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Prince Township Collection Savings Initiative CIF Project 863



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Acknowledgement

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1 Background

1.1 Community Profile

Prince Township is located along the eastern or windward side of Lake Superior, at the point where the lake flows into the St. Marys River. The City of Sault Ste. Marie abuts the Township to the east, and Dennis is the abutting Township to the North. Located within the western part of the Sudbury Climatic Region, Prince Township enjoys 4 distinct seasons. Lake Superior plays a major role in influencing the climate of the Township, which results in a longer growing season than most of Northern Ontario. Today, the Township is a bedroom community, as most agricultural livelihoods have given way to more profitable jobs in Sault Ste. Marie.

The Township is rural in nature, and geared towards small scale growth, with special regard for maintaining the existing rural character. The Township is home to a permanent population of just over 1,000 with a smaller group of cottagers and fair weather residents within the 85 square kilometre borders.

1.2 Waste Management System

The municipality provides curbside collection of two-stream recycling and garbage from residents. Recycling is collected biweekly with garbage collected weekly. Recycling collection is completed by Green For Life Ltd (GFL) who also provides the Township with processing and marketing services out of their Sault Ste. Marie facility.

A small portion of seasonal residents from the Prince Lake area in the northern reaches of the Township (apx 40 households) are provided with depot collection of solid waste materials at the Township office and a local area business. The two stream blue box collection program accepts the following materials:

Containers: Glass bottles & jars, plastic #1 & #2 containers, and metal containers.

Fibres: Newspapers, magazines & books, boxboard & mixed paper, and old corrugated cardboard.

Garbage waste materials are deposited in the City of Sault Ste. Marie landfill through an agreement between the two municipalities.

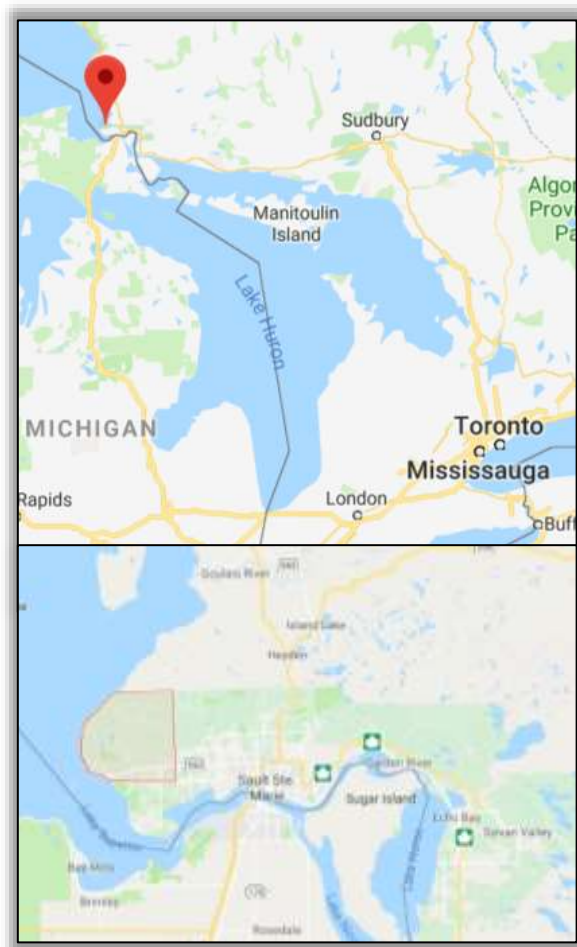


Figure 1: Map of Prince Township service area

1.3 Program Challenges

The Township provided two stream curbside collection of blue box recyclables for many years using municipal staff and equipment to gather materials and transport these to the GFL Material Recovery Facility in the City. The Township had used an open top trailer to collect materials from a mixed bag of containers at resident addresses (standard blue boxes, bags, other boxes). On the trailer, staff placed and secured 96 gallon rolling carts to deposit the collected materials into. The system was not without its challenges.

In 2014, the Township was considering replacing the trailer as it had reached the end of its useful life. In researching a closed top replacement which would allow for better control over recyclables and improved ergonomics and safety features, the Township completed an options analysis with the help of CIF. The results of the analysis indicated a split cart collection system, mirroring that of the City of Sault Ste. Marie, may prove more cost efficient and would align the Township with City services. In other areas of programming, the City and Township share services and it was the hope at the time the two municipalities could move towards a shared recycling collection service.

In addition to the changes elected for curbside collection, the Township also endeavoured to evaluate the depot collection program at the municipal office and local business.



Figure 2: Previous curbside collection trailer system.



Figure 3: Previous Township depot collection bins.

2 Approach

The Township opted to change the way collection of Blue Box recyclables was done by switching to a split-cart collection system and contracting out the service to GFL and received funding to do so from the CIF under project #863. The transition to the new program was completed in Winter of 2016 as carts and promotion & education materials were distributed to residents.

Recycling carts were purchased through the CIF's Cooperative Container Procurement Program (CCPP: <https://thecif.ca/ordering-containers/>) which provides municipalities with the opportunity to purchase recycling carts, blue boxes and reusable bags for their Blue Box programs at economies of scale pricing.

2.1 Monitoring and Measurement Methodology

The reporting aspects of this project focus on the costs to operate the Blue Box program and diversion of these materials.

2.1.1 Operating Costs

In the previous system, staffing, equipment operating costs, capital depreciation, and contracted costs for the two depot locations and processing/marketing fees were included in calculating the bottom line for operating the program. Whereas in the new program, the entirety of services (other than promo & ed and oversight) are contracted out to a single service provider. The costs for the calendar year 2014 (the year of the application) were compared to those of 2016 (first year of operation).

2.1.2 Diversion of Blue Box materials

2014 vs 2016 diversion of Blue Box materials as submitted through the Resource Productivity and Recovery Authority datacall process were used in evaluating any changes in performance.

2.2 Implementation

2.2.1 Cart Purchase

Recycling carts were purchased from IPL Products Ltd. in the winter of 2016 and took approximate 4 weeks for delivery. The cart lids featured a list of acceptable materials in the Blue Box program that are colour coded for the two stream system. Additionally the Township logo is also featured prominently on both sides of the cart lid.

The carts are identified with a nine digit number and corresponding RFID tag incorporated in the handle for easy identification and asset management.



Figure 4: Recycling cart lids with accepted materials list.

2.2.2 Cart Assembly and Distribution

Once the carts arrived at the Township offices/public works yard, staff set to work assembling the lids and wheels for the carts in preparation for distribution to residents. Carts were distributed by staff during the months of February and March, 2016 to Township residences. In total, approximately 80 hours of staff time went into receiving, assembling, and distributing the recycling carts.

2.2.3 Promotion and Education

The Township is a small municipality and word spread quickly regarding the new program and how it would mirror the City's. Residents were prepared for the launch of the new program and well aware of how the City's cart collection worked. The new cart collection would see the same materials collected at the curb and continue the two stream sorting approach residents were familiar with.



Figure 5: Recycling cart set out for collection.

In addition to word of mouth, the Township updated its website with information on the program launch date, provided a brochure with the delivery of carts, and included notifications in 7 newsletters prior to the launch of the program.

2.2.4 Issues Encountered

There were a couple of issues with regards to pieces missing during the assembly process, but nothing major and we were able to get the parts relatively quickly from IPL.

The Township has operated under a handshake arrangement with GFL for some time and had planned to secure a contract for the provision of these services with the launch of the new cart collection program. Alternatively, the Township has also reached out to City staff through the CIF to begin initial discussions around a shared services arrangement for Blue Box collection as the two municipal program now matched in most respects (i.e., materials solicited and split carts as the collection container).

Unfortunately, both objectives have not been met as of the writing of this report. The Township remains in the same relationship with GFL and has not been able to make progress on a shared services arrangement with the City. One difficulty in sharing service with the City is differing collection schedules. The Township currently only collects biweekly, as do many cart collection programs in the province, as the recycling carts provide more than adequate capacity for storing recyclables over a two week generation period.

2.3 Project Results

The key performance indicators tracked for this project were: haul costs, tonnages (load weights), fuel use by the backup generator, and the financial impacts of the new program.

2.3.1 Costs

The key performance indicators tracked for this project were the costs of, staffing, equipment operating costs, capital depreciation, and contracted costs for the two depot locations and processing/marketing fees. Capital depreciation is the cost of the trailer over a period of five years of service life. The analysis compares costs of the 2014 full year of programming (the point at which the project application was received) with the first year of operations (2016).

Table 1: Comparison of pre vs post operating costs at Auld Rd site

Operating cost	Pre	Post
Collection	\$ 28,005	\$ 35,519
Equipment amortization	\$ 2,337	\$3,505
Depot	\$ 6,193	-
MRF	\$3,334	-
Totals	\$ 38,818	\$39,024

Post Costs: Depot costs are not included in the post calculation of programming costs, as this item is now included in the collection agreement with GFL and Prince Lake residents may use the split-top carts behind the community centre to recycle their cardboard or bundle it and place it beside the carts. (see: <https://www.saultstar.com/news/local-news/waste-management-contract-scrubbed>). MRF costs are included in the costs of collection in the post condition as this item is also included in the agreement with GFL. Capital amortization in the post condition is the depreciation of the recycling carts over a service life of 10 years (matching the warranty period).

The pre-condition also did not include capital amortization on a trailer purchase which would have been required to continue operation of the program. Estimates of this trailer would have increased costs in the pre-condition by approximately \$3,000 per year through depreciation and capital replacement planning.

2.3.2 Tonnages

With transition to cart collection, there was a risk material volumes (diversion) could be impacted, either through loss in participation or misunderstandings related to using the new collection carts.

In fact, diversion of blue box materials increased from 37 tonnes recycled in 2014 to 42 tonnes in 2016. The processing contractor did not note any significant change in the quality of material entering the sort facility and no issues with contamination.

2.4 Analysis of Results

The implementation has provided the Township with a small amount of cost savings, all things considered. However, not securing a firm contract with the service provider has led to difficulties in maintaining the price of services since the reporting period for this project. Regular incremental costs to receive these services have continued to the date of writing this report.

Cart programs historically have demonstrated issues with managing contamination levels as has been reported many times in the past few years. For example, CIF has reported contamination in single stream cart collection programs in the GTA often exceed 20% of material weights. Feedback from the Township's service provider indicates our material is relatively free of contamination and in line with other two stream collection programs in the province. CIF recently published the results of a contamination audit in the City of Sault Ste. Marie which corroborates the efficacy of two stream collection carts as an efficient means of managing contamination and promoting diversion.

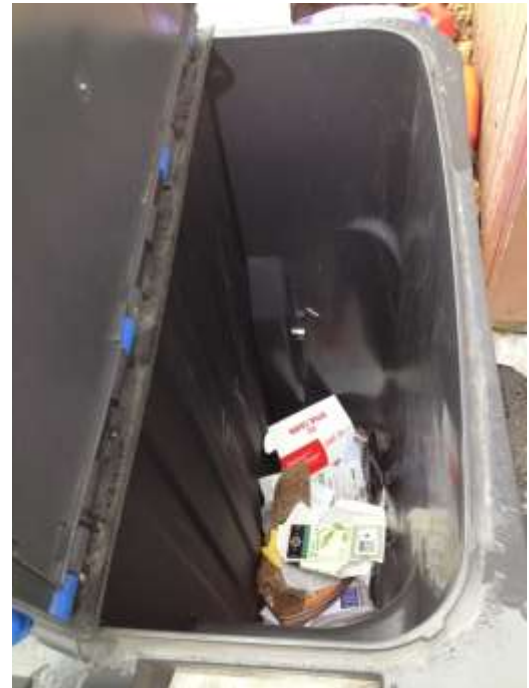


Figure 6: Photo of fibre side of split recycling cart.

The increased diversion of Blue Box materials is a bright spot for our program. Staff and residents alike are committed to recycling and protecting our environment and the results of this project go a long way in demonstrating our ability to do both.

Staff are also pleased the new cart collection program uses automation to protect collection staff and drivers from musculoskeletal injury through eliminating repetitive lifting, exposure to slips, trips and falls, and potential sharp hazards commonly encountered by waste collection staff handling these materials.

2.5 Lessons Learned

The introduction of the new recycling carts was generally well received by residents. Main complaint received from residents, was people with very long driveways or communal locations noted difficulties in setting out their carts on collection day. Staff worked with these residents and suggested leaving cart near end of drive and filling it throughout two weeks period.

Continued efforts to engage the service contractor and other municipalities for a shared service arrangement are needed to further improve the financial sustainability of the program.

3 Project Budget

The budgeted project related costs to CIF project 863 amount to \$45,000. The actual costs is presented on the following page in Table 2. The project was completed below budget as better pricing was received on the recycling carts through use of the CIF CCPP tender. Recycling cart assembly and distribution costs came in slightly under budget as the carts were easier to put together than initially planned.

Table 2: Budget Comparison to Actual Project Costs.

Vendor	Item	Subtotal
IPL	Split 96 Gallon Recycling Carts	\$ 35,200.00
Township (internal)	Cart Assembly and Distribution to Residences	\$ 2,540.10
Township (internal)	Promo & Ed Materials	\$ 270.00
Total costs		\$ 38,010.10

P&E costs were below budget as Township elected to rely on standard methods of message delivery and a cost of just under \$1.00 per household.

4 Conclusions

In conclusion, the Township would like to thank the Continuous Improvement Fund, and Stewardship Ontario for supporting the new split cart recycling collection system. The system is functioning well and residents of the Township are pleased with having the same services as those in the larger City of Sault Ste. Marie to the east. The new program does a great job at improving the safety of waste collection staff through the use of the automated collection vehicles.

Efforts to combine services with neighbouring municipalities or re-enter conversations with service providers have been put on hold for the moment as discussions continue for eventual transition of the Blue Box program under the Waste Free Ontario Act to full producer responsibility.

Staff are continuing to explore opportunities that support the financial sustainability of the Blue Box program and endeavor to deliver the most cost effective service levels for residents.