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## Unified Waste Utility – Utility Rate Setting Philosophy

### Recommendation

That the Standing Policy Committee on Environment Utilities, and Corporate Services recommend to City Council:

1. That Administration be directed to recommend initial utility rates that encourage diversion, and;
2. That Administration implement Option Three as the multi-year rate setting philosophy for the Unified Waste Utility, should it be approved.

### Topic and Purpose

The purpose of this report is to outline options for City Council to direct the Administration when setting multi-year rates for the Unified Waste Utility.

### Report Highlights

1. Rate setting is a complex exercise as many of the factors influencing rates are interdependent.
2. Traditional options for rate setting could be used for setting Unified Waste Utility Rates.
3. An alternative approach to rate setting could be used to set rates that further encourage waste diversion.
4. After a review of the City Council approved values for the Unified Waste Utility, the alternative rate setting approach, by varying the volume charge for each cart was recommended.

### Strategic Goals

The options presented in this report support the Strategic Goal of Environmental Leadership by helping reach maximum solid waste diversion and promoting landfill operations to reach financial sustainability. These options directly support the implementation of a long-term funding and program strategy for solid waste management and waste diversion.

### Background

City Council, at its meeting held on February 27, 2017, considered the Waste Management Master Plan – State of Waste report; and resolved, in part:

- “2. That the values to be used in preparing options for a new Waste Management business model, including the ability to pay in terms of future cost allocations for fairness and equity, be approved.”

Concurrent to receiving this report, City Council will be receiving the Waste Management Levels of Service – Curbside Organics and Pay as You Throw Waste Utility report and the Ability-to-Pay Considerations of Expanded Curbside Waste Utility report.

## Report

### Program Factors are Interdependent

City Council will receive concurrent information on indicative rates and ability to pay. The reports will outline that the greater the difference in rates between the smallest and largest collections carts sizes incentivise the greatest rate of diversion. The two reports will show that as the differential in the rates for different cart sizes increases, households will choose a smaller cart. However, as more households select a smaller cart, the cost of the smallest cart must increase as there are less households subsidizing the total cost of the program with higher cost (larger) carts. Increasing the cost of the smallest cart works against ability to pay, as the reports will note that in a variable rate utility, the lower the cost of service available, the more it is affordable.

For the purposes of this report, the Unified Waste Utility includes single family curb side recycling, waste, and organics collection and disposal. It includes costs for enforcement and program management. It does not include, waste minimization programs, education programs, or recycling depots. Attachment 4 of the Waste Management Levels of Service – Curbside Organics and Pay as You Throw Waste Utility report has more details on the inclusion and exclusion of programs.

The rates presented in this report and the rates in the Waste Management Levels of Service – Curbside Organics and Pay as You Throw Waste Utility report consider landfill airspace; however, they do not consider the cost of landfill replacement. That is to say that these rates are based on achieving the long-term strategic goal of not needing to replace the landfill. Therefore, rate setting philosophy should have controls for household behaviour. This would be a philosophy where the more Saskatoon diverts, the less funds are needed for the Landfill Replacement Reserve, and lower rate increases could be achieved.

Independent of the need to set a long-term rate structure, because this is a new utility, an initial rate structure also needs to be established. When preparing initial rate options for City Council, the Administration requires direction on prioritizing cost recovery and low initial rates or rates that further encourage diversion. As noted above, since these are interdependent, higher differential rates are expected to increase the lowest-cost option when also considering rate recovery. Administration is recommending that diversion be the focus because the long-term benefits to households outweigh the shorter term cost savings, while helping to achieve diversion targets sooner.

With respect to waste diversion, Skumatz Economic Research Associates, Inc. (SERA) conducted a study which incorporated data from Pay as You Throw programs from over 10,000 communities across North America. SERA's study recommended a minimum rate differential of 55-60% between small bins and the largest bin would be sufficient to incentivize higher switchover rates, with a differential of 65-70% recommended for Saskatoon to maximize diversion. SERA has also found that dollar differentials lower than \$5 do not seem to affect bin size choices as much as differentials over \$5. Also of note, incentives above 80% rate differential aren't expected to result in material additional increases in waste diversion.

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### Option One - Cost Recovery with Traditional Rate Increases

This option outlines the indicative rates anticipated for a rate structure built around cost recovery with no rate modifier for incentivizing waste diversion. Traditional rate increases for utilities are based on a percent increase in rate over previous years. This increase is based on growth, costs from other utilities, capital programs, borrowing and other factors. As an example, based on the comparative rates in the Waste Management Level of Service for Organics and Waste Utility for Option 1, a 2% rate increase would have rates as shown in Table 1 (Organics & Waste).

Table 1: Example Rates Cost Recovery with Traditional Rate Increases

Cart Sizes	Initial Year	Year Two	Year Three
180L (48gal)	\$18.00	\$18.40	\$18.70
240L (65gal)	\$20.00	\$20.40	\$20.80
360L (96gal)	\$23.00	\$23.50	\$23.90

Note: Monthly recycling utility charges (\$5.65/hh/month) are in addition to the amount shown.

As can be seen in Table 1, the smallest cart size has the lowest increases; however, the total difference in price remains closer together (22% spread) over three years. With such a small differential rate between small and large cart, this option would have a limited impact on waste diversion. This option better considers keeping all rates low regardless of the cart size selected.

### Option Two - Small Bin Affordability Ceiling plus Phased Waste Diversion Incentive Rate Structure Over Long Term

This option outlines the indicative rates whereby the rates for medium and large carts would be increased proportionally each year to incentivize waste diversion. In this method, the smallest cart size cost would be locked and the differential charge per litre for the larger carts increases each year to encourage switching to a smaller cart, which can encourage diversion. This process could be in effect until a diminishing return were achieved on households switching cart sizes, at which time a return to a more traditional rate increase would be required. Current indicative rates have a \$0.026 difference per litre for the larger carts. In each year, this amount could be increased. As an example, Table 2 shows rate increases by increasing the differential rate by 10% annually. This rate option would only reach the 70% differential in cart costs after ten years.

Table 2: Example Rates with Small Bin Affordability Ceiling plus Phased Waste Diversion Incentive Rate Structure over Long Term

Cart Sizes	Initial Year	Year Two	Year Three
180L (48gal)	\$18.00	\$18.00	\$18.00
240L (65gal)	\$19.70	\$19.90	\$20.10
360L (96gal)	\$22.80	\$23.30	\$23.90

Note: Monthly recycling utility charges (\$5.65/hh/month) are in addition to the amount shown. Small cart rates are constant as the financial model assumes that more residents are switching to the smallest cart each year.

It can be noted that there is a 25% difference in the high and low rates after three years and this rate differential could continue to increase to incentivise households to switch to a smaller bin. This option also provides an advantage of holding the cost of the smallest cart, providing a longer term lower-cost option in respect of ability to pay.

Option Two provides a balance between Option One and Option Three. This option allows for more drawn out capital expenditures for collections carts, as well as gives residents more time to make a decision about switching carts before a larger difference in cost is achieved.

Option Three - Phased Waste Diversion Rate Structure over Short Term

Under this option, a 70% rate differential between small and large carts would be established by 2023 based on phased increases. This option is in line with the timing of the 2023 diversion goals. As noted above, once this differential is reached, there is limited uptake in smaller carts expected. As a result, after year three rate increases would return to traditional methods. This example rate structure is shown in Table 3.

*Table 3: Example Rates with Phased Waste Diversion Rate Structure over Short Term*

Cart Sizes	Initial Year	Year Two	Year Three
180L (48gal)	\$18.00	\$18.00	\$18.00
240L (65gal)	\$19.70	\$22.10	\$24.50
360L (96gal)	\$22.80	\$29.50	\$36.20

Note: Monthly recycling utility charges (\$5.65/hh/month) are in addition to the amount shown. These numbers show a spread of greater than 100% (between small and large carts) by year three so that when recycling (flat cost) is included the total difference for charges in the unified waste utility is closer to 70% between small and larger cart households. Small cart rates are constant as the financial model assumes that more residents are switching to the smallest cart each year.

The 70% rate differential (or alternatively a rate differential of a minimum of \$5 or more between each bin size) could be established right from the outset of the program in Year One, but it is expected that a larger number of households will take up the smaller cart. This would increase the initial capital costs of the program as well as increase the initial cost for the small cart. It is estimated that this would result in a minimum of \$2.00 increase to the small cart indicative rate, though this would need to be confirmed by additional financial modelling. In addition, this would create an excessive stockpile of large carts, currently located at the landfill, with limited repurposing value. Option Three would require a return to a traditional rate increase strategy after reaching the 70% differential between the small and large cart rates depending on City Council's decision on timelines.

Values Based Analysis

The values of Financial, Environmental, and Social Sustainability were considered at a high level when making a recommendation for a rate setting philosophy. The rates set are based on financial sustainability and, as such, it weighted equally all options. It should be noted that the financial numbers are provided for example only Options One and Two show different approaches to the same overall increase. Option Three is considered more valuable based on environmental sustainability, as it will provide for a greater difference in the cost from a small cart to a large cart, over the short term incentivising diversion, thereby attempting to balance capital investment with waste diversion targets.

Option Two was initially considered more favourable for social sustainability (ability to pay) because it locked to lowest cost for the longest period of time, however, this may be outweighed by the eventual need to increase all rates to account for funding the

replacement of the landfill with less diversion, so Option Three is considered more favourable overall.

**Options to the Recommendation**

Although this report has comparative rates in it, City Council may choose to set any other rates they desire. City Council may also direct the Administration to research and report on a different rate setting philosophy. Should City Council choose an option to the recommendation, Administration would report back on the financial implications.

**Communication Plan**

Should a Unified Waste Utility be implemented, a communication plan will be developed at that time.

**Financial Implications**

As noted, rate setting is an interrelated process establishing a rate-setting philosophy which allows the Administration to prepare rates for City Council’s consideration during budget deliberations. The proposed rate structure in these reports is based on households taking advantage of smaller bins. There is a financial risk of overcharging if there is less uptake than predicted. This excess revenue could then be used for programs that encourage diversion. The rate information in this report is for example only and City Council will be provided with recommendations and options at the time of rate setting.

**Environmental Implications**

The recommended rate structure continues to encourage diversion by further incentivising smaller carts as rates increase, while also giving residents an opportunity to become accustomed to the financial changes over time.

**Other Considerations/Implications**

There are no public/stakeholder involvement, policy, privacy, or Safety/CPTED implications or considerations.

**Due Date for Follow-up and/or Project Completion**

If the Unified Waste Utility is approved Administration will report on implementation in Q2 of 2019 and will present more detailed rates in advance of the 2020 budget deliberations.

**Public Notice**

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

**Report Approval**

Written by: Russ Munro, Director of Water and Waste Stream  
Reviewed by: Clae Hack, Director of Finance  
Brenda Wallace, Director of Environment and Corporate Initiatives

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Angela Gardiner, A/General Manager, Transportation and Utilities  
Dept.  
Approved by: Dan Willems, A/General Manager, Corporate Performance Dept.

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