



# Recycling Innovations: Transfer Station Upgrade

Final Project Report, August 31, 2011

Township of Strong

CIF 581.11



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## **1. Executive summary**

This is the final report of Continuous Improvement Fund (CIF) project *581.11 – Township of Strong Transfer Facility Upgrade*, implemented by The Township of Strong between August 24, 2010 and August 30, 2011.

The project goal was to increase operation efficiencies and revenue by installing a portable conveyor and overhead magnetic separator to separate ferrous and aluminum, extending the size of the recycling facility to aid operations and traffic flow of residents, improving facility signage and educating the public regarding better recycling practices. The CIF provided financial and technical assistance.

The Township of Strong has a population of 1,289. It provides landfill and recycling services to the Township of Joly and landfill services to the Village of Sundridge. It currently provides blue box recycling to 1,134 households, including 1,130 single-family households and 4 multi-residential buildings.

The Township has realized significant increases in tonnage and revenue due to the improvements made to its facility and promotion and education efforts. Three new bins were purchased to handle greater volumes of recycling from increased usage of the centre.

The cost to complete the project budget was \$29,743.27.

For further information regarding this project, please contact Linda Maurer, Clerk/Treasurer, Township of Strong, [clerk@strongtownship.com](mailto:clerk@strongtownship.com).

## **2. Introduction**

In 2009, the Township of Strong completed a major project to erect a large recycling centre to house a Nexgen Baler unit. The 'drive-through' recycling centre allows residents to drive their vehicle through a covered portion of the transfer station and sort their recycling into four areas – newspaper, containers, glass and cardboard. It was determined that sorting metal from aluminum would provide greater revenue and a magnetic separator was considered along with an expansion of the building to provide better traffic flow.

Council hired a contractor to provide specific program information, compile comments and discuss recycling with patrons while at the centre. The contractor was at the centre for the months of July and August 2010 which is the peak season for our seasonal residents, whom we wished to target along with the year round residents. The contractor discussed with ratepayers while recycling, the benefits the municipality will realize from greater revenues due to cleaner bales, the benefits to the environment as less will be going into the landfill site which in turn will secure the longer life expectancy of the landfill site. Council were so pleased with the results in 2010 a contractor was hired again in 2011 to provide education and promotion, conduct surveys and attend various functions throughout the municipality. A copy of his final report is attached to this document along with sample of the surveys used.

## **3. Project results**

### **3.1 Performance and costs**

Magnetic Separator cost was \$2,672.45. Previously, tonnages of metal cans shipped were included in our co-mingled report from WSI (previous compactor bin contractor). Since the installation of the magnetic separator, the following tonnages have been recorded (October 2010 to August 2011): Steel – 8.677 tonnes; Aluminum – 3.389 tonnes.

The magnetic separator has provided an increase in revenue and efficiencies at the recycling centre.

### **3.2 Health and Safety Issues**

The equipment has required very little maintenance. Daily inspection logs are kept of the equipment. There were no Health and Safety issues to report that relate to the operation of any of the equipment.

The larger area for vehicles to drive through has made the centre more accessible, safe and user friendly at the same time as allowing a smoother, more efficient flow of traffic.

### 3.3 Affect on Marketed Material

	<b>Revenue Sept 2010-Aug. 2011</b>	<b>Revenue Sept. 2009 to Aug. 2010</b>
OCC	\$7,116.77	\$8,518.72
#1-#7	\$2,934.72	\$.00
Steel	\$4,234.01	\$.00
Aluminum	\$4,352.27	\$.00
Film	\$ 143.12	\$.00
News	\$1,897.10	\$ 1,558.65
<b>Total</b>	<b>\$20,677.99</b>	<b>\$10,077.37</b>

	<b>Tonnes shipped: Sept 2010-Aug. 2011</b>	<b>Tonnes shipped: Sept. 2009 to Aug. 2010</b>
OCC	65.642	<b>80.98</b>
#1-#7	23.604	<b>.00</b>
Steel	8.677	<b>.00</b>
Aluminum	3.389	<b>.00</b>
Film	51.674	<b>.00</b>
News	38.97	26.25
Mixed Paper	.00	14.22
<b>Total</b>	<b>191.956</b>	<b>121.45</b>

### 3.4 Regionalization Benefits

The Township of Strong provides landfill and recycling services to the Township of Joly and Landfill services to the Village of Sundridge. The installation of the recycling centre has prolonged the life of our landfill site which is a benefit to all municipalities.

#### 4. Project budget and schedule

**Table 4.1 Project budget, planned and actual**

Description	Unit	Estimate	CIF Approved (upset limit)	Actual Cost
Milestone 1	Proof of Construction	\$6,885	\$6,885	
	Excavate for construction	\$3,000		\$4,931.26
	Building Addition	\$17,000		\$5,130.20
Milestone 2	Proof of Delivery & Installation	\$6,885	\$6,885	
	Magnetic Separator and purchase of a weigh scale	\$17,000		\$12,710.24
	Bins			\$2,902.57
	Electrical Upgrade			\$653.55
Milestone 3	Proof of Installation & Public Outreach	\$10,000		\$3,415.29
<b>Total</b>				<b>\$29,743.11</b>

**Table 4.2 Project schedule, planned and actual**

Project Deliverables	Approved Payment (upset limit)	Percent	Expected Completion Date	Completion Date
Phase 1 – to install addition	\$6,885	30%	August 2010	Aug. 2010
Purchase magnetic separator	\$6,885	30%	August 2010	Aug. 2010
Educational Material	\$3,443	15%	August 2011	Aug. 2011
Monitoring data analysis	\$5,737	25%		
CIF Funds Requested	\$22,950	100%		

## 5. Concluding comments

The Township of Strong has seen an increase in revenue as the ferrous and non-ferrous materials are now marketed separately. Steel revenue increased from \$0.00/tonne to \$140.00/tonne. Aluminum increased from \$0.00/tonne to \$1,247.00/tonne. Both are FOB our facility with no freight costs. #1 to #7 mixed plastics increased from \$50/tonne revenue and \$675 cost for freight to \$88.00/tonne revenue FOB our facility with no freight.

Additional cost savings were realized as a result of no longer paying shipping charges on loads. Previously, bales were co-mingled and revenues were low to non-existent due to shipping charges applied.

Since the installation of the new recycling centre and equipment, staffing levels have increased. The part-time landfill staff person is now full-time in the recycling centre and there has been an additional increase of 20% of staff time in processing, packaging and shipping of products. The increase in labour has not increased the overall budget as the increase in revenue offsets any costs related to recycling programs.

There has been an increase in ratepayers using the facility as a direct result of new promotion and education material and better signage.

The Township of Strong continues to improve the recycling facility. We have entered into an agreement with the unorganized Township of Lount to receive their cardboard and hard plastics. The agreement includes reimbursement to the Lount Landfill Committee 50% of revenue received from their bales. We shipped 16.44 bales of cardboard on their behalf. The Township of Strong also provides a location beside the recycling centre for the local Lions Club to collect LCBO returnable bottles.

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