	29.2%	410	(1)	(0.2%)	410
TOTAL UTILITIES	\$ 4,540	\$ 7,161	\$ 5,327	\$ 6,210	\$ 883	16.6%	\$ 6,419	\$ 209	3.4%	\$ 6,524

Power, natural gas and water estimates are provided by Urban Form and Corporate Strategic Development, Economic and Environmental Sustainability. Estimates are based on historical consumption and future forecasted rates for current service levels. Service level changes are applied to the estimates to determine the budget numbers for each utility.

Line 1 - Power

Increase in power costs as a result of:	2020
Commissioning of the High Solids Anaerobic Digestion Facility	\$ 861
Residential Collection and Eco Stations	5
Refuse Derived Fuel Facility (production of feedstock)	261
Other	18
Total	\$ 1,145

Line 2 - Natural Gas

The decrease in natural gas from the 2019 Forecast reflects lower anticipated heat requirements due to the closure of the Edmonton Composting Facility.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

9.8 Intra-Municipal Recoveries

(in thousands of dollars)

Line #	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast
1 Litter Collection Recovery	\$ (1,923)	\$ (1,922)	\$ (1,922)	\$ (1,922)	-	-	\$ (1,922)	-	-	\$ (1,922)
2 Landfill Disposal Fees	(170)	(188)	(200)	(200)	-	-	(200)	-	-	(200)
3 Charges to Capital	(2,344)	(3,229)	(2,481)	(2,575)	(94)	3.8%	(2,619)	(44)	1.7%	(2,667)
TOTAL INTRA-MUNICIPAL RECOVERIES	\$ (4,437)	\$ (5,339)	\$ (4,603)	\$ (4,697)	\$ (94)	2.0%	\$ (4,741)	\$ (44)	0.9%	\$ (4,789)

Intra-Municipal Recoveries are billings to other areas within the City of Edmonton for services provided by the Waste Services Utility. These recoveries include direct charges such as litter collection charged to Capital City Clean-Up and charges to other City of Edmonton areas for disposal of waste at the Edmonton Waste Management Centre.

Line 3 - Charges to Capital

As in-house engineers work on capital projects, a portion of their time is capitalized to the project(s) instead of being charged to operating expenses.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

10.0 Amortization and Interest Expense

(in thousands of dollars)

Line #		2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	2021 Forecast	2022 Forecast
1	Amortization of Non-Contributed Assets	\$ 22,308	\$ 23,900	\$ 22,284	\$ 24,214	\$ 27,757	\$ 29,199
2	Amortization of Contributed Assets	1,342	1,389	1,406	1,412	1,423	1,344
	TOTAL AMORTIZATION OF ASSETS	\$ 23,650	\$ 25,289	\$ 23,690	\$ 25,626	\$ 29,180	\$ 30,543
3	Long-Term Interest - Existing Borrowing	\$ 9,226	\$ 8,279	\$ 8,895	\$ 8,192	\$ 7,481	\$ 6,765
4	Long-Term Interest - Proposed Borrowing	-	1,126	12	857	2,028	2,813
		9,226	9,405	8,907	9,049	9,509	9,578
5	Short-Term Interest	48	61	74	110	91	70
	TOTAL INTEREST EXPENSE	\$ 9,274	\$ 9,466	\$ 8,981	\$ 9,159	\$ 9,600	\$ 9,648
	COST OF DEBT						
6	Long-Term Debt Principal Repayment - Existing Borrowing	\$ 20,933	\$ 17,604	\$ 19,105	\$ 17,755	\$ 17,518	\$ 17,121
7	Long-Term Debt Principal Repayment - Proposed Borrowing	-	1,867	-	1,679	4,274	6,362
		20,933	19,471	19,105	19,434	21,792	23,483
8	Short-Term Debt Principal Repayment	432	651	794	1,428	1,477	1,529
	TOTAL PRINCIPAL REPAYMENTS	\$ 21,365	\$ 20,122	\$ 19,899	\$ 20,862	\$ 23,269	\$ 25,012
9	Long-Term Debt Balance - Existing Borrowing	\$ 214,739	\$ 198,838	\$ 195,634	\$ 177,878	\$ 160,361	\$ 143,239
10	Long-Term Debt Balance - Proposed Borrowing	16,160	45,324	26,795	71,338	116,956	130,638
	TOTAL LONG-TERM DEBT BALANCE	\$ 230,899	\$ 244,162	\$ 222,429	\$ 249,216	\$ 277,317	\$ 273,877
	MID-YEAR LONG-TERM DEBT BALANCE	\$ 233,286	\$ 241,940	\$ 226,664	\$ 235,823	\$ 263,267	\$ 275,597

Amortization expense represents the amount of asset life used during a given operating period. The rate of amortization is dependent upon the asset class, each with a predetermined estimated useful life based upon historical experience. Waste Services Utility's assets are divided into 47 different classes with useful lives varying between three years and extending up to 60 years. Amortization expense is calculated using the straight-line method which incurs half year expenses in the first and last year of the asset's life.

Interest expense includes both interest for Alberta Capital Financing Authority (ACFA) debentures related to capital projects, as well as interest on short-term loans from the City of Edmonton. Projected rates are provided by the City of Edmonton Budget Office and are based on recent ACFA rates and economic conditions (see section 3.0 Methodology and Key Assumptions).

Line 1 - Amortization of Non-Contributed Assets

The annual increases in amortization result from upcoming commissioning of new facilities including the Groundwater Diversion System, Anaerobic Digestion Facility, site infrastructure and facilities projects, Source Separated Organics Program initiatives, and vehicle and equipment purchases. The majority of existing assets will not reach the end of their useful life for several more years.

Line 2 - Amortization of Contributed Assets

Amortization of Contributed Assets represents the amount of benefit from assets which were received or funded by third parties. The amortization from contributed assets decreases the amount of total amortization expense for the Waste Services Utility. Amortization of Contributed Assets are the benefits received from the Advanced Energy Research Facility, funded by Alberta Innovates - Energy and Environment Solutions, and Edmonton Waste Management Centre Site 440 infrastructure. A large portion of Site 440 construction was funded by an external third party.

Lines 5 and 8 - Short-Term Interest and Short-Term Debt Principal Repayments

Refer to Schedule 10.1 for additional details.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

10.1 Short-Term Loan from the City of Edmonton

(in thousands of dollars)

Line #	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	2021 Forecast	2022 Forecast	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast	2027 Forecast	2028 Forecast
1	Loan To Cover Non-Regulated Program Losses and Maintain Cash Flow											
Beginning Balance	\$ 3,232	\$ 4,056	\$ 4,898	\$ 7,236	\$ 5,808	\$ 4,331	\$ 2,802	\$ 1,216	-	-	-	-
Draw	2,098	1,304	3,132	-	-	-	-	-	-	-	-	-
Principal	432	651	794	1,428	1,477	1,529	1,586	1,216	-	-	-	-
Interest	48	61	74	110	91	70	48	25	-	-	-	-
Ending Balance	\$ 4,898	\$ 4,709	\$ 7,236	\$ 5,808	\$ 4,331	\$ 2,802	\$ 1,216	-	-	-	-	-

Line 1 - Loan to Cover Non-Regulated Program Losses and Maintain Cash Flow

To address non-regulated program losses and achieve target cash balances, the Waste Services Utility was given authorization through the 2015 Operating Budget process to draw on a short-term loan from the City of Edmonton beginning in 2015. This ensures that non-regulated losses are covered by the loan as opposed to regulated revenues and assists in reducing non-regulated rate increases. The first draw of \$1.57 million was December 31, 2015; no draw was made in 2016; a draw of \$1.96 million was made in 2017; and a draw of \$2.1 million was made in 2018. Principal and Interest (1.5%) are paid annually for ten years from the first draw in 2015. Interest payments are reflected entirely within non-regulated program expenses. As part of the year end financial reporting process, the Waste Services Utility will determine the borrowing requirement to offset non-regulated program losses and cover the loan repayments. For this document a forecast 2019 draw was incorporated based on best estimates.

This rate file anticipates additional annual draws up to December 31, 2019 to cover projected non-regulated losses related to the commercial business lines including closure of the Construction and Demolition Recycling Facility and the wind-down of Commercial Collections. Once the full extent of the losses are ascertained by the end of 2019, the Utility will bring forward a plan and recommendation to address program losses and loan repayment options in 2020.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

10.2 Deferral Account Balances

(in thousands of dollars)

Line #		Recovery Period (Years)	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	2021 Forecast	2022 Forecast
1	Opening Deferral Balance (Regulatory Asset)		-	-	-	\$ 14,404	\$ 26,670	\$ 23,421
	Additions							
2	2017 Initial Impairment of ECF Structure (Previously Approved)	12	-	\$ 15,713	\$ 15,713	-	-	-
3	2019 Impairment of ECF Equipment	8	-	-	-	5,015	-	-
4	2019 ECF Deconstruction *	8	-	-	-	10,500	-	-
5	Deferral Additions During the Year		-	\$ 15,713	\$ 15,713	\$ 15,515	-	-
6	Deferral Balance Including Additions		-	15,713	15,713	29,919	26,670	23,421
7	Amortization of Regulatory Asset - 2017 Impairment (Line 2)	12	-	1,309	1,309	1,309	1,309	1,309
8	Amortization of Regulatory Asset - 2019 Impairment (Line 3)	8	-	-	-	627	627	627
9	Amortization of Regulatory Asset - ECF Deconstruction (Line 4)	8	-	-	-	1,313	1,313	1,313
10	Total Amortization of Regulatory Asset		-	\$ 1,309	\$ 1,309	\$ 3,249	\$ 3,249	\$ 3,249
11	Closing Deferral Balance (Regulatory Asset)		-	\$ 14,404	\$ 14,404	\$ 26,670	\$ 23,421	\$ 20,173

*In the 2019 Rate Filing, an estimated provision of \$1.5 million was included for demolition cost in the approved deferral account balance of \$15.7 million (on line 2). The required deferral account addition for deconstruction cost (on line 4) has therefore been reduced by \$1.5 million for calculating rates from the current deconstruction cost estimate of \$12 million.

The Waste Services deferral account is a rate regulated accounting mechanism which allows the Utility to minimize rate volatility for ratepayers by recovering approved cost from ratepayers over a period of time compared to when the costs are actually incurred. This results in the Utility recording a regulatory asset for the deferral account balances which is amortized over a reasonable time period to allow the Utility to recover costs from ratepayers while ensuring rate stability and minimizing inter-generational inequity.

Lines 2-4 - Impairment of ECF & Deconstruction Cost

Line 2 - During 2017, structural issues associated with the Aeration Hall roof were identified resulting in an initial financial impairment of \$15.7 million. Waste Services received approval to create a deferral account for this impairment through its 2019 Rate Filing to minimize impact to ratepayers.

Lines 3 and 4 - In spring 2019, it was concluded that the facility was no longer safe to continue operating and to begin the shut down process to permanently decommission the facility. This decision was based on the latest structural scan and in collaboration with external structural engineers. As a result, there is an additional impairment related to unsalvageable equipment of \$5 million. In addition, the facility deconstruction cost is estimated at \$12 million. The additional impairment and estimated deconstruction costs have been incorporated as additions to the previously approved deferral account balances in this rate filing to minimize impact to ratepayers.

Line 10 - Amortization of Regulatory Asset

The amortization of the regulatory asset represents the annual amount of the deferral balance recovered through Utility rates. The amortization period used for the regulatory asset closely matches the remaining useful life of the original asset and in the case of decommissioning cost a reasonable time period that minimizes rate impact while balancing inter-generational equity. The Utility will monitor its deferral account balances for appropriate additions or adjustments to the amortization periods when justified.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

11.0 Revenue Requirement

(in thousands of dollars)

Line #	Reference	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	2021 Forecast	2022 Forecast	
1	O&M Expenses and Grants	Schedule 9.0	\$ 174,053	\$ 189,276	\$ 183,264	\$ 180,470	\$ 178,758	\$ 180,419
2	Intra-municipal Recoveries	Schedule 9.0	(4,437)	(5,339)	(4,603)	(4,697)	(4,741)	(4,789)
	Net Operations and Maintenance Expenses		169,616	183,937	178,661	175,773	174,017	175,630
3	Amortization of Non-Contributed Assets	Schedule 9.0	22,308	23,900	22,284	24,214	27,757	29,199
4	Amortization of Regulatory Asset	Schedule 10.2	-	1,309	1,309	3,249	3,249	3,249
5	Debt Servicing - Total Interest	Schedule 9.0	9,274	9,466	8,981	9,159	9,599	9,648
	Total Net Expense		201,198	218,612	211,235	212,395	214,622	217,726
6	Return on Rate Base	Schedule 11.3	18,134	12,317	15,269	6,572	8,364	13,095
	Total Revenue Requirement		219,332	230,929	226,504	218,967	222,986	230,821
7	Less Non-Rate Revenues	Schedule 11.1	39,302	41,892	35,684	20,931	17,584	17,791
	TOTAL RATE REVENUE REQUIRED		\$ 180,030	\$ 189,037	\$ 190,820	\$ 198,036	\$ 205,402	\$ 213,030

Waste Services Utility Fiscal Policy C558A was adopted by City Council on September 23, 2014. As per this policy, "At a minimum, the projected total revenue generated will be equal to the projected expenses for the year, including sufficient cash to meet the cash flow requirements of the Utility." Costs associated with Contributed Capital, such as amortization, are excluded as these are not eligible to be funded through regulated utility rates.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

11.1 Non-Rate Revenue

(in thousands of dollars)

Line #		2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast
1	Program Revenues - Tip Fees	\$ 5,662	\$ 5,598	\$ 6,998	\$ 5,890	\$ (1,108)	(15.8%)	\$ 5,806	\$ (84)	(1.4%)	\$ 5,928
2	Program Revenues - C&D Waste	4,391	6,273	2,273	-	\$ (2,273)	(100.0%)	-	-	-	-
3	Program Revenues - Materials Recovery Facility	3,898	3,240	2,150	1,775	(375)	(17.4%)	1,775	-	-	1,775
4	Program Revenues - Commercial Collection	8,031	7,704	6,704	2,342	(4,362)	(65.1%)	-	(2,342)	(100.0%)	-
5	Program Revenues - Eco Stations	2,896	3,360	2,905	3,410	505	17.4%	3,473	63	1.8%	3,539
6	Program Revenues - Organics Operation	4,648	6,261	4,900	-	(4,900)	(100.0%)	-	-	-	-
7	Program Revenues - Other	6,795	4,506	4,664	5,063	399	8.6%	5,129	66	1.3%	5,198
8	Late Payment Penalty	488	-	-	-	-	-	-	-	-	-
9	Investment Earnings	989	350	1,490	1,450	(40)	(2.7%)	1,401	(49)	(3.4%)	1,352
10	Grants	1,504	4,600	3,600	1,000	(2,600)	(72.2%)	-	(1,000)	(100.0%)	-
	TOTAL NON-RATE REVENUE	\$ 39,302	\$ 41,892	\$ 35,684	\$ 20,930	\$ (14,754)	(41.3%)	\$ 17,584	\$ (3,346)	(16.0%)	\$ 17,792

Line 1 - Tip Fees Revenue

Tip Fee Revenues are generated by private haulers disposing of waste materials at the Edmonton Waste Management Centre (EWMC).

Line 2 - Construction and Demolition (C&D) Waste Revenue

The decrease from 2019 Forecast for C&D revenues reflects the strategic direction to exit the C&D non-regulated business line.

Line 3 - Materials Recovery Facility Revenue

Materials Recovery Facility (MRF) revenue from the sale of recyclable materials are highly influenced by both the commodities market and the US exchange rate. MRF revenues are anticipated to be lower due to lower market demand of materials.

Line 4 - Commercial Collection

Commercial Collection revenues are anticipated to be lower due to the strategic direction to wind-down and exit this commercial business line.

Line 5 - Eco Stations Revenue

Continued growth in Eco Station usage results in an anticipated revenue increase in 2020 and beyond.

Line 6 - Organics Operation

Biosolids and dewatering revenues have been eliminated starting in 2020 due to the closure and planned deconstruction of the Edmonton Composting Facility.

Line 7 - Other Program Revenue

Other Program Revenue includes revenues generated from third parties operating at the Edmonton Waste Management Centre based on agreements, which includes sharing of third party sales revenues. Also included in this category are revenues generated from environmental initiatives such as the Sale of Landfill Gas credits. Beginning in 2020, this also includes estimated revenue generated from the Excess Waste Program on a full cost recovery basis.

Line 8 - Late Payment Penalty

An outcome of the 2017 Cost of Service Study is that revenue for late payments by ratepayers is now included in Rate Revenue totals.

Line 9 - Investment Earnings

Investment earnings include short-term interest payments received on existing cash balances. Interest earned is expected to decline in the coming years as the amount of restricted cash held for the Landfill Post Closure Liability and the Bremner Lagoon Liability are reduced.

Line 10 - Grants

Grants reflected are flow through, received from Alberta Innovates Energy and Environment Solutions and are disbursed to the owner of the Edmonton Waste to Biofuels and Chemical Facility upon achievement of contractual milestones. The net operating impact of these grants is zero with the offset in grant expense (Schedule 9.0). A remaining \$1 million grant is expected in 2020 upon achievement of the final milestone.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

11.2 Calculation of Rate Base

(in thousands of dollars)

Line #	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	2021 Forecast	2022 Forecast
1 Investments in Tangible Capital Assets						
Gross Book Value - Non Contributed	\$ 539,743	\$ 605,035	\$ 570,533	\$ 531,207	\$ 595,671	\$ 621,988
Gross Book Value - Contributed	28,863	21,167	30,888	31,463	32,013	32,013
Gross Book Value - All Assets	568,606	626,202	601,421	562,670	627,684	654,001
Accumulated Depreciation - Non Contributed	269,199	282,456	294,884	212,195	239,952	269,151
Accumulated Depreciation - Contributed	7,320	6,703	8,726	10,137	11,561	12,904
Accumulated Depreciation - All Assets	276,519	289,159	303,610	222,332	251,513	282,055
Net Book Value - Non Contributed	270,543	322,579	275,650	319,012	355,719	352,838
Net Book Value - Contributed	21,544	14,464	22,163	21,326	20,453	19,109
Net Book Value - All Assets	\$292,087	\$337,043	\$297,813	\$340,338	\$376,172	\$371,947
Mid-Year Non-Contributed Assets	281,271	312,314	273,096	297,331	337,366	354,278
2 Cash Flow Requirement						
One Month Operations	2,513	17,844	17,306	16,938	17,110	17,391
RATE BASE AT MID YEAR	\$ 283,784	\$ 330,158	\$ 290,402	\$ 314,269	\$ 354,476	\$ 371,669

WASTE SERVICES UTILITY

2020 Utility Rate Filing

11.3 Return on Rate Base

(in thousands of dollars)

Line #	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	2021 Forecast	2022 Forecast	
1	\$ 283,784	\$ 330,158	\$ 290,319	\$ 314,352	\$ 354,475	\$ 371,669	
	Mid-Year Capital Structure						
2	Debt	82.2%	73.1%	78.1%	75.0%	74.3%	74.2%
3	Equity	17.8%	26.9%	21.9%	25.0%	25.7%	25.8%
	Cost Rates						
4	Debt	3.3%	2.8%	3.1%	2.9%	2.7%	2.6%
5	Equity	6.4%	3.7%	5.3%	2.1%	2.4%	3.5%
	Weighted Average Cost of Debt	3.8%	3.1%	3.5%	2.7%	2.6%	2.8%
	Return on Rate Base						
6	Debt	9,226	9,405	8,907	9,049	9,509	9,578
7	Equity	18,134	12,317	15,269	6,571	8,363	13,096
	Total Return	\$ 27,360	\$ 21,722	\$ 24,176	\$ 15,620	\$ 17,872	\$ 22,674

Return on Rate Base is the net income/(loss) as a percentage of the Mid-Year Rate Base. The positive return on rate base is indicative of Waste Services Utility's increased focus on working towards financial sustainability and the need to meet Pay As You Go capital requirements.

12.0 Capital Budget and Forecast Plan - Capital Project Summary

As part of the 25-year Waste Strategy and 2020 Business Plan, the Utility has placed greater emphasis on delivering strategic program changes, while continuing to manage a few legacy issues within the 2.5 percent rate increase using focused prioritization and realignment of capital plan and capital spend. The 2020 rate filing reflects the following realignment of capital spend:

- Realignment of timing for the Organics Processing Facilities (OPF) with major spends starting in 2023.
- Reallocation of funding from the IIS managed composite profile (Waste Services Infrastructure Planning & Design) to a new OPF stand alone profile for awarding the Owner's Engineer and Financial Adviser contracts to advance the OPF P3 business case development, including concept design for the new OPF.
- Realignment of timing for Cure Site land use and development with planned completion in 2024.
- Accelerated capital spend on the Materials Recovery Facility and Refuse Derived Fuel starting in 2020 to improve efficiency.
- Reduction in the equipment and vehicle requirements as a result of the wind-down of Commercial Collections business lines.
- Allocation of funding to complete the Groundwater Diversion system.
- Forecasted capital requirement in 2020 to meet Interim Organics processing requirements until the new OPF comes into service in 2025. A separate capital profile for interim organics has been included in this rate filing for rate forecasting purposes only. A detailed business case will be brought forward for approval in spring 2020 before any capital is committed.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

(in thousands of dollars)

Line #	Capital Projects	Appendix	4 Year Capital Budget					Forecast						
			2019	2020	2021	2022	2019-2022 Total	2023	2024	2025	2026	2027	2028	2019-2028 Total
Branch-wide														
1	Facilities & Infrastructure Planning & Design		\$80	\$292	\$298	\$337	\$1,006	\$739	\$2,077	\$1,229	\$1,122	\$1,427	\$1,529	\$9,130
2	Facilities & Infrastructure Project Delivery		3,067	4,864	5,225	5,110	18,265	6,655	18,697	11,063	10,094	12,843	13,761	91,378
3	Waste Services Infrastructure Planning and Design (IIS)		1,772	275	985	400	3,432	1,000	400	2,000	500	-	-	7,332
4	Waste Services Project Delivery (IIS)		3,979	11,654	15,701	3,193	34,527	33,372	40,158	27,377	-	-	-	135,433
5			8,897	17,085	22,208	9,039	57,230	41,767	61,332	41,669	11,716	14,270	15,290	243,273
Collection Services Facilities														
6	Collection Facilities and Infrastructure		2,267	-	-	-	2,267	-	-	-	-	-	-	2,267
7	Mayfield (NW) Eco Station		-	-	-	-	-	-	-	-	777	6,075	6,925	13,777
8			2,267	-	-	-	2,267	-	-	-	777	6,075	6,925	16,044
Sustainable Waste Processing Facilities														
9	Cure Site Land Use & Development		265	100	100	100	565	2,925	3,110	-	-	-	-	6,600
10	Groundwater Diversion System		7,200	1,000	-	-	8,200	-	-	-	-	-	-	8,200
11	Material Recovery Facility Renewal (MRF)		395	-	-	-	395	-	-	-	-	-	-	395
12	Organics Processing Facilities (OPF)	B.1	1,298	3,328	815	-	5,441	-	-	-	-	-	-	5,441
13	Advanced Energy Research Facility (AERF) Upgrade	B.2	25	575	550	-	1,150	-	-	-	-	-	-	1,150
14			9,183	5,003	1,465	100	15,752	2,925	3,110	-	-	-	-	21,787
Vehicles & Equipment														
15	Waste Containers		1,307	1,427	1,162	1,251	5,147	3,399	3,500	3,600	3,700	3,778	3,827	26,951
16	WM Services Equipment Acquisition		2,740	18,874	15,120	13,770	50,504	10,483	14,370	3,901	7,574	11,518	11,932	110,282
17			4,047	20,302	16,282	15,021	55,651	13,883	17,870	7,501	11,274	15,296	15,759	137,233
Waste Program Changes														
18	Source Separated Organics Program		-	24,277	25,059	2,158	51,494	-	-	-	-	-	-	51,494
19			-	24,277	25,059	2,158	51,494	-	-	-	-	-	-	51,494
20	Total Recommended Profiles		24,394	66,666	65,014	26,318	182,392	58,574	82,312	49,170	23,766	35,641	37,974	469,830
Profile to be Proposed for Approval in Spring 2020														
21	Interim Organics Processing Solution	B.3	-	5,000	-	-	5,000	-	-	-	-	-	-	5,000
22	Grand Total		\$24,394	\$71,666	\$65,014	\$26,318	\$187,392	\$58,574	\$82,312	\$49,170	\$23,766	\$35,641	\$37,974	\$474,830

Lines 1 and 2 - Facilities & Infrastructure Planning and Design and Project Delivery Composite

These composite profiles provide capital funding for planning and design and project delivery, which will be managed internally by Waste Services. The scope of the Facilities and Infrastructure profiles includes the capital maintenance, renewal and upgrade of existing assets due to new or increased waste streams, safety concerns, and design improvements that increase the efficiency of Waste Services' operations. This also includes implementation of an asset management program to deliver sustainable waste services and maintain optimal service levels. Projects were prioritized using a branch-wide process that identifies and ranks projects based on strategic criteria such as environmental impact, health and safety, and alignment to strategy. All projects managed by IIS and some of the larger projects managed by Waste Services will follow the Project Development & Delivery Model (PDDM) process.

Projects anticipated to be undertaken in this budget cycle include, but are not limited to:

- Accessory projects to the Refuse Derived Fuel Facility to enhance process efficiencies.
- Anaerobic Digestion Facility humidifier project to optimize processing conditions.
- EWMC site fire protection upgrades to address risk identified by a third-party consultant.

Lines 3 and 4 - Waste Services Planning and Design and Project Delivery Composite (IIS Managed)

These composite profiles provide capital funding for planning and design and for project delivery for projects managed by Integrated Infrastructure Services (IIS). The profiles provide a budget to support concept level planning for major capital initiatives in accordance with the City's Project Development & Delivery Model (PDDM). The PDDM is a framework to manage all capital infrastructure projects and represents best practice in project management from industry and comparable municipalities. This process ensures that sufficient information is prepared in advance of the capital budget approval process to support informed investment decisions, provides adequate resources for planning and design and provides an overall framework to guide the management of Waste Services' capital projects. Projects have been identified and prioritized based on strategic criteria such as environmental impact, health and safety and alignment with branch and corporate goals.

Projects anticipated to be undertaken in this budget cycle include, but are not limited to, the following:

- Upgrades to the Material Recovery Facility equipment to replace aging machinery and improve processing efficiency.
- Major efficiency enhancements to the Refuse Derived Fuel Facility to include a second pre-shredder and alternate offload.
- Post commissioning upgrades to the Anaerobic Digestion Facility to enhance safety and efficiency, such as a process to further reduce pathogens.
- Expansion of IPTF locker room to increase locker room capacity for City and contract staff.

Line 9 - Cure Site Land Use and Development

This profile was carried forward from 2015-2018 and allows for the procurement and development of an external cure site for composting activities. Due to realignment of priorities and requirements, this profile is anticipated to incur the majority of capital spend in 2023 and 2024.

Line 10 - Groundwater Diversion System

This profile was carried forward from 2015-2018 and supports the installation of a functioning groundwater diversion system to serve the EWMC site. Due to unforeseen and adverse ground conditions encountered during trenching, an additional budget of \$3.2 million is required for remedial action, groundwater pumping and related technical work. Capital funding of \$13.3 million was approved in the 2015-2018 budget cycle, of which \$5.9 million was spent in 2018, \$3.5 million is projected to be spent in 2019 and an estimated \$7.1 million is required to complete the project. This results in an additional budget requirement of \$3.2 million over the previously approved funding of \$13.3 million, which has been reflected in the realigned 2020 capital plan.

Line 12 - Organics Processing Facilities (OPF)

This line represents the reallocation of funding from the IIS managed composite profile, Waste Services Infrastructure Planning & Design, to a new OPF stand alone profile for awarding the Owner's Engineer and Financial Adviser contracts to advance OPF P3 business case development including concept design for the OPF. This project will adhere to both the PDDM process as well as Policy C555 to ensure that sufficient justification is prepared in advance of the acceptance of the P3 business case and approval to procure a P3 partner. Currently the award of the Owner's Engineer and Financial Advisor contracts will be under this standalone profile.

The OPF business case will be brought forward for approval in spring 2020. Once approved, a subsequent budget adjustment will be requested to allocate the remaining OPF project delivery funds to this stand alone profile. For further details, please see the Capital Profile in Appendix B.1.

Line 13 - Advanced Energy Research Facility (AERF) Upgrade

Provincial grant funding from the Climate Change Innovation and Technology Framework (CCITF) will be used to upgrade the research and development equipment and infrastructure at the AERF. This work has been established under a separate stand alone profile to facilitate cost and grant tracking. For further details, please see the Capital Profile in Appendix B.2.

Lines 15 and 16 - Waste Containers and Waste Services Equipment Acquisition

These composite profiles provide capital funding for Waste Containers and Mobile Equipment. The objective of these profiles is to replace existing assets at the end of their useful lives and provide funding for growth assets to support the current market conditions and the changing needs of Waste Services customers. For waste containers, this entails the purchase of steel bins and litter baskets as well as carts required to support the initial rollout of the residential Source Separated Organics (SSO) Program in 2020. The equipment acquisition profile supports the purchase and capital refurbishment of Collections and Sustainable Waste Processing equipment such as waste collection vehicles, highway tractors and trailers, and compost turners.

Line 18 - Source Separated Organics Program

This profile was approved by Council in September 2019 and supports major changes to the current waste collection program and the way single unit residents set out their waste for collection. The capital procurement includes household carts and associated accessories, automated collection and crew maintenance vehicles, a cart storage yard and processing equipment for the citywide program rollout.

Line 21 - Interim Organics Processing Solution

This new stand alone profile includes the estimated capital required to meet interim organics processing requirements until the new OPF comes into service in 2025. The Utility is reviewing and exploring possible solutions including a request for expression of interest from commercial entities to process organics. A separate capital profile for interim organics has been included in this rate filing for rate forecasting purposes however, no funds will be committed until a detailed business case is brought forward for approval in spring 2020. For further details, please see the Capital Profile in Appendix B.3.

12.1 Capital Project Financing Summary

(in thousands of dollars)

Line #	Source of Financing	4 Year Capital Budget				2019 - 2022 Total	Forecast						2019 - 2028 Total
		2019	2020 Proposed	2021	2022		2023	2024	2025	2026	2027	2028	
1	Self Liquidating Debentures	\$10,900	\$46,322	\$49,992	\$20,144	\$127,358	\$50,035	\$73,925	\$35,522	\$5,071	\$5,696	\$2,513	\$300,120
2	Pay As You Go Requirement	7,890	8,237	10,472	6,174	32,773	8,539	8,387	13,648	18,695	29,945	35,461	147,448
3	Existing Cash	5,579	16,532	4,000	-	26,111	-	-	-	-	-	-	26,111
4	Provincial Grants & Partnership	25	575	550	-	1,150	-	-	-	-	-	-	1,150
	Total Capital Project Financing	\$24,394	\$71,666	\$65,014	\$26,318	\$187,392	\$58,574	\$82,312	\$49,170	\$23,766	\$35,641	\$37,974	\$474,829

Line 1 - Self Liquidating Debentures

Self Liquidating Debentures are coordinated through the City of Edmonton and drawn from the Alberta Capital Financing Authority. The cost of debt varies according to economic conditions and length of term (see Section 3.0). Details on debt servicing costs are provided in Schedule 10.0.

Line 2 - Pay As You Go Requirement

With the approval of Fiscal Policy C558A on September 23, 2014, Pay As You Go (PAYG) requirements are incorporated into the Financial Indicators calculation for Target Cash Position as illustrated in Section 7.0 Financial Indicators. This term is used to identify the portion of a given capital project which is funded by cash (equity). The Pay As You Go Requirement for the succeeding year is used in calculating a given year's target cash position.

Line 3 - Existing Cash

Existing cash balances are used to fund capital expenditures when feasible after taking into account target cash position requirements and cash requirements to meet post-closure liability requirements. Utilizing existing cash helps the Utility to reduce PAYG and debt requirements, thereby allowing the Utility to maintain stable, consistent rate increases while managing the Utility's Debt to Net Assets Ratio.

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Line 4 - Provincial Grants & Partnership

Provincial grant funding for equipment and infrastructure upgrades to the Advanced Energy Research Facility is provided by the Climate Change Innovation and Technology Framework (CCITF). For further details, please see the Capital Profile in Appendix B.2.

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13.0 Segmented Reporting - Program Revenues and Expenses

(in thousands of dollars)

WASTE COLLECTION SERVICES

Line #	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast
1 Personnel	\$ 24,230	\$ 28,479	\$ 25,800	\$ 26,818	\$ 1,018	3.9%	\$ 27,189	\$ 371	1.4%	\$ 27,156
2 Materials, Goods & Supplies	383	1,657	912	1,852	940	103.1%	2,460	608	32.8%	2,726
3 External Services	23,016	31,807	28,761	32,643	3,882	13.5%	32,319	(324)	(1.0%)	33,184
4 Fleet Services	8,896	9,408	9,527	9,367	(160)	(1.7%)	8,186	(1,181)	(12.6%)	8,211
5 Shared Services	-	-	-	-	-	-	-	-	-	-
6 Intra-municipal Services	1,247	1,775	1,853	1,685	(168)	(9.1%)	1,938	253	15.0%	1,956
7 Utilities	620	992	616	856	240	39.0%	855	(1)	(0.1%)	855
8 Other Expenses	7,430	564	1,201	1,430	229	19.1%	1,429	(1)	(0.1%)	1,430
SUBTOTAL	65,822	74,682	68,670	74,651	5,981	8.7%	74,376	(275)	(0.4%)	75,518
9 Intra-municipal Recoveries	626	(301)	684	(1,135)	(1,819)	(265.9%)	(1,913)	(778)	68.5%	(1,913)
TOTAL O&M EXPENSES	66,448	74,381	69,354	73,516	4,162	6.0%	72,463	(1,053)	(1.4%)	73,605
10 Amortization of Non-Contributed Assets	6,089	1,098	5,947	6,932	985	16.6%	8,572	1,640	23.7%	9,719
11 Debt Interest	951	26	915	1,237	322	35.2%	1,784	547	44.2%	2,034
EXPENSES BEFORE ONE-TIME	73,488	75,505	76,216	81,685	5,469	7.2%	82,819	1,134	1.4%	85,358
12 Grant Payment	-	-	-	-	-	-	-	-	-	-
13 Grant Revenue	-	-	-	-	-	-	-	-	-	-
14 Program Revenues	-	(12,001)	(10,868)	(8,612)	2,256	(20.8%)	(6,326)	2,286	(26.5%)	(6,391)
15 Rate Revenues	(73,488)	(63,504)	(65,348)	(73,073)	(7,725)	11.8%	(76,493)	(3,420)	4.7%	(78,967)
NET INCOME/(NET LOSS)	-	-	-	-	-	-	-	-	-	-

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SUSTAINABLE WASTE PROCESSING

Line #	2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast	
1	Personnel	\$26,358	\$21,582	\$23,489	\$23,750	\$261	1.1%	\$24,890	\$1,140	4.8%	\$24,750
2	Materials, Goods & Supplies	3,342	5,357	2,857	2,797	(60)	(2.1%)	2,803	6	0.2%	2,812
3	External Services	52,493	52,191	57,992	51,294	(6,698)	(11.5%)	49,098	(2,196)	(4.3%)	50,456
4	Fleet Services	9,724	8,056	8,959	8,129	(830)	(9.3%)	8,302	173	2.1%	8,320
5	Shared Services	10,669	9,616	9,616	9,901	285	3.0%	10,035	134	1.4%	9,179
6	Intra-municipal Services	3,176	3,237	2,908	3,135	227	7.8%	3,224	89	2.8%	3,245
7	Utilities	3,920	6,169	4,711	5,354	643	13.6%	5,564	210	3.9%	5,670
8	Other Expenses	(2,950)	1,393	461	460	(1)	(0.2%)	467	7	1.5%	472
	SUBTOTAL	106,732	107,601	110,993	104,820	(6,173)	(5.6%)	104,383	(437)	(0.4%)	104,904
9	Intra-municipal Recoveries	(5,063)	(2,645)	(5,287)	(3,561)	1,726	(32.6%)	(2,829)	732	(20.6%)	(2,877)
	TOTAL O&M EXPENSES	101,669	104,956	105,706	101,259	(4,447)	(4.2%)	101,554	295	0.3%	102,027
10	Amortization of Non-Contributed Assets	16,220	22,802	16,337	17,282	945	5.8%	19,185	1,903	11.0%	19,480
11	Amortization of Regulatory Asset	-	1,309	1,309	3,249	-	-	3,249	-	-	3,249
12	Debt Interest	8,324	9,440	8,065	7,922	(143)	(1.8%)	7,815	(107)	(1.4%)	7,614
	EXPENSES BEFORE ONE-TIME	126,213	138,507	131,417	129,712	(1,705)	(1.3%)	131,803	2,091	1.6%	132,370
13	Grant Payment	1,500	4,600	3,600	1,000	(2,600)	(72.2%)	-	(1,000)	(100.0%)	-
14	Grant Revenue	(1,500)	(4,600)	(3,600)	(1,000)	2,600	(72.2%)	-	1,000	(100.0%)	-
15	Program Revenues	(37,802)	(25,291)	(21,216)	(11,319)	9,897	(46.6%)	(11,255)	64	(0.6%)	(11,400)
16	Rate Revenues	(106,545)	(125,533)	(125,470)	(124,963)	507	(0.4%)	(128,911)	(3,948)	3.2%	(134,066)
	NET INCOME/(NET LOSS)	\$ 18,134	\$ 12,317	\$ 15,269	\$ 6,570	\$ (8,699)	(57.0%)	\$ 8,363	\$ 1,793	27.3%	\$ 13,096

Note: Program and Rate Revenues sufficient to achieve a net income of zero are transferred from Sustainable Waste Processing to Collection Services. The net income for Waste Services is therefore wholly contained within Sustainable Waste Processing.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

13.1 Revenues and Expenses by Regulated and Non-Regulated Program

(in thousands of dollars)

REGULATED PROGRAMS

Line #		2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast
1	Personnel	\$ 43,243	\$ 42,863	\$ 43,132	\$ 47,347	\$4,215	9.8%	\$ 49,192	\$1,845	3.9%	\$ 49,004
2	Materials, Goods & Supplies	4,568	6,506	1,807	3,191	1,384	76.6%	3,809	618	19.4%	4,082
3	External Services	66,865	72,661	78,403	80,422	2,019	2.6%	77,736	(2,686)	(3.3%)	79,834
4	Fleet Services	13,757	13,718	15,006	15,695	689	4.6%	14,937	(758)	(4.8%)	14,977
5	Shared Services	10,669	9,616	9,616	9,901	285	3.0%	10,035	134	1.4%	9,179
6	Intra-municipal Services	4,145	4,508	4,471	4,817	346	7.7%	5,161	344	7.1%	5,201
7	Utilities & Others	8,538	8,441	6,702	7,850	1,148	17.1%	8,022	172	2.2%	8,112
	SUBTOTAL	151,785	158,313	159,137	169,223	10,086	6.3%	168,892	(331)	(0.2%)	170,389
8	Intra-municipal Recoveries	(4,146)	(529)	(2,244)	(835)	1,409	(62.8%)	(225)	610	(73.1%)	(225)
	O & M EXPENSES	147,639	157,784	156,893	168,388	11,495	7.3%	168,667	279	0.2%	170,164
9	Amortization of Non-Contributed Assets	21,359	23,184	20,723	23,230	2,507	12.1%	26,905	3,675	15.8%	28,502
10	Amortization of Regulatory Asset	-	1,309	1,309	3,249	1,940	148.2%	3,249	-	-	3,249
11	Debt Interest	9,016	9,279	8,780	8,927	147	1.7%	9,393	466	5.2%	9,468
	EXPENSES BEFORE ONE-TIME	178,014	191,556	187,705	203,794	16,089	8.6%	208,214	4,420	2.2%	211,383
12	Grant Payment	(1,210)	(3,710)	(2,822)	(784)	2,038	(72.2%)	-	784	(100.0%)	-
13	Grant Revenue	1,214	3,710	2,822	784	(2,038)	(72.2%)	-	(784)	(100.0%)	-
14	Program Revenues	18,212	16,140	15,288	11,062	(4,226)	(27.6%)	11,131	69	0.6%	11,206
15	Rate Revenues	180,032	189,037	190,818	198,037	7,219	3.8%	205,404	7,367	3.7%	213,031
	NET INCOME/(LOSS)	\$ 20,234	\$ 13,621	\$ 18,401	\$ 5,305	\$ (13,096)	(71.2%)	\$ 8,321	\$3,016	56.9%	\$ 12,854

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NON-REGULATED PROGRAMS

Line #		2018 Actual	2019 Budget	2019 Forecast	2020 Proposed	YoY \$ Variance	YoY % Variance	2021 Forecast	YoY \$ Variance	YoY % Variance	2022 Forecast
1	Personnel	\$ 7,345	\$ 7,197	\$ 6,157	\$ 3,222	\$ (2,935)	(47.7%)	\$ 2,887	\$ (335)	(10.4%)	\$ 2,901
2	Materials, Goods & Supplies	(843)	508	1,962	1,458	(504)	(25.7%)	1,454	(4)	(0.3%)	1,455
3	External Services	8,644	11,337	8,350	3,514	(4,836)	(57.9%)	3,681	167	4.8%	3,806
4	Fleet Services	4,863	3,746	3,480	1,801	(1,679)	(48.2%)	1,551	(250)	(13.9%)	1,554
5	Intra-municipal Services	278	503	290	3	(287)	(99.0%)	1	(2)	(66.7%)	1
6	Utilities	482	678	288	250	(38)	(13.2%)	293	43	17.2%	315
	SUBTOTAL	20,769	23,969	20,527	10,248	(10,279)	(50.1%)	9,867	(381)	(3.7%)	10,032
7	Intra-municipal Recoveries	(291)	(2,417)	(2,359)	(3,861)	(1,502)	63.7%	(4,516)	(655)	17.0%	(4,564)
	TOTAL O&M EXPENSES	20,478	21,552	18,168	6,387	(11,781)	(64.8%)	5,351	(1,036)	(16.2%)	5,468
8	Amortization of Non-Contributed Assets	950	716	1,561	984	(577)	(37.0%)	852	(132)	(13.4%)	697
9	Debt Interest	258	188	201	232	31	15.4%	207	(25)	(10.8%)	180
	EXPENSES BEFORE ONE-TIME	21,686	22,456	19,930	7,603	(12,327)	(61.9%)	6,410	(1,193)	(15.7%)	6,345
10	Grant Payment	(290)	(890)	(778)	(216)	562	(72.2%)	-	216	(100.0%)	-
11	Grant Revenue	290	890	778	216	(562)	(72.2%)	-	(216)	(100.0%)	-
12	Program Revenues	19,586	21,152	16,796	8,869	(7,927)	(47.2%)	6,453	(2,416)	(27.2%)	6,586
	NET INCOME/(NET LOSS)	\$ (2,100)	\$ (1,304)	\$ (3,134)	\$ 1,266	\$4,400	(140.4%)	\$ 43	\$ (1,223)	(96.6%)	\$ 241

To address non-regulated program losses and achieve target cash balances, the Waste Services Utility was given authorization through the 2015 Operating Budget process to draw on a short-term loan from the City of Edmonton beginning in 2015. This ensures that non-regulated losses are covered by this loan as opposed to regulated revenues and assists in reducing non-regulated rate increases.

WASTE SERVICES UTILITY

2020 Utility Rate Filing

13.2 Regulated Activities Expense Changes

(in thousands of dollars)

Regulated Activities		2019 Forecast	Customer Growth	Consumption	Inflation	New Activities (Note 1)	Activities No Longer Required (Note 2)	2020 Proposed
1	Personnel	\$ 43,132	-	-	\$ 1,290	\$ 2,925	-	\$ 47,347
2	Materials, Goods & Supplies	1,807	19	656	36	673	-	3,191
3	External Services	78,403	823	(4,724)	1,568	4,851	(500)	80,422
4	Fleet Services	15,006	-	389	300	-	-	15,695
5	Shared Services	9,616	-	91	194	-	-	9,901
6	Intra-municipal Services	4,471	-	346	-	-	-	4,817
7	Utilities & Other Expenses	6,702	-	1,013	134	-	-	7,850
	SUBTOTAL	159,137	842	(2,229)	3,522	8,449	(500)	169,223
8	Intra-municipal Recoveries	(2,244)	-	(405)	-	-	1,814	(835)
	O & M EXPENSES	\$ 156,893	\$ 842	\$ (2,634)	\$ 3,522	\$ 8,449	\$ 1,314	\$ 168,388

Line 1 - Personnel

Inflation reflects the merit increases for current positions. New Activities is related to temporary staff requirements for the Source Separated Organics Program under Note 1.

Line 2 - Materials Goods & Supplies

Consumption costs are related to increased volume from the Anaerobic Digestion Facility (ADF) and Eco Stations. New Activities is related to material requirements for cart maintenance and Excess Waste Program cost related to the Source Separated Organics Program under Note 1.

Line 3 - External Services

Increase in the number of customers represents the additional costs to provide service to a larger customer base. Consumption is related to the decrease in biosolids costs from the closure of the Edmonton Composting Facility. New Activities is related to external services costs for the digital strategy, communications and collections for the Source Separated Organics Program under Note 1. Activities no longer required is related to a reduction of external services related to the Leachate Plant as indicated in Note 2.

Line 4 - Fleet Services

Consumption costs are for an increase in standard repairs related to long-haul trucking.

Line 7 - Utilities & Other Expenses

Consumption represents the increases to power associated with the Refuse Derived Fuel Facility and Anaerobic Digestion Facility.

Note 1: New activities are for the citywide rollout of the Source Separated Organics Program. This involves major changes to the current waste collection program and the way single unit residents set out their waste for collection.

Note 2: Activities no longer required includes a reduction in external services related to the running of the Leachate Plant as Waste Services sought and received approval from AEP to treat leachate through EPCOR's Wastewater Treatment Plant. Also included is a reduction in intra-municipal recoveries for a decrease in tip fees at the IPTF due to the wind-down of the Commercial Collections business line.

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14.0 Historical Trends

(in thousands of dollars)

Line #	Reference	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Proposed	
1	Operations and Maintenance	Schedule 9.0	\$ 121,371	\$ 131,901	\$ 141,496	\$ 155,604	\$ 164,316	\$ 180,709	\$ 172,553	\$ 179,664	\$ 179,470
2	Amortization of Non-Contributed Assets	Schedule 10.0	16,099	17,074	17,466	19,227	20,310	20,779	22,308	22,284	24,214
4	Debt Interest	Schedule 10.0	10,124	10,104	9,852	9,750	9,588	9,369	9,274	8,981	9,159
5	Intra-municipal Recoveries	Schedule 9.8	(8,806)	(11,649)	(11,501)	(13,680)	(14,932)	(10,972)	(4,437)	(4,603)	(4,697)
6	Grants	Schedule 9.0	3,700	3,700	4,000	2,005	2,000	-	1,500	3,600	1,000
7	Amortization of Regulatory Asset	Schedule 9.0	-	-	-	-	-	-	-	1,309	3,249
	TOTAL EXPENSES		142,488	151,130	161,313	172,906	181,282	199,885	201,198	211,235	212,395
8	Non-Rate Revenue	Schedule 11.1	25,394	26,538	28,379	27,037	28,772	35,880	39,302	35,684	20,930
9	Rate Revenue	Schedule 11.0	113,325	122,403	133,177	148,611	163,010	174,780	180,030	190,820	198,036
	TOTAL REVENUES		138,719	148,941	161,556	175,648	191,782	210,660	219,332	226,504	218,966
	NET INCOME/(LOSS)	Schedule 13.0	\$ (3,769)	\$ (2,189)	\$ 243	\$ 2,742	\$ 10,500	\$ 10,775	\$ 18,134	\$ 15,269	\$ 6,571

WASTE SERVICES UTILITY

2020 Utility Rate Filing

Waste Services Utility Customer Counts

	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Proposed	2021 Forecast	2022 Forecast
Single Unit	190,952	195,525	200,475	206,576	211,145	214,900	219,973	222,385	226,602	230,760	234,890
Multi Unit	149,989	154,850	158,821	163,636	169,386	174,196	175,519	177,493	177,476	177,411	177,323
Total	340,941	350,375	359,296	370,212	380,531	389,096	395,492	399,878	404,078	408,171	412,213

Includes the reclassification of 9,533 customers from Multi-Unit to Single Unit in 2020. Refer to Sec 3.0 for detailed information.

All Customer Counts shown represent December 31 balances. For budget and forecast purposes the utility rates are calculated using a phased-in increase to Customer Counts over a given year to ensure representation of consistent growth. As a result, mid-year customer counts are used in these calculations.

Appendix A: Waste Services Utility Operating Business Cases

There are no Waste Services Operating Business Cases for the 2020 Utility Rate Filing.

Appendix B: Waste Services Utility Budget Adjustments & Capital Profiles

The following capital profiles provide additional information for the initiatives noted under Schedule 12.0 Capital Budget and Forecast Plan:

- B.1 Organics Processing Facilities (OPF) - New Stand Alone Profile
- B.2 Advanced Energy Research Facility (AERF) Upgrade - New Stand Alone Profile
- B.3 Interim Organics Processing Solution - New Stand Alone Profile