

# Responses to City Council Questions on the 2019-22 Proposed Utility Budget

The following report is sorted  
numerically by question number.

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Nickel

**Question #:** 19-001U

**Budget Page #:**

*For all questions below I would like a 5 year history on each along with a yearly projection for the next four years.*

*Drainage/Sanitary*

- 1. Operating costs for the collection/conveyance of wastewater per kilometer of wastewater main.*
- 2. Total costs for the collection/conveyance of wastewater per kilometer of wastewater main.*
- 3. Total costs, net of interest on long term debt, for the collection/conveyance of wastewater per kilometer of wastewater main.*
- 4. Operating costs for the treatment and disposal of wastewater per megalitre.*
- 5. Total costs for the treatment and disposal of wastewater per megalitre.*
- 6. Total costs, net of interest on long term debt, for the treatment and disposal of wastewater per megalitre.*
- 7. Operating costs for the collection/conveyance, treatment, and disposal of wastewater per megalitre (integrated system).*
- 8. Total costs for the collection/conveyance, treatment, and disposal of wastewater per megalitre (integrated system).*
- 9. Total costs, net of interest on long term debt, for the collection/conveyance, treatment, and disposal of wastewater per megalitre (integrated system).*
- 10. Number of wastewater main backups per 100 kilometers of wastewater main in a year.*
- 11. Percentage of wastewater estimated to have by-passed treatment.*
- 12. Operating costs for urban storm water management (collection, treatment, and disposal) per kilometer of drainage system. (Broken down by Wards)*
- 13. Total costs for urban storm water management (collection, treatment, and disposal) per kilometer of drainage system.*
- 14. Total costs, net of interest on long term debt, for urban storm water management (collection, treatment, and disposal) per kilometer of drainage system.*

**Question Answer:**

*Response provided by EPCOR:*

*Rates for Water, Wastewater Treatment, Sanitary and Stormwater Collection are not reviewed or approved in the annual City budget process.*

*City Council has established separate and specific procedures for reviewing the rates, governance, policies, and operations of EPCOR's Water, Wastewater Treatment, Sanitary and Stormwater Collection Utilities. More specifically, Bylaw 12294 - EPCOR Edmonton Regulated Utilities Procedures Bylaw*

## 2019-22 Utility Budget Questions By Question #

*provides a mechanism for Utility Committee to review the operation and performance of EPCOR's Water, Wastewater Treatment , Sanitary and Stormwater Collection Utilities.*

*Rates are set under five-year PBR plans approved by Council. EPCOR provides regular reporting to Council through Utility Committee including annual operational plans and mid-year updates and year end PBR Progress reports.*

*EPCOR has indicated that much of the data requested for EPCOR's City-regulated businesses is not tracked as a component of the PBR, is not readily available and would require considerable time and effort to assemble. Council, through Utility Committee, could consider requiring EPCOR to track and report this information in the future.*

*In addition to Utility Committee reporting, EPCOR has also reaffirmed that it is always available to work with Councillor offices to address constituent questions and concerns, and to respond to specific information requests from Councillors, particularly where there are community impacts from our operations.*

**Branch:** Waste Management Services

**Asked By:** Councillor Nickel

**Question #:** 19-002U

**Budget Page #:**

*For all questions below I would like a 5 year history on each along with a yearly projection for the next four years.*

*Storm Water*

- 1. Operating costs for urban storm water management (collection, treatment, and disposal) per kilometer of drainage system.*
- 2. Total costs for urban storm water management (collection, treatment, and disposal) per kilometer of drainage system.*
- 3. Total costs, net of interest on long term debt, for urban storm water management (collection, treatment and disposal) per kilometer of drainage system.*

**Question Answer:**

*EPCOR has been notified of this request for information. Please refer to 19-001U.*

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Nickel

**Question #:** 19-003U

**Budget Page #:**

*For all questions below I would like a 5 year history on each along with a yearly projection for the next four years.*

## *Waste Management*

*Q1) Cost of refuse collection service per household (excluding landfill tax and waste disposal)*

*Q2) Cost of refuse collection service per household (Excluding landfill tax, waste disposal and civil and environmental consultants)*

*Q3) Net cost of recycling per household*

*Q4) Tones of domestic waste sent for recycling per household*

*Q5) Kg of domestic waste sent for recycling per head of population*

*Q6) Cost of recycling per household covered by curbside recycling collections (including civil and environmental consultants)*

*Q7) Tones of domestic waste recycled per household*

*Q8) Kg of domestic waste recycled per head of population*

*Q9) Percentage of households covered by curbside recycling collections*

*Q10) Percentage of total domestic waste collected which is sent for recycling*

*Q11) Percentage of household waste collected which is composted*

*Q12) Percentage recovery of energy from waste collected*

*Q13) Percentage of total waste collected which is recycled*

*Q14) Kg of residual waste sent to landfill per annum per household*

*Q15) Cost of refuse collection service per head of population (Excluding landfill tax & waste disposal)*

*Q16) Cost of refuse collection service per head of population (excluding landfill tax and waste disposal and civil and environmental consultants)*

*Q17) Total labor costs as a percentage of total expenditure (excluding waste disposal costs)*

*Q18) Transport cost as a percentage of total expenditure (excluding waste disposal costs)*

*Q19) Front line labor costs as a percentage of total expenditure (excluding waste disposal costs)*

*Q20) Central establishment charges as a percentage of total expenditure*

## 2019-22 Utility Budget Questions By Question #

- Q21) Average cost per front line vehicle by vehicle type
- Q22) Cost of recycling per tonne (tonnes sent for recycling)
- Q23) Cost of recycling per tonne (tonnes actually recycled)
- Q24) Trade waste – operational recovery ratio
- Q25) Cost per household excluding trade waste cost
- Q26) Cost of domestic waste disposal per household
- Q27) Cost of municipal waste disposal per household
- Q28) Costs of any and all quality assurance and consultation processes
- Q29) Missed collections per 100,000 collections
- Q30) Trade waste contracts (charged) as a percentage of available market
- Q31) Number of trade waste agreements for recycling (free or charged)
- Q32) Percentage change in trade waste contracts
- Q33) Table – Average distance in KM to disposal site
- Q34) Staffing  
I. Staff absence (all employees)  
II. Staff absence – days lost per employee
- Q35) Percentage of household waste sent to landfill per annum
- Q36) Percentage of municipal waste sent to landfill per annum
- Q37) Curbside recycling recovered per property (kgs)
- Q38) Percentage of recycled organic waste which constitutes garden waste
- Q39) Percentage of recycled organic waste which constitutes food

### Question Answer:

*The City of Edmonton is committed to using information to drive decision making and the continuous improvement of service delivery. In May 2018, City Council approved the Enterprise Performance Management Policy, C600, to formalize this commitment.*

*Waste Services continues to gain maturity in its performance measurement and reporting program. This program establishes measures, monitoring and reporting structures, informs performance targets and aims to improve Branch decisions and inform strategy. New key performance indicators have been established and are reflected in section 4.0 of the 2019 Waste Services Rate Filing. Waste Services works closely with its Department and Corporate partners to ensure a mature performance measurement program is in place, and aligns with corporate process.*

# 2019-22 Utility Budget Questions By Question #

*The attached summary table provides a five year history and four year forecast for each measure for which data was available. The "Data / Formula" column clarifies the methodology used to calculate the requested metric*

# 2019-22 Utility Budget Questions By Question #

#	KPIs (as requested by Councillor Nickel)	Data / Formula Used to Calculate Requested KPI	Unit of Measurement	Historical				Current Year Forecast	Forecast			
				2014	2015	2016	2017	2018	2019	2020	2021	2022
Q1	Cost of refuse collection service per household (excluding landfill tax and waste disposal)	Direct refuse collection expense / # households	\$/household	\$65	\$72	\$74	\$72	\$81	\$80	\$82	\$84	\$84
Q2	Cost of refuse collection service per household (Excluding landfill tax, waste disposal and civil and environmental consultants)	Direct refuse collection expense / # households (no related consultant expense)	\$/household	\$65	\$72	\$74	\$72	\$81	\$80	\$82	\$84	\$84
Q3	Net cost of recycling per household	(Direct recycling collection cost + Net recycling facility cost) / # households	\$/household	\$54	\$48	\$45	\$44	\$57	\$62	\$66	\$66	\$67
Q4	Tones of domestic waste sent for recycling per household	Total tonnes of waste sent to Materials Recovery Facility / # households	tonne/household	0.13	0.13	0.12	0.12	0.11	0.12	0.12	0.12	0.12
Q5	Kg of domestic waste sent for recycling per head of population	Total kg of waste sent to Materials Recovery Facility / # population	kg/capita	52.4	51.8	48.9	47.1	46.0	47.8	49.3	51.5	52.5
Q6	Cost of recycling per household covered by curbside recycling collections (including civil and environmental consultants)	Direct recycling collection expense / # households	\$/household	\$22	\$20	\$21	\$22	\$27	\$25	\$24	\$23	\$22
Q7	Tonnes of domestic waste recycled per household	Tonnes of recyclable waste sent to recyclers / # households	tonne/household	0.092	0.097	0.087	0.082	0.069	0.087	0.089	0.092	0.094
Q8	Kg of domestic waste recycled per head of population	KG of recyclable waste sent to recyclers / population	kg/capita	37.5	40.1	35.5	33.3	48.0	49.0	51.0	52.0	53.0
Q9	Percentage of households covered by curbside recycling collections	All households receive recycling collection services	%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Q10	Percentage of total domestic waste collected which is sent for recycling	Total residential recycling collected / total residential waste + recycling collected	%	14.9%	14.8%	14.1%	14.3%	13.9%	15.5%	16.2%	17.1%	17.9%
Q11	Percentage of household waste collected which is composted	Total residential waste sent to Edmonton Compost Facility / total residential waste + recycling collected	%	42.2%	43.3%	45.1%	24.7%	26.3%	13.1%	13.0%	12.9%	27.4%
Q12	Percentage recovery of energy from waste collected	Total tonnes of residential waste sent to Anaerobic Digestion Facility + Enerkem Biofuels Facility / total residential waste + recycling collected	%	0.0%	0.0%	0.0%	0.0%	3.4%	34.8%	41.4%	40.5%	39.6%
Q13	Percentage of total waste collected which is recycled	Total recyclable material sent to recycling market / total waste + recycling collected	%	14.3%	14.0%	13.4%	13.6%	13.3%	14.7%	15.3%	16.0%	16.7%
Q14	Kg of residual waste sent to landfill per annum per household	KG of waste sent from EWMC to landfill / # households	kg/household/year	875	869	943	946	976	729	597	574	462
Q15	Cost of refuse collection service per head of population (Excluding landfill tax & waste disposal)	Total refuse collection direct expense / population	\$/capita	\$27	\$30	\$30	\$29	\$33	\$33	\$34	\$35	\$35
Q16	Cost of refuse collection service per head of population (excluding landfill tax and waste disposal and civil and environmental consultants)	Total refuse collection direct expense / population (no related consultant expense)	cost/capita	\$27	\$30	\$30	\$29	\$33	\$33	\$34	\$35	\$35
Q17	Total labor costs as a percentage of total expenditure (excluding waste disposal costs)	Total labour cost / (Total Expense - landfill hauling and disposal cost)	%	26.9%	27.4%	29.2%	25.9%	27.2%	25.0%	25.1%	24.5%	24.0%

# 2019-22 Utility Budget Questions By Question #

#	KPIs (as requested by Councillor Nickel)	Data / Formula Used to Calculate Requested KPI	Unit of Measurement	Historical				Current Year Forecast	Forecast			
				2014	2015	2016	2017	2018	2019	2020	2021	2022
Q18	Transport cost as a percentage of total expenditure (excluding waste disposal costs)	Total waste hauling cost / (Total Expense - landfill hauling and disposal cost)	%	5.4%	5.3%	6.5%	5.6%	6.4%	7.0%	7.0%	6.4%	6.0%
Q19	Front line labor costs as a percentage of total expenditure (excluding waste disposal costs)	Total operational labour cost / (Total Expense - landfill hauling and disposal cost)	%	18.1%	18.7%	20.0%	18.4%	21.3%	21.0%	21.1%	20.8%	20.5%
Q20	Central establishment charges as a percentage of total expenditure	Shared Services cost / total expenditure	%	4.6%	5.6%	5.5%	5.0%	5.1%	4.4%	4.4%	4.3%	4.3%
Q21	Average cost per front line vehicle by vehicle type	Average purchase cost for front line vehicles, adjusted for inflation. 2018 base year	\$									
	Tandem collection trucks		\$	\$344,318	\$347,165	\$346,126	\$345,663	\$344,501	\$351,047	\$357,717	\$357,717	\$357,717
	Midsized collection trucks (single axle)		\$	\$318,770	\$321,406	\$320,444	\$320,015	\$318,940	\$325,000	\$331,175	\$331,175	\$331,175
	Front end collection trucks (front bin)		\$	\$343,291	\$346,130	\$345,093	\$344,632	\$343,474	\$350,000	\$356,650	\$356,650	\$356,650
	Haul Aids (collection truck/trailer)		\$	\$237,245	\$239,207	\$238,491	\$238,172	\$237,372	\$241,882	\$246,478	\$246,478	\$246,478
	Rear Loaders		\$	\$234,078	\$236,014	\$235,307	\$234,993	\$234,203	\$238,653	\$243,187	\$243,187	\$243,187
	Automated side loaders		\$	\$344,318	\$347,165	\$346,126	\$345,663	\$344,501	\$351,047	\$357,717	\$357,717	\$357,717
	Roll-off trucks		\$	\$217,457	\$219,255	\$218,599	\$218,307	\$217,573	\$221,707	\$225,919	\$225,919	\$225,919
Q22	Cost of recycling per tonne (tonnes sent for recycling)	Materials Recovery Facility gross expense / total inbound recycling tonnes	\$/tonne	\$145	\$177	\$183	\$204	\$185	\$201	\$198	\$188	\$184
Q23	Cost of recycling per tonne (tonnes actually recycled)	Materials Recovery Facility gross expense / total tonnes of recyclable material sent to recyclign market	\$/tonne	\$202	\$229	\$252	\$290	\$302	\$267	\$262	\$250	\$245
Q24	Trade waste – operational recovery ratio	Cost recovery ratio of the non-regulated program. The ratio is available from the 2017 cost of service study. Non-Reg. cost recovery ratio in 2010 was 69.4%		N/A	N/A	N/A	86%	N/A	N/A	N/A	N/A	N/A
Q25	Cost per household excluding trade waste cost	Total expenditure less cost of non-regulated program / # households	\$/household	\$410	\$424	\$436	\$491	\$466	\$477	\$468	\$479	\$478
Q26	Cost of domestic waste disposal per household	Waste hauling cost + landfill cost / # households	\$/household	\$54	\$56	\$64	\$56	\$51	\$45	\$45	\$40	\$37
Q27	Cost of municipal waste disposal per household	Waste hauling cost + landfill cost / # households	\$/household	\$54	\$56	\$64	\$56	\$51	\$45	\$45	\$40	\$37
Q28	Costs of any and all quality assurance and consultation processes	All costs coded as consultant	\$	\$44,383	\$81,222	\$7,167	\$182,093	\$215,802	\$216,413	\$219,647	\$223,688	\$227,938
Q29	Missed collections per 100,000 collections	# missed collections per 10,000 households	number	3	2	2	2	2	2	2	2	2
Q30	Trade waste contracts (charged) as a percentage of available market	In 2017 it was estimated that 4.3% of the annual estimated 600,000 tonnes of waste generated by the industrial, commercial and institutional sector is impacted by the City's non-regulated operations	%	N/A	N/A	N/A	4.30%	N/A	N/A	N/A	N/A	N/A



# 2019-22 Utility Budget Questions By Question #

#	KPIs (as requested by Councillor Nickel)	Data / Formula Used to Calculate Requested KPI	Unit of Measurement	Historical				Current Year Forecast	Forecast			
				2014	2015	2016	2017	2018	2019	2020	2021	2022
Q31	Number of trade waste agreements for recycling (free or charged)	# commercial customers for the Materials Recovery Facility	number	27	25	31	37	39	39	39	39	39
Q32	Percentage change in trade waste contracts	Annual % change in # commercial customers for the Materials Recovery Facility	%	N/A	-7.4%	24.0%	19.4%	5.4%	0.0%	0.0%	0.0%	0.0%
Q33	Table – Average distance in KM to disposal site (Landfill)	Total KM from EWMC to Ryley landfill	km	90	90	90	90	90	90	90	90	90
Q34	Staffing (I. Staff absence (all employees) II. Staff absence - days lost per employee)	Total Absence Hours per absence category for all Full / part time, Perm, temp, provisional employees	hours									
	SICK			23,380	25,160	29,820	34,740	27,760	33,674	34,721	34,764	35,235
	NCS			163	138	216	168	64	166	177	182	185
	MDL			1,470	1,480	1,530	1,810	1,510	1,569	1,596	1,614	1,658
	LTD			150	104	431	675	957	473	540	615	639
	Sick w/out Pay			2,100	2,270	2,570	3,250	2,000	2,440	2,506	2,553	2,561
	TOTAL			27,263	29,152	34,567	40,642	32,291	38,321	39,540	39,728	40,279
Q35	Percentage of household waste sent to landfill per annum	Total waste sent from EWMC to landfill / total waste delivered to EWMC	%	61%	63%	58%	62%	60%	51%	42%	41%	33%
Q36	Percentage of municipal waste sent to landfill per annum	Total waste sent from EWMC to landfill / total waste delivered to EWMC	%	61%	63%	58%	62%	60%	51%	42%	41%	33%
Q37	Curbside recycling recovered per property (kgs)	Total KG of single unit residential recycling collected / # single unit households	kg/household	166	151	146	144	137	130	137	137	137
Q38	Percentage of recycled organic waste which constitutes garden waste	This metric is unavailable	%	N/A								
Q39	Percentage of recycled organic waste which constitutes food	In 2015 Waste Services conducted a waste characterisation study. This study found that 31.5% of curbside collected waste was food waste, and 27.1% of waste collected in bins (i. e. multi-unit) was food waste.	%	N/A	Curbside - 31 Bin - 27.1%	N/A		N/A	N/A	N/A	N/A	N/A

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Nickel

**Question #:** 19-004U

**Budget Page #:**

*For all questions below I would like a 5 year history on each along with a yearly projection for the next four years.*

*Misc. for EPCOR*

*Q1) Please advise as to the average cost of installation for a full set of traffic lights*

*Q2) Please advise as to the average cost of installation of a fire hydrant.*

*Q2) Please provide the following:*

*I. Annual labor cost per job category*

*II. Average cost per job category*

*III. Average labor hours per job category*

*IV. Average number of days each work order is past due*

*V. Average number of labor hours to complete a maintenance task*

*VI. Average response time to fix breaks*

*VII. Crew productivity ratios*

*VIII. Equipment failure rate*

*IX. Equipment unavailability, hours per year - Planned maintenance*

*X. Equipment unavailability, hours per year - Sustained fault*

*XI. Equipment unavailability, hours per year - Temporary fault*

*XII. Equipment unavailability, hours per year - Unplanned maintenance*

*XIII. Maintenance backlog*

*XIV. Maintenance cost as a percentage of manufacturing cost*

*XV. Mean time to repair*

*XVI. Number of complaints received by type*

*XVII. Number of customers who were cut off due to violations of regulations*

*XVIII. Number of disconnections*

*XIX. Number of pending work orders*

*XX. Number of sewage blockages per month/year*

*XXI. Number of staff per 1,000 customer connections*

*XXII. Number of uncontrolled sewage overflows affecting private properties*

*XXIII. Outage time per event*

*XXIV. Percentage of customers that would characterize their bills as accurate and timely*

*XXV. Percentage reduction in number of complaints to the local regulatory body*

*XXVI. Percentage reduction in number of equipment failures*

*XXVII. Percentage of maintenance work orders requiring rework*

*XXVIII. Percentage of man-hours used for proactive work*

*XXIX. Percentage of scheduled man-hours to total man-hours*

*XXX. Reduction in hazardous liquid spill notification time*

*XXXI. Response time for water leaks*

*XXXII. Total time to complete new customer connections*

*Source: <http://www.apse.org.uk/apse/assets/File/Refuse%20Collection.pdf>*

**Question Answer:**

*EPCOR has been notified of this request for information. Please refer to 19-001U.*

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Nickel

**Question #:** 19-005U

**Budget Page #:**

Q3) EPCOR Capital Construction – please have each department provide the flowing table for the past capital cycle

Capital Construction - please provide by department where applicable

Pease fill in the following tables regarding capital construction projects within the city of Edmonton for Capital projects between \$5 million to \$20 million for the last capital cycle.

Capital Construction - please have each department provide the flowing table for the past capital cycle (see image)

**Question Answer:**

EPCOR has been notified of this request for information. Please refer to 19-001U.

**Branch:** Waste Management Services

**Asked By:** Councillor Nickel

**Question #:** 19-006U

**Budget Page #:**

Q4) EPCOR Capital Construction - please have each department provide the flowing table for the past capital cycle

Capital Construction - please provide by department where applicable

Pease fill in the following tables regarding capital construction projects within the city of Edmonton for Capital projects for \$20 million and over for the last capital cycle. DO NOT MERGE WITH PREVIOUS TABLE MENTIONED IN Q3

Capital Construction - please have each department provide the flowing table for the past capital cycle (see image)

**Question Answer:**

EPCOR has been notified of this request for information. Please refer to 19-001U.

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Henderson

**Question #:** 19-007U

**Budget Page #:** 34

[34, 35, 40, 41] In regards to the organics and nutrigold operation, it is unclear how the transfer of the revenue from Intramunicipal recoveries on page 34 and 35 of the rate filing to non-rate revenue on page 40 and 41 reconcile. On page 41 it suggests that not only have the revenues been transferred but the level of operation for organics operation has also changed. As a result the two revenue numbers in the transfer from one to the other do not match. Can you clarify how much revenue is actually transferred and how much is lost due to the change of operation? Also how would this be effected if the composter continues to operate?

**Question Answer:**

Biosolids revenue reporting changed with the transfer of Drainage Services to EPCOR on September 1, 2017. Prior to the Drainage transfer, Biosolids revenue was reported as an Intra-Municipal recovery as represented on table 9.8 of the 2019 Utility Rate Filing. Starting September 1, 2017 Biosolids revenues are reported under Non-Rate Revenue as represented on table 11.1 of the 2019 Utility Rate Filing. In 2017, Waste Services recovered \$8.5 million under Intra-Municipal recoveries from Drainage Services for the period January 1, 2017 to August 31, 2017 (of which \$2.5 million was related to Nutri-Gold) and earned an additional \$2.1 million in Biosolids disposal revenue from EPCOR which was reported under Non-Rate Revenue. This represented total Biosolids revenue of \$10.6 million in 2017.

Please note that on table 11.1 of the 2019 Utility Rate Filing, the revenue amounts reported for 2017 Actual for line 6 'Program Revenues - Organics Operation' and line 7 'Program Revenues - Other' were transposed. The 2017 Actual 'Program Revenues - Organics Operation' should be \$2,132 while 'Program Revenues - Other' should be \$6,372. This transposing error does not impact other years or the determination of rates.

Effective September 1, 2017, Nutri-Gold services are no longer provided by Waste Services to EPCOR. This represents a \$2.5 million reduction in revenue due to the Drainage transfer.

Waste Services 2018 Budgeted revenue was reduced to \$8.5 million to reflect the elimination of Nutri-Gold services. Subsequently, EPCOR reduced the volume of biosolids sent for processing resulting in lower forecasted revenue of \$6.3 million in 2018. While similar volumes are anticipated for 2019, the potential closure of the Edmonton Composting Facility (ECF) in the fall of 2019 may eliminate biosolids revenue for the years 2020 - 2022 (TBD - following business case for organics infrastructure), leaving only dewatering revenues in those years.

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Cartmell

**Question #:** 19-008U

**Budget Page #:** 2

*Need to develop an asset management strategy. Doesn't the COE have a strategy? RIMS? Can Waste Management tie into that?*

**Question Answer:**

*A significant aspect of a successful waste services operation is being able to provide the proper facilities and resources to carry out the mission. As such, Waste Services has and will continue to enhance its Asset Management program. To date, the Branch has identified an asset management best practice for infrastructure maintenance funding guidelines that has been endorsed by the Office of the City Auditor. These guidelines apply to funding for routine maintenance activities and capital maintenance of waste facilities and infrastructure based on a percentage of the total construction replacement value of those facilities.*

*A major component of this work identified the roles, responsibilities and processes to be followed within the Branch for the collection and processing of the information required to rigorously manage all Waste Services assets. The result of this work will be captured through RIMS and formalize future identification of renewal funding requirements for assets. Additionally, Waste Services' approach aligns with the corporations robust governance structure and provides additional oversight to ensure proper management of City assets.*

**Branch:** Waste Management Services

**Asked By:** Councillor Cartmell

**Question #:** 19-009U

**Budget Page #:** 3

*Has decision been made to collect yard waste only in spring and fall?*

**Question Answer:**

*No, Waste Services is still in the process of framing the program details for grass, leaf and yard waste which will launch in spring 2019. Further recommendations will come forward to the Utility Committee in the Organics Program Business Case on February 1, 2019. Although we recommended single collections in spring and fall as a starting point, Utility Committee asked Waste Services to look at the costs of implementing additional collections and/or incorporating options for residents to 'top-up' an eventual green cart.*

*We are also still collecting feedback and suggestions in the current "Time to Talk Future of Waste" engagement program. As of November 5, public engagement has resulted in the completion of over 12,000 surveys and seen over 2,000 participants attending 21 drop-in sessions. The fully analysed results will be made available to Waste Services early December which will be used to inform program details and further recommendations. This information and recommendations will be brought back to Utility Committee and Council for discussion and approval*

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Cartmell

**Question #:** 19-010U

**Budget Page #:** 10

*What assumptions went into the expenditures estimates? Yard waste collection? Separation at Source? Seems to go up a lot year over year. Please provide more detail.*

**Question Answer:**

*The expenditure increase year over year is driven by: (1) increased amortization expense resulting from planned replacement and refurbishment of fleet units reaching the end of their useful life within the upcoming four-year capital budget cycle (see Capital Profile CM-81-2048); (2) increased contract expenditures resulting from population growth, increased waste volume and new contract rates for curbside and multi-unit services; and (3) increased amortization resulting from the replacement of waste containers nearing the end of their useful life, and purchase of new waste containers to match growth needs.*

*Waste Services is currently engaged in an extensive public consultation process on proposed changes to how residential waste is collected including a Source Separated Organics (SSO) program. Proposed program changes will be informed by the public engagement activities and will be brought forward to Utility Committee and Council through a Business Case in 2019*

**Branch:** Waste Management Services

**Asked By:** Councillor Cartmell

**Question #:** 19-011U

**Budget Page #:** 12

*Operational Performance Measures, how is satisfaction measured?*

**Question Answer:**

*Waste Services conducts an annual survey with residents to measure satisfaction with its services. Questions are asked about overall satisfaction with residential collection services, overall satisfaction with Eco Stations and usage of various waste services such as Eco Stations and Recycling Depots. Waste Services has also identified "Customers are satisfied with Waste Services" as a service outcome in our performance management framework. As Waste Services progresses with strategy development and receives public input and feedback through the public engagement process, customer satisfaction metrics will be reviewed and targets will be reset.*



# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Cartmell

**Question #:** 19-012U

**Budget Page #:**

*Have we considered the potential for reduced Eco Station revenue when we stop charging for yard waste?*

**Question Answer:**

*Currently, the overall tonnage of yard waste received at Eco Stations is minimal, approximately 1,000 tonnes per year. This material will have a minor budget impact that will be continually assessed as program changes are implemented.*

*Once the grass, leaf and yard waste program begins in spring 2019, we anticipate the tonnage of this material dropped off at Eco Stations to increase. This increase in material processed at Eco Stations may result in an increase in operational costs, however residents will not be charged for the drop-off of this material. While revenue as a percentage of operating costs may decline, the costs of facilitating this portion of the program will be offset by overall operational efficiencies.*

*Waste Services will continue to engage residents on providing valuable service through Eco Stations. This could result in adjusting operating hours to accommodate resident demand and schedules. Non-residential customers who choose to dispose of yard waste at Eco Stations will be charged*

**Branch:** Waste Management Services

**Asked By:** Councillor Cartmell

**Question #:** 19-013U

**Budget Page #:**

*(CM-81-2048) What happens if we go to separate at source options that include automated bin dumping equipment? Will that change this investment analysis?*

**Question Answer:**

*Waste Services is proposing changes to how residential waste is collected, which will result in impacts to the collection vehicles fleet. This change will be recommended to Utility Committee and Council through a program level Business Case for the recommended curbside set-out, and the 2020 Rate Filing, and will factor in results from public engagement.*

*Waste Services has a fleet of 94 waste collection units (October 31, 2018). 38 of these units are scheduled to be replaced over the next four years. The new units are manufactured to support automated collection, which is required for garbage collection in carts. This configuration is now standard in the waste collection vehicle manufacturing industry.*

*While the new units can support automated collection, an automated collection arm will not be installed. This allows for manual collection (our current program) to continue. If proposed program changes are approved, the automated waste collection arm can be retro-fitted in the existing units. Any additional fleet that is required to support the program change will be identified and requested via a Business Case to Utility Committee in 2019*

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Cartmell

**Question #:** 19-014U

**Budget Page #:** 14

*Alternative 4 - What does this mean, "Fleet and Facility services does not support rehabilitation / refurbishment of all Waste Services vehicles and equipment"? Does that mean the only support repair of some vehicles / equipment? Or that they are of the opinion that this equipment should not be rehabilitated?*

**Question Answer:**

*The majority of Waste equipment is hard mounted to chassis. Therefore refurbishment for the majority of this equipment requires refurbishment or replacement of both the body and the chassis. Waste equipment in particular generally has more complicated hydraulic and electrical systems and is subjected to greater mechanical wear than in other industries, leading to higher potential refurbishment costs. In many instances the cost of refurbishment is prohibitive to the gain in lifecycle in comparison to the purchase of a new unit.*

*The City's Fleet and Facility Services (FFS) Branch completed a cost analysis on refurbishing Waste collections equipment and determined that it would be more costly, both financially and in terms of operational availability, to refurbish rather than purchase new units. FFS has reached out to manufacturers to understand if industry refurbishes these units or if any other groups had refurbished this type of equipment. Only one example was given, where Calgary had highly customized pieces of equipment that were not otherwise available in the retail market. In that case, they paid the extra expense to refurbish due to operational needs and availability of a new asset.*

*Refurbishment is possible with some categories of equipment and we look at those on a unit category by unit category basis. However, this is an exception to the rule due to operational requirements of assets and not having sufficient assets to support an asset being refurbished for a lengthy period of time. Before undergoing a rehabilitation program, the mobile equipment is inspected for operational and economic feasibility.*

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-015U

**Budget Page #:**

*How much money is leaving our local economy through contracts with out-of-country waste management service companies?*

**Question Answer:**

*Expenses through contractors comply with trade agreements and follow a competitive bidding process. Proprietary information related to funds transferred out of province is not available to the City. In the 2019 Utility Rate Filing, the external services budget is \$84 million or 38% of the total Waste Services Budget. Roughly \$46 million is spent on contract services for sustainable waste processing while \$29 million is spent for collection services. While some of our contractors head offices are located outside of the Edmonton area, most staff members hired through contractors are believed to be local.*



# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-016U

**Budget Page #:**

*How competitive are these contracts and is the city getting optimized value for payments made to private waste management service providers compared to other municipalities of similar size?*

**Question Answer:**

*The procurement of goods, services, construction and intellectual property rights is conducted in a fair, transparent and accountable manner that achieves the best value for the City and supports Council's environmental, social and economic objectives. Expenses through contractors comply with trade agreements and follow a competitive bidding process.*

*To ensure Waste Services is managing contracts in an effective manner, the Branch has repurposed resources to create a Contract Management Unit within the Business Integration section. Working closely with relevant Branches across the corporation, such as Corporate Procurement and Supply Services, Law, and Business Performance and Customer Experience (City Operations), this unit is responsible for contract management compliance, governance, strategy development, planning and risk management. This approach will allow Waste Services to achieve best value for money spent*

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-017U

**Budget Page #:**

*When are these contracts up for renewal?*

**Question Answer:**

*Approximately 25% of Branch operational contracts are renewed on an annual basis. As Waste Services explores program changes through the Waste Strategy, contract terms have been adjusted to align with proposed program change implementation schedules. In addition, as contracts are up for renewal, business requirements are reviewed and contract terms are adjusted to ensure value for money.*

## 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-018U

**Budget Page #:**

*How does the portion of the waste management budget that is spent on contracts compare to other Canadian municipalities of similar size?*

**Question Answer:**

*City of Edmonton Waste Services participates in National Solid Waste Benchmarking Initiative (NSWBI) which compares waste services provided in 10 municipalities throughout Canada. It is clear from this program that no other Canadian municipality is truly comparable to Edmonton in this regard for two reasons: (1) No other Canadian municipalities operate their waste services as a fully cost allocated and transparent Utility, and (2) The suite of programs offered in each Municipality are quite different.*

*In terms of contract spend, each municipality resources the waste services program differently. Some municipalities contract out the entire operation, while others offer the program completely in-house. Many, however use a combination of in-house and contract resources similar to Edmonton's approach.*

*One example that highlights how each municipality offers different ways to resource the waste services program is in terms of landfill operation. For example, Edmonton does not own and operate an active landfill, so this entire expense is provided through contract. Many other municipalities however own a landfill, so this expense would not flow through as a contract expenditure.*

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-019U

**Budget Page #:**

*Does the average volume of household waste go down during winter months? If so, has waste management explored the potential of a reduced pick up schedule for those months and associated cost savings?*

**Question Answer:**

*Yes, in the current state, the average volume of household waste does decrease during winter months as grass and yard waste are not collected during these times. As part of the strategic review, Waste Services is examining how collection cycles might be adapted in response to more extensive source separation. Public engagement around proposed program changes is ongoing. These proposed program changes will be presented to Utility Committee for consideration in early 2019.*

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-020U

**Budget Page #:**

*How much has already been spent and how much is slated to be spent going forward on the city's experimental waste diversion project with Enerkem?*

**Question Answer:**

*As per the January 2018 Waste Services Audit report, the Refuse Derived Fuel processing costs and tipping fees payable to the third party operating the Waste to Biofuels Facility are approximately \$127 per tonne for conversion to biofuels. These costs include interest and amortization of assets used in support of the Waste to Biofuels Facility including the Integrated Transfer and Processing Facility (IPTF), the Advanced Energy Research Facility (AERF) and the Refuse Derived Fuel (RDF) Facility, along with all related operating costs for these facilities.*

*Any further investments decisions in the RDF will be brought forward to Utility Committee with a fully costed business case to inform the decision.*

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-021U

**Budget Page #:**

*To what extent has this operation been meeting its targets and what mechanisms does the City have to hold this company accountable to its contractual commitments around diversion?*

**Question Answer:**

*The Waste to Biofuels Facility is not yet fully operational. Once operational, the contractor will be expected to operate in accordance with the agreement, including achieving target processing capacity.*

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-022U

**Budget Page #:**

*What has been the City's return on investment to date in this facility and what are the projected future returns?*

**Question Answer:**

*The City is not a direct investor in the Waste to Biofuels Facility and therefore there is no return on investment for the City in this project. Our principal interest in this project is the increased diversion of municipal solid waste from landfill.*

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-023U

**Budget Page #:**

*What costs are currently paid by ratepayers for this operation?*

**Question Answer:**

*As per the January 2018 Waste Services Audit report, the RDF processing costs and tipping fees payable to the third party operating the Waste to Biofuels Facility are approximately \$127 per tonne for conversion to biofuels. All costs associated with processing residential waste through this operation are attributed to ratepayers.*

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-024U

**Budget Page #:**

*How is waste management dealing with the stockpile of recyclables no longer shipped to market (China)?*

**Question Answer:**

*Waste Services does not have a stockpile of recyclable material. For the City of Edmonton, the impact of the quality restrictions of imported recyclable material in China has been largely mitigated through operational process changes and market diversification. All non-recyclable material processed through the Materials Recovery Facility can be used in the Waste to Biofuels Facility.*

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-025U

**Budget Page #:**

*What costs are incurred from the discontinuation of the sale of these waste products?*

**Question Answer:**

*The sales market for recyclable material has softened since the imposition of quality restrictions of imported recyclable material in China. This has impacted expected Branch revenue. In the 2019 Utility Rate Filing revenue from the Materials Recovery Facility has been reduced by \$1 million. Also, in response to the quality restrictions in China, Waste Services has made operational adjustments to the Materials Recovery Facility that will help to ensure continued sales of recyclable material. These operational changes are expected to increase expenses by \$700,000 in 2019.*

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-026U

**Budget Page #:**

*Are there other markets being explored?*

**Question Answer:**

*Waste Services works closely with commodity brokers to monitor market conditions for recyclable materials. The Branch has proactively adjusted sales to various markets as conditions have changed. For example, in 2016, 54% of recyclable fibre was sold to China. By 2018, only 15% of recyclable fibre was sold to China. Market diversification has been improved by identifying new markets; for example the Branch now sells recyclable commodities in Korea.*

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-027U

**Budget Page #:**

*How could implementation of extended producer responsibility support cost reductions for the city?*

**Question Answer:**

*An initial report on EPR was presented to Utility Committee on August 23, 2018 (CR\_5681). The report indicated that an Extended Producer Responsibility program would potentially shift funding for recycling programs to producers. The current funding impact of associated programs is \$16.4 million annually.*

*Further, the report indicated that if Waste Services were to maintain the collection of Packaging and Printed Paper from approximately 390,000 households, based on the model currently in place in British Columbia, where the Producer Responsibility Organization offers a subsidy of approximately \$35 per household annually, the City could potentially receive an estimated \$13.6 million subsidy.*

*Waste Services is currently working on a second EPR report that will be brought to Utility Committee in February 2019.*

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-028U

**Budget Page #:**

*What is the City of Edmonton currently doing to advocate for provincially or federally mandated EPR?*

**Question Answer:**

*The City of Edmonton continues to advocate the provincial government to move forward with Extended Producer Responsibility legislation and may pursue initiatives including establishing a partnership with Calgary and other municipalities, collaborating with the Recycling Council of Alberta, sending a resolution to the Municipal Leaders' Conference advocating for EPR, and sending a follow up letter to the Alberta Minister of Environment and Parks to support and commit to an EPR program.*

*Much of this effort is in response to Councillor Henderson's motion on February 13, 2018 that Council support the City of Calgary resolution brought forward at the AUMA Municipal Leaders Caucus in March 2018 in support of encouraging the Government of Alberta to join other Provinces by bringing in Extended Producer Responsibility in Alberta. An update on activities and potential activities, including input from the current public engagement activities, will be brought to the February 1, 2019 Utility Committee.*

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-029U

**Budget Page #:**

*Utility Advisor - What is being done to correct the misallocation of customers to fully recover non-residential costs of service?*

**Question Answer:**

*In addition to encouraging the diversion of non-residential waste material from landfill, waste services provided to the non-regulated sector are intended to break-even or where possible contribute positively to the reduction of residential rates. Non-regulated services include four primary programs: commercial collections, commercial self-haul, aggregate recycling, and construction and demolition recycling. To ensure that non-regulated program losses do not impact ratepayers, 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 Financial Stabilization Reserve (FSR) over four years beginning in 2015.*

*From the 2017 Cost of Service Study conducted by Waste Services, recovery of the non-regulated portion of Waste Services' business was 86.4%. While there continues to be a revenue requirement deficiency for the non-residential customer class, this recovery has improved from 69.4% in 2010.*

*A strategic review of non-regulated business lines is underway to evaluate their effectiveness and efficiency. More specifically, a Request For Expressions Of Interest (RFEOI) was released on November 1, 2018 for the Construction and Demolition (C&D) recycling program. After completing the review, a revised strategy for the non-regulated program will be developed and implemented in 2019. A preliminary report will be presented to Utility Committee on February 1, 2019.*



# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Paquette

**Question #:** 19-030U

**Budget Page #:**

*What are the details of the swap agreement between the Gold Bar and Capital Waste Water Plants in terms of volume and any kind of payment agreements or informal contractual obligations?*

**Question Answer:**

*EPCOR has been notified of this request for information. Please refer to 19-001U.*

**Branch:** Waste Management Services

**Asked By:** Councillor Dziadyk

**Question #:** 19-031U

**Budget Page #:**

*Which services are remaining the same or decreasing, while rates increase?*

**Question Answer:**

*There are no program changes proposed in the 2019 budget at this time with the exception of a separate leaf and yard collection scheduled to start, on a voluntary basis, in spring 2019. Any changes to programs will be made following a fully costed business case presentation to Utility Committee and will be aligned with the findings from public engagement and the overall waste strategy. Waste Services anticipates delivering a business case to address organic waste management, along with decisions on the renewal of the Edmonton Composting Facility in February 2019. A business case recommending changes to the remainder of the waste set-out is anticipated to be delivered in June 2019.*

**Branch:** Waste Management Services

**Asked By:** Councillor Dziadyk

**Question #:** 19-032U

**Budget Page #:**

*What elements of our waste services has Administration considered downloading to private industry? What potential savings, and risk mitigation, could be found with further privatization?*

**Question Answer:**

*In 2019, Waste Services has proposed operating expenditures for external services of \$84 million or 38% of the total budget. In addition, the vast majority of the \$265 million in proposed capital expenditures from 2019 to 2022 will be delivered externally by contractors.*

*Waste Services continually seeks to engage with private partners to add value to its services. For example, Waste Services issued a Request For Expressions Of Interest (RFEOI) on November 1, 2018 to gauge the level of interest in the commercial market to partner with the City of Edmonton with the aim of optimizing value in operating the Construction and Demolition Recycling Facility at the Edmonton Waste Management Centre.*

*One of the key focus areas for the strategic work currently being completed by Waste Services is to ensure the Branch is working effectively with the private sector. As this work is completed, new or expanded opportunities for private sector involvement may be identified. These opportunities would be analyzed on a case-by-case basis to identify potential savings and risks. Any such opportunities will be brought forward to Utility Committee for assessment.*

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Councillor Dziadyk

**Question #:** 19-033U

## **Budget Page #:**

*There are already private sector players in the re-use and recycling field. Are our Reuse Centres cost recovery? Are they needed?*

## **Question Answer:**

*Waste Services provides municipal waste services in alignment with the waste hierarchy. Waste prevention, reduction and reuse are key components of this hierarchy. This was further reinforced through the 2018 Waste Services Audit which recommended the Branch focus additional efforts on strategies in these areas.*

*Currently ratepayers fund four Eco Stations (two of which have a Reuse Area), and one Reuse Centre as a part of the waste drop-off program. The principal objective of these programs is to provide a convenient means for residents to divert waste from landfill in an environmentally and sustainable way. Waste Services, as part of the current work on the Waste Strategy, is exploring opportunities to better utilize these already-built assets to improve waste reduction.*

*Waste reduction will be presented as part of the overall waste strategy to Utility Committee in June 2019. Our strategic work will also conduct outreach with the non-profit sector as well as private sector partners to consider new ways to manage and expand these activities, especially as we work to meet new goals on waste reduction overall*



# 2019-22 Utility Budget Questions By Question #

**Branch:** Infrastructure Planning & Design

**Asked By:** Councillor Dziadyk

**Question #:** 19-034U

## Budget Page #:

*Under a different ownership structure, could the development industry deliver the same utility services to Blatchford without compromising the overall development vision. If not, might this apply to subsequent development phases only (where construction has not begun)?*

### Question Answer:

*Truly sustainable developments are ambitious and require commitment, creativity and innovation. Achieving Council's vision for Blatchford will not only benefit Blatchford's residents, but also inform the development of future communities and establish the City of Edmonton as a leader in community-led renewable energy and sustainable design. Achieving this vision at the scale of a mixed-use neighbourhood with 30,000 residents, within the energy context of the province of Alberta, has the potential to put Blatchford at the forefront of sustainable development efforts.*

*The land development industry is not responsible for the delivery of utility services, so a private land developer would not create a utility to service their land; instead, they would connect to existing utilities. The private utility industry would also not typically implement a District Energy System at this scale due to the potential risk and higher profit margin expectations. The District Energy Sharing System in Blatchford is being built to deliver on the renewable energy and carbon goals for the community as part of Council's vision*

*In Edmonton, private builders have implemented smaller, localized geothermal and renewable energy systems but typically only for single buildings at a much lower scale. Other systems, but again to a much smaller scale, have been implemented in other municipalities funded by developers or builders. Cities such as Vancouver, Richmond and Surrey have also taken on starting up, owning and operating their own municipal district energy utilities using technology similar to Blatchford. Many universities and colleges have district energy system in place as well as the Government of Canada where the government buildings in Ottawa are on a district energy loop.*

*In the near term, moving away from the current City ownership of the utility may result in less Council control or oversight to achieving the vision for Blatchford. In addition, from the Utility perspective, there may be a loss of access to government grants to address the Utility's funding gap. A private utility may also base its business decisions from a financial rate of return perspective rather than the social and environmental objectives outlined in Council's vision for Blatchford.*

*As the Utility grows and matures, the Blatchford Renewable Energy Utility Business Plan contemplates exploring possible partnerships or other arrangements with existing, established utilities. The intent would be to understand the level of interest and feasibility of such a partnership in future development stages.*

# 2019-22 Utility Budget Questions By Question #

**Branch:** Waste Management Services

**Asked By:** Mayor Iveson

**Question #:** 19-035U

**Budget Page #:**

*[Capital Budget Binder pages 243-250] Given the discussions over the future of waste management we are currently undertaking, how much could we save by putting a hold on the purchase of new waste management trucks?*

**Question Answer:**

*Please note: CM-25-1001 does not include vehicles for Waste Services. The replacement of Waste Services vehicles is included in profile CM-81-2048.*

*Waste Services has a fleet of over 400 units including vehicles and equipment used to collect waste and recyclables and process these materials at the Edmonton Waste Management Centre. Capital profile CM-81-2048 recommends replacing and refurbishing fleet units reaching the end of their useful life within the upcoming 2019-2022 capital budget cycle.*

*Deferring the replacement of these units will advance the average age of this fleet. An older fleet typically has higher operating costs and lower reliability than a younger fleet. For example, a Tandem Collection Truck has an operating expense of \$0.74/km in its first year. This increases to \$4.59/km by the tenth year. Assuming the approximate average 2017 usage of 12,500 km per unit, a truck in the final year of life would cost \$48,125 more to operate than a unit in the first year of life. Therefore, any capital cost savings, through reduced amortization costs, is offset by higher operating costs.*

*Waste Services is proposing changes to how residential waste is collected which will result in impacts to the collection vehicles fleet. This change will be recommended to Utility Committee and Council through a Business Case and the 2020 Rate Filing, and will factor in results from public engagement.*

*Of the total fleet, 94 units (October 31, 2018) are waste collection vehicles; 38 of these units are scheduled to be replaced over the next four years. The new units are manufactured to support automated collection, which is required for garbage collection in carts. This configuration is now standard in the waste collection vehicle manufacturing industry and will be well aligned with our strategy going forward.*

*While the new units can support automated collection, an automated collection arm will not be installed. This allows for manual collection (our current program) to continue for the time being. If proposed program changes are approved, the automated waste collection arm can be retro-fitted in the existing units.*

*Waste Services currently schedules 10 collection units for replacement each year to ensure a smooth replacement cycle and average age. Replacement can be deferred until a decision is made on the proposed program changes. For example, 10 collection units are scheduled to be replaced in 2019 totalling approximately \$3.5 million. If a decision is made on proposed program changes in 2019, this would defer the replacement of these units from 2019 to 2020. However, deferring this scheduled replacement is not necessary or recommended, as detailed above. Only 14 collection vehicles were replaced during 2016 and 2017.*