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BRIEFING FORM

SUBMITTED TO: Environmental and Sustainability Standing Committee

DIRECTOR'S APPROVAL:

A handwritten signature in cursive script, appearing to read "M. [unclear]", written over a horizontal line.

DATE OF MEETING: September 8, 2011

SUBJECT: Municipal Operations – 4-Stream Project

ORIGIN

A request was made of staff to provide an overview of the 4-Stream Project and provide information on the potential use of solar powered waste receptacles.

RECOMMENDATION/ DECISION REQUIRED

N/A - Information Report

BACKGROUND

HRM has an internationally recognized and award winning solid waste management strategy; a component of this strategy is mandatory source separation. Under Bylaw S-600, HRM residents, businesses and institutions are required to source separate organics and recyclables from refuse. At present there are relatively few 4-stream receptacles available to the public in HRM's open spaces, it is therefore incumbent upon to HRM to lead by example.

This initiative originates from a number of goals/objectives set out in the Transportation and Public Works 2011/2012 Business Plan:

1) Achieve fiscal, social, environmental and cultural sustainability targets

TPW 4.9 - Implement practices and policies for compliance in source separation of waste collection programs at all HRM facilities/infrastructure/public spaces

TPW 4.10 - Develop the business case project proposal for public areas multi-stream receptacle's replacement plan

2) Deliver an efficient sustainable resource oriented solid waste program

TPW 6.9 - Work with all Business Units to implement corporate compliance with By-law S-600 at all HRM operations, sites, properties and facilities

These TPW objectives serve to support the Corporate Business Plan's Community Outcome Areas of creating a Clean and Healthy Environment and the development of Well Planned and Engaged Communities.

The primary goal of this initiative will be to establish a plan to move waste receptacles and waste collection toward 4-Stream compliance in HRM's open spaces. In order to assist in funding this plan, TPW will develop a business case that will optimize and consolidate its waste collection strategy that will deliver on a number of strategic objectives:

- Bylaw compliance
- Increase in waste diversion through the implementation of 4-Stream Containers
- Productivity savings
 - Fuel savings
 - FTE savings
 - Vehicle savings
 - Contractor savings (facilities group)
- Increase service delivery
- Green House Gas reduction
- Improved aesthetic
- International/national recognition

In attempting to address these critical success factors, the project team has been undertaking a review of the use of solar powered compaction waste receptacles with wireless technology. These units while costly, (\$7,565 per unit plus HST), offer a significant productivity opportunity in eliminating the need to unnecessarily service bins that are not near capacity. This results in fuel savings, FTE savings and vehicle savings producing the added benefit of reducing HRM's carbon footprint.

The project team has been assessing the success of the Waterfront Development Corporation's deployment of "Big Belly" units and will be incorporating the results of the eight existing units presently owned by HRM; four of which are located in Grand Parade, two are located at the MetroLink bus stops on Barrington Street near Scotia Square and two are located adjacent the Ferry Terminal.

Of the eight units purchased by HRM, six units were tendered and purchased through the Capital Streetscape Account (Big Belly was the only bidder). The two additional units were sole sourced following an initial orientation session with Big Belly Solar, now owned by Waste Management; these units were purchased to trial. It is important to note that Big Belly holds the patent on this technology and there is no competition in this particular market at this time.

Part of the funding strategy for this project is an application for a low-interest loan to the Federal Green Fund. Green Fund applications are typically successful when accompanied by targeted objectives for waste diversion, and carbon reduction targets. If successful, the Green Fund provides an additional 10% grant of the loan awarded. The inclusion of solar powered compaction and wireless technology may be a critical success factor in funding approval. However, funding from the "Green Fund" is not considered to be a critical factor and the business case will still proceed to Council with recommendation in December.

The project is presently engaged in data collection and will be commencing route optimization and container rationalization in October; this will inform the business case and 4-Stream compliance plan.

ALTERNATIVES AND ASSOCIATED RISKS

The business case will include the costs as well as cost savings associated "with" the use of Solar-Powered Compaction Technology as well as "without". A recommendation will be made based on the outcome of the business case and scenario that best aligns with the project's strategic objectives.

It is important to note that "Big Belly" units are not optimal for all locations; therefore the recommendation will include a receptacle standard for each type of location.

IMPACT/BENEFITS

The following are the anticipated benefits:

- Waste collection centralized to one business unit
- Reduction in the types of waste receptacles (presently over 27 varieties)
- Plan to move to 100% 4-Stream compliance
- Reduction in # of receptacles
- Increase in service standards
- Reduction in # employees
- Reduction in # of vehicles
- Route Optimization
- Improved collection and transfer procedures
- Education opportunity through the use of wraps

While the business case is in its infancy (+/- 50%) we anticipate a \$50k annual revenue return and an annualized savings of approximately \$1M. The estimated cost at this time \$4.6M; Big Belly is suggesting a payback of 2.2 years on their product.

COMMUNICATION ISSUES/OPPORTUNITIES

A Council Report with recommendation is anticipated for December 2011.

ATTACHMENTS

None

KEY STAFF CONTACT

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