



To: Public Works and Transportation Committee

Date: May 1, 2011

From: Tom Stewart, AScT.
Director, Public Works Operations

File: 10-6370-10-05/2011-
Vol 01

Re: Food Scraps/Organics Collection Program Update

Staff Recommendation

That the Food Scraps/Organics Collection Program Update, dated May 1, 2011, from the Manager – Fleet and Environmental Programs, be received for information.

Tom Stewart, AScT.
Director, Public Works Operations
(604-233-3301)

FOR ORIGINATING DEPARTMENT USE ONLY		
CONCURRENCE OF GENERAL MANAGER		
REVIEWED BY TAG	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
REVIEWED BY CAO	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

Staff Report

Origin

At their November 23, 2009 meeting, Council approved an expanded recycling program to collect food scraps/organics from single-family residential households, commencing April, 2010. In approving this program, Council requested staff report back in one year with a status update.

This report responds to Council's request by providing an overview of the program, its implementation and results to date. It also highlights potential considerations for future organics collection strategies.

Analysis

Background

Implementation of food scraps/organics recycling was the next most logical progression in Richmond's successful recycling program – particularly since food scraps represent an estimated 21% of what remains in waste disposed. Food scraps include fruit and vegetable peelings, table scraps, meat/poultry/fish, dairy products and food-soiled paper. Food scraps are collected with yard trimmings and composted into a soil supplement at Fraser Richmond Soil & Fibre.

Program Overview

Richmond's food scraps/organics collection program commenced on April 6, 2010. In order to introduce this program, three key changes were required:

- i) plastic bags were eliminated because the processing facility would not accept food scraps in plastic bags,
- ii) food scraps were added along with yard trimmings in marked containers of a maximum permitted size (80 litres) and weight (20 kg, or 44 lbs), and
- iii) the set out time for collection of all garbage and recycling items was changed to 7:30 a.m. to maximize collection efficiency.

Implementation

Planning for implementation commenced immediately upon Council approval, and included operational, administrative and communications strategy development. Early communications and education work was done with local retailers and front line City staff. The public communications program involved several facets:

- Program branding: "Green Can"
- Advertising via local media, including Chinese media (approximately 20 ads)
- Press releases
- Community/educational events
- City website
- Distribution of promotional materials (door hanger) and decals
- One-on-one education with residents
- Advertising on collection vehicles

A one-month grace period was allowed for residents to adjust to the program. This allowed the opportunity for residents to use up existing supplies of clear plastic bags and the time necessary to obtain the appropriate-sized containers and paper yard waste bags. The latter was important as local retailers were having some difficulty keeping up with the demand for the maximum 80-litre size. There was also demand from some residents for 80 litre containers with wheels, which were not available locally. To address this, staff worked with a local retailer to source out and stock these containers.

It is noteworthy that the branding developed by Richmond: “Green Can” has proven very effective for this program and is being replicated in other jurisdictions.

Results

Participation in the program has been very high, with an estimated 95% of residents placing out Green Cans, paper yard waste bags, and/or both. Because food scraps are mixed with yard trimmings in the Green Can/s, it is not feasible to measure the amount of food scraps separately from yard trimmings. However, we can compare overall organics and garbage tonnage collected to determine the impact of the program.

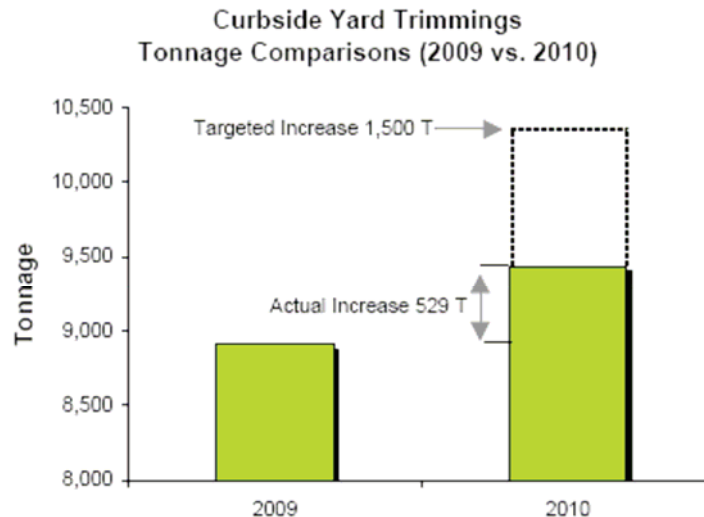
There were three targets incorporated into the program planning for increased recycling and waste diversion/reduction:

1. Curbside organics collection: anticipated 1,500 tonne annual *increase* due to addition of food scraps,
2. Recycling Depot: anticipated annual *increase* in yard trimmings of 270 tonnes,
3. Garbage: anticipated annual *reduction* in total garbage collected of 1,500 tonnes.

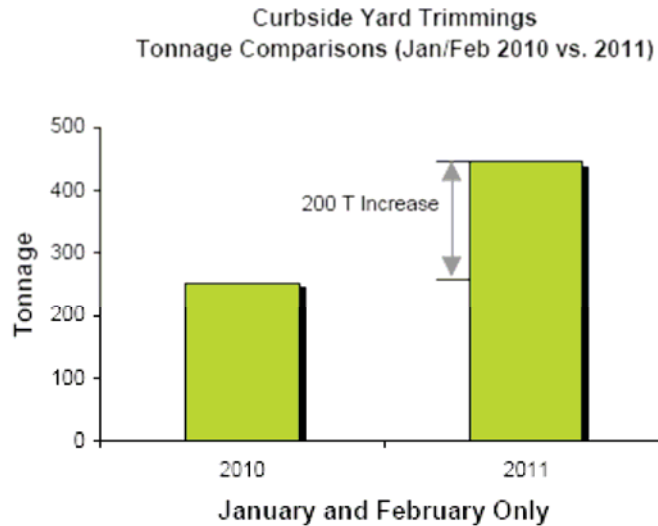
The following provides a summary of the results as compared with the established targets.

Curbside Organics Collection

Overall, there was an increase of 529 tonnes of yard trimmings collected in 2010 when compared with 2009. This is below our established target of 1,500 tonnes, however, it should be noted that the food scraps program was not fully implemented until May, 2010.



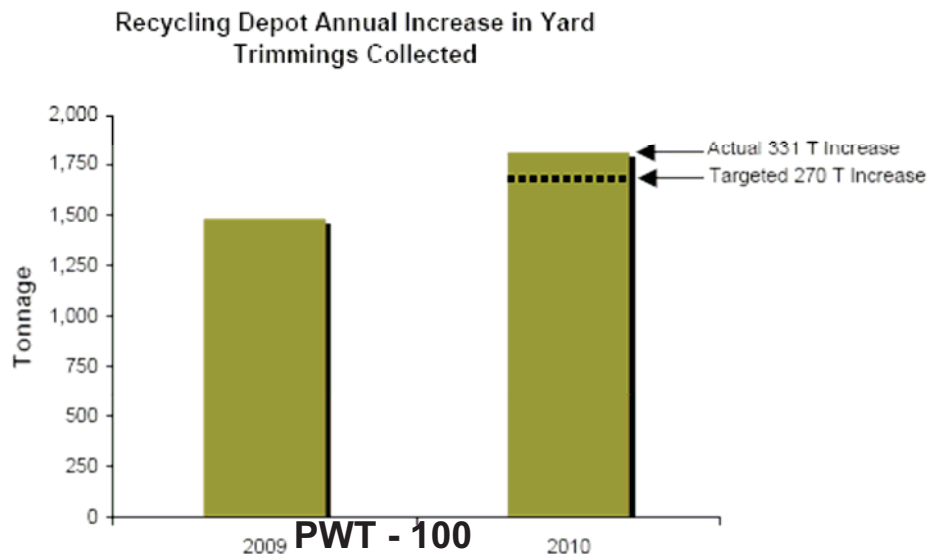
Given the program did not commence until May, 2010, the first two months of the year (January and February of 2010 vs. 2011) are a relatively good comparator of food scraps participation since yard trimmings volumes would be very minimal during this time. Therefore, when the first two months of 2010 are compared with 2011, there was an increase of approximately 200 tonnes of total organics collected in 2011. This is a good indication that we are trending in the right direction to meet the 1,500 tonnes additional annual diversion target for food scraps.



In addition, the elimination of plastic bags associated with the Green Can program has resulted in an estimated annual 400 tonne reduction in plastic bag waste. It is interesting to note that the elimination of plastic bags has significantly reduced water build-up from condensation. This loss of water weight could be a factor in the lower than expected tonnage of food scraps collected. This helps to reduce processing costs and increase collection efficiency.

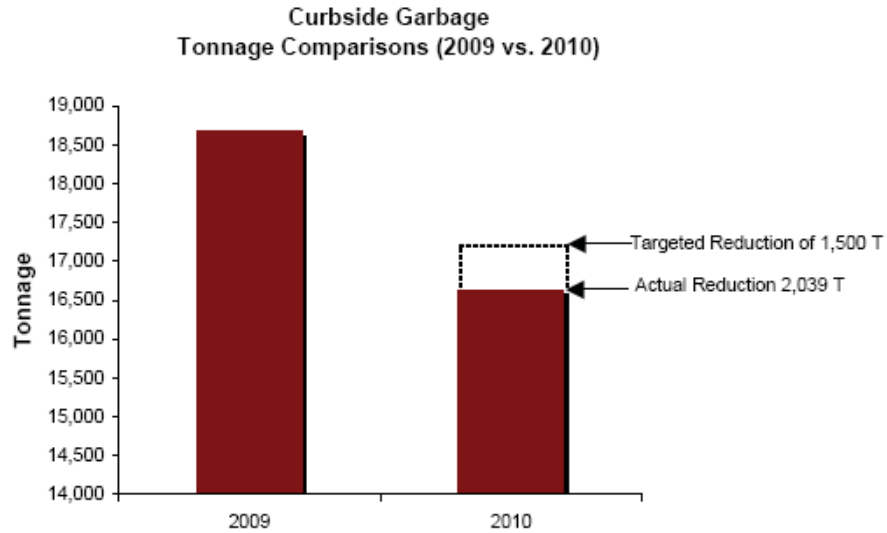
Recycling Depot

At the Recycling Depot, we established a target of 270 tonnes of additional yard trimmings annually. This target was met and exceeded with a total additional amount of 331 tonnes collected in 2010 when compared with 2009.

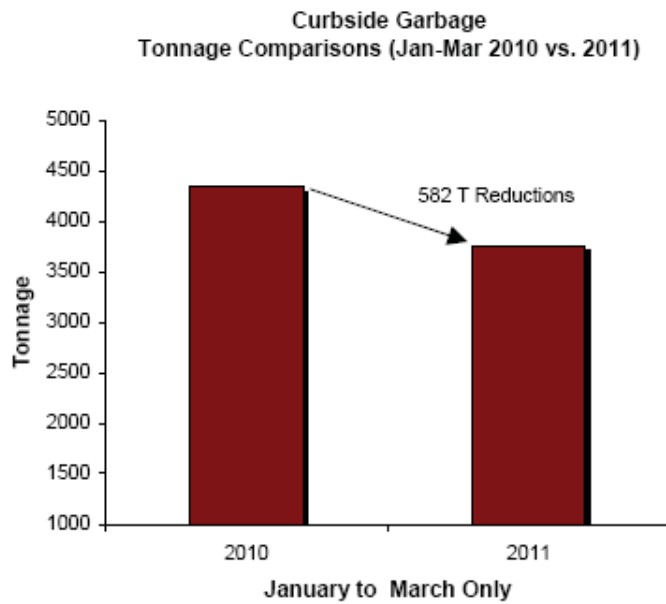


Curbside Garbage Collection

With respect to garbage volumes, a 1,500 tonne annual reduction/diversion was expected (corresponding estimated amount that would be diverted from garbage to food scraps/organics recycling). The results were surprising, and our expectations were well exceeded, with a reduction of 2,039 tonnes in garbage collected in 2010 compared with 2009.



This trend is continuing in 2011 with a reduction of 582 tonnes for the first three months of 2011 when compared with the first three months of 2010.



Summary

Overall, the results indicate this program has been extremely successful in reducing the overall amount of waste disposed from single-family households. Efforts in 2011 will include enhanced communications on the Green Can program to encourage maximum participation. This will include Green Can promotion at workshops, community displays and local advertising.

Future Considerations

While the Green Can program is still relatively new and residents are actively participating, some discussion of the issues which arose at the early stages may be helpful for general information and/or future development of this initiative.

The "Yuck" Factor

Early on, there was concern expressed about the cleanliness factor since plastic bags or plastic biodegradable bag liners cannot be used (due to contamination issues). This does necessitate cleaning/rinsing of the cans, but can be addressed if residents use paper bag bin liners for their waste which can then be placed in their Green Can. Newspapers can also be used to wrap food scraps to help keep containers cleaner.

Contamination

Some plastic bag contamination was occurring early on in the program, but through individual communication (information tags, door-to-door education, etc.), this is no longer an issue. There have been no concerns expressed from the composting facility operator about contamination issues.

Rodents/Animals

Residents have expressed concern about the potential for rodents and animals getting into their Green Cans. We have provided tips on how to avoid this (wrapping food scraps in paper, ensuring tight fitting lids, freezing food scraps, impressing that collection remains weekly, etc.) and this problem has not been evident. However, it is possible that this concern could be deterring residents from recycling all of their food scraps. Future considerations could include a City-provided, lockable cart to help avoid these concerns and enhance participation.

Container Weight

The weight of containers can be an issue for residents and collectors, since food scraps and wet grass can be particularly heavy. This can be managed by communicating with residents about the weight limitations and suggesting lids be used to help reduce water weight build-up, etc. In the future, City-provided carts with wheels could be incorporated which would eliminate this challenge completely.

Paper Yard Waste Bags

The paper yard waste bags work well for yard trimmings. There have been some issues with bags breaking and/or weakening when they are over-filled or left in rainy conditions. This can be managed by ensuring the bags are not over-filled and avoiding prolonged exposure to rainy conditions. In the future, carts with sufficient capacity could help reduce the number of paper yard waste bags required.

There were some comments initially about the cost to residents to purchase multiple cans and/or the paper yard waste bags. The cost of the paper bags has reduced since the program started, as was anticipated. For example, early on the costs were approximately \$1.00/bag, but have since reduced, depending on the retailer, to ~\$0.55-\$0.60/bag.

The above discussion is provided for information at this time. Staff will continue to evaluate the program and identify suggested future enhancements (such as the provision of carts for organics) as the program evolves.

Financial Impact

The estimated cost for this program in 2010 was \$640,000, based on an April 1 start date. This included additional costs associated with resource support, additional collection/contract costs and advertising, less savings in composting and disposal fees. Costs were below projections due to higher than anticipated savings from lower composting and disposal tonnages and associated costs:

• Resource support:	\$ 71,336
• Collection/Contracts:	\$739,251
• Advertising:	\$ 35,059
• Composting fee savings:	(\$176,902)
• Disposal fee savings:	<u>(\$175,661)</u>
Net 2010 Cost	\$493,083

The costs for this program are recovered via the garbage/recycling utility charges to residents, and are assessed only to those whom the program/service is provided.

Conclusion

The food scraps/organics or “Green Can” program was successfully implemented in 2010 and is continuing in 2011. While 2010 results are somewhat below target levels for additional food scraps recycling, 2011 trending indicates established recycling targets will be met this year. Garbage volumes dropped considerably more than expected, indicative of overall success in achieving a significant reduction in the amount of overall waste disposed, which is the ultimate goal.

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An early review of the program indicates that consideration could be given in future to the introduction of standardized, wheeled carts for the curbside organics collection program.



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SJB: