

**Regional Municipality of Peel
Peel Integrated Waste Management Facility**

**Continuous Improvement Fund
Project Number 376**

**Material Recovery Facility
Residue Compactor Upgrade
Final Report**

Table of Contents

- 1. EXECUTIVE SUMMARY - 3 -
 - 2.1. MRF Process Description - 4 -
 - 2.1.1. Waste Receiving Area - 4 -
 - 2.1.2. Pre-sort Process - 4 -
 - 2.1.3. Fibre Processing - 5 -
 - 2.1.4. Container Processing - 6 -
 - 2.1.5. Recovered Material Storage Area - 7 -
 - 2.1.6. MRF Amenities - 7 -
 - 2.1.7. Throughput and Processing Flexibility - 8 -
 - 2.2. Proposed Residue Compactor Upgrade - 8 -
- 3. PROJECT MONITORING - 10 -
- 4. FINDINGS - 10 -
 - 4.1. Residue Management Costs - 10 -
 - 4.2. Residue Haulage Requirements - 11 -
 - 4.3. Waste Diversion - 11 -
- 5. EVALUATION AND CONCLUSION - 12 -

TABLES

Table 1: Compactor Upgrade Business Case

Table 2: Compactor Upgrade Impact Analysis

APPENDICES

Appendix I – PIWMF MRF Process Flow

Appendix II – CIF Project Grant, CIF Project Number 376

1. EXECUTIVE SUMMARY

The Peel Integrated Waste Management Facility (PIWMF) Blue Box Material Recovery Facility (MRF) commenced initial operations in February 2006. The MRF was designed to process single stream recyclable material at 35 tonnes per hour or 130,000 tonnes per year.

The MRF was originally constructed with two separate two (2) cubic yard compactors that filled roll-off type containers with Residue from the MRF. In early 2011, the Region of Peel (Region) prepared a business case for replacing both two (2) cubic yard compactors with one 11 cubic yard compactor that would fill a full size 120 cubic yard waste trailer, or hiring two full time staff to operate the waste transfer station after hours while Residue was being unloaded using roll-off type containers. The Region opted to replace the smaller compactors due to a number of operational and health and safety concerns.

The Residue compactor upgrade project focused on reducing Residue management costs and increasing waste diversion. The Region received funding approval for Continuous Improvement Fund (CIF) Project Number 376, MRF Residue Compactor Upgrade in April 2011. The project's total budget amounted to \$255,664.61, of which CIF would fund \$130,083, including all taxes. The payback for this project was expected to be one to two years.

The installation of the new 11 cubic yard compactor resulted in a net savings of \$177,321.72, or \$16.63 per tonne for the Region during its first year of operation. In addition to the achieved cost savings, the Region diverted an additional 6,400 tonnes of Residue from landfill, through a Residue management process that allows Residue to be processed at a secondary MRF at a lower cost than regular landfill. This Residue management process was previously unavailable due to the extra costs incurred with shipping the smaller compactors.

2. BACKGROUND

The Peel Integrated Waste Management Facility Blue Box Material Recovery Facility commenced initial operations in February 2006. From February 2006 until September 2010, the MRF was operated and maintained by Waste Management of Canada Corporation. Since September 2010, Canada Fibers Ltd. (CFL) has been responsible for plant operation and maintenance. The MRF was designed to process single stream recyclable material at 35 tonnes per hour, or 130,000 tonnes per year.

2.1. MRF Process Description

Please refer to Appendix I for the PIWMF MRF Process Flow.

2.1.1. Waste Receiving Area

The MRF includes a separate receiving/tipping area capable of storing up to 1,000 tonnes of received material. The MRF receiving/tipping area has four receiving doors and can accommodate up to 30 collection trucks per hour (at peak levels).

The key functions of the tipping floor include:

- traffic control;
- material management;
- inbound load inspection; and,
- introduction of received material into the sorting process via two parallel in-feed lines.

2.1.2. Pre-sort Process

The pre-sort process consists of:

- material metering drums;
- an environmentally controlled sorting room;
- a manual pre-sort area with two in-feed lines;

- a bag breaking system that allows for the breaking of bags of received material (either mechanically, manually or both);
- a dedicated Film Baler to bale Film Plastic; and,
- two material storage bunkers.

The key functions of the pre-sort process are:

- redirection of bagged material to bag breaker;
- recovery of Film Plastic to Film baler;
- removal of Residue to a compactor for compaction, or to storage bunker for loose loading;
- recovery of Polystyrene (storage bunker); and,
- recovery of larger High Density Polyethylene (HDPE) containers (storage bunker).

2.1.3. Fibre Processing

The Fibre recovery process consists of:

- two parallel multiple disc screens for the main of separation of Old Corrugated Cardboard (OCC);
- two parallel multiple disc screens for the main of separation of Old Newsprint (ONP) and the segregation of Mixed Paper;
- a V-screen that separates the remaining Fibre from the Container materials;
- five separate live floor type storage bunkers, primarily for Fibre storage;
- two environmentally controlled Fibre sorting rooms;
- sorting conveyors for manual quality control (QC) of the various Fibre streams;
- a recirculation line for Container material;
- a provision for further Film Plastic recovery and storage;
- a provision for receiving and storing (or directly baling) incoming “clean” loads of Fibre (i.e. a single grade of Fibre material);

- two balers, each baler accessible to, and capable of baling, all Fibre materials and Container materials; and,
- a provision to loose load ONP direct to compacted trailers.

The key functions of the Fibre recovery process are:

- QC of Recovered Fibre Material;
- removal of OCC and Mixed Paper;
- secondary recovery of Film Plastic;
- recirculation of Container Material; and,
- removal of Non-Recyclable Material.

2.1.4.Container Processing

The Container recovery process consists of:

- an environmentally controlled sorting room;
- magnetic separation for the removal of Steel cans (trommel magnet, magnetic head pulleys);
- screening of Mixed Broken Glass from remaining Container stream;
- an air separation system to segregate “light” and “heavy” material;
- manual Glass sorting/QC line prior to mechanical Glass clean up system (cyclonic system);
- an auto drum separator to remove small Fibre material;
- perforator/crusher equipment;
- a two-sort Optical Sorter Technology (OST) including quality control lines, currently ejecting Polyethylene Terephthalate (PET) and Polycoat containers;
- eight separate storage bunkers;
- three eddy current separators to segregate non-ferrous metals (Aluminum cans); and,
- two balers, each baler accessible to, and capable of baling, all Fibre materials and Container materials.

The key functions of the Container recovery process are:

- automated recovery of Glass, ferrous and non-ferrous metals, Polycoated containers and PET;
- manual recovery of PET bottles and containers not selected by OST;
- manual recovery of natural HDPE bottles, jugs and jars;
- manual recovery of pigmented HDPE bottles, jugs and jars;
- manual recovery of Mixed Plastic, currently Tubs and Lids; and,
- manual recovery of Polycoat cartons not selected by OST.

2.1.5.Recovered Material Storage Area

The following components make up the storage area:

- an indoor storage area, capable of storing up to two days of baled inventory;
- indoor storage bunkers with bay doors for Mixed Broken Glass;
- three bay doors for shipping; and,
- shipping and receiving desk with door for drivers to enter storage area away from lift-truck traffic.

2.1.6.MRF Amenities

The following features are also part of the MRF:

- separate lunch room for MRF personnel;
- first aid room;
- full washroom facility (including lockers & showers);
- separate maintenance room;
- quality assurance (QA)/quality control (QC) room;
- building reception area;
- limited office space for MRF management personnel; and,
- dedicated IT and phone lines available for MRF personnel.

2.1.7. Throughput and Processing Flexibility

The system has incorporated some flexibility into the equipment design and layout, including but not limited to:

- pause lines throughout system;
- provisions to recover additional recyclable material;
- the ability to selectively use the bag breaker system for material that requires debagging; and,
- the use of reversing conveyors and by-pass systems to redirect material during periods of equipment maintenance or repairs.

2.2. Proposed Residue Compactor Upgrade

The MRF was originally constructed with two separate two (2) cubic yard compactors that filled roll-off type containers with Residue from the MRF. Due to numerous operational concerns involving these compactors including; continuous material jams, the frequency which the roll-off containers were required to be emptied and health and safety issues associated with unloading the roll-off containers, the use of the existing compactors was discontinued. As a result, Residue was required to be stored on the MRF tipping floor and then loaded into open top waste transfer trailers before shipping for final disposal. While this alternative solved the compactor material jamming issues, the health and safety concerns surrounding the after hours unloading of material still had to be addressed. In addition, the storage of Residue on the MRF tipping floor takes valuable storage capacity from the inbound single stream recyclable material.

In early 2011, Region prepared a business case for replacing both two (2) cubic yard compactors with one 11 cubic yard compactor that would load a full size 120 cubic yard waste trailer, or hiring two full time staff to operate the waste transfer station after hours, while Residue was being unloaded. Both proposed solutions identified in the business case eliminated the health and safety concerns around the after hours unloading and the Residue storage

issues on the MRF tipping floor. The business case identified a potential cost savings of \$12.20 per tonne or \$193,579.17 per year by replacing the two (2) cubic compactors with one 11 cubic yard compactor, as opposed to the hiring of the two additional staff. Please see Table 1: Compactor Upgrade Business Case for the cost comparison.

Table 1: Compactor Upgrade Business Case

| | Base | Extra WTS Staff | Compactor Upgrade |
|-----------------------|------------------------|------------------------|--------------------------|
| Total Residue Tonnes | 15,866.60 | 15,866.60 | 15,866.60 |
| Landfill Split | 100% | 100% | 40% |
| Arrow Split | 0% | 0% | 60% |
| Landfill Tonnage | 15,866.60 | 15,866.60 | 6,346.64 |
| Arrow Tonnage | | | 9,519.96 |
| Residue Disposal Cost | \$ 1,105,738.55 | \$ 1,105,738.55 | \$ 1,035,898.58 |
| 2 Extra ROP Staffing | \$ - | \$ 123,739.20 | \$ - |
| Total Cost | \$ 1,105,738.55 | \$ 1,229,477.75 | \$ 1,035,898.58 |
| Cost per Tonne | \$ 69.69 | \$ 77.49 | \$ 65.29 |

| | |
|--|----------------------|
| Savings per tonne (\$77.49 - \$65.29) | \$ 12.20 |
| Savings \$ per Year (\$1,229,477.75 - \$1,035,898.58) | \$ 193,579.17 |

As an added benefit of the compactor upgrade, CFL agreed to receive a minimum of 60% of the Residue at their Arrow Road MRF where it would be reprocessed to recover materials not recovered at the PIWMF MRF at a lower cost than regular landfill disposal. This resulted in a more efficient Residue management process. By reducing the overall material haulage and being able to schedule loads to maximize payloads, the Region stands to benefit from an overall increase in diversion and cost reductions in its Residue management practices.

The Region received funding approval for CIF Project Number 376, MRF Residue Compactor Upgrade in April 2011. The projects total budget amounted to \$255,664.61, of which CIF would fund \$130,083, including all taxes. The projected project payback was expected to be one to two years.

Please refer to Appendix II for the CIF Project Grant for CIF Project Number 376.

3. PROJECT MONITORING

The project was monitored through the actual monthly cost per tonne for Residue management. A comparison of the pre-upgrade and post-upgrade Residue costs will be utilized to measure the success of the project. The business case anticipated a cost savings of \$12.20 per tonne or \$193,579.17 per year.

4. FINDINGS

The Residue compactor upgrade at the PIWMF MRF was completed in July 2011. Analysis of actual Residue management costs both pre-upgrade and post-upgrade show a cost savings exceeding the Region's initial business case estimates. In addition, the Region has increased its overall waste diversion since the compactor upgraded project was completed.

4.1. Residue Management Costs

During the 12 month period after completion of the compactor upgrade project, August 2011 to July 2012, the Region managed 10,664.30 tonnes of Residue from the PIWMF MRF. Using the newly installed Residue compactor system and shipping Residue loads to both Arrow Road and to landfill, the all-inclusive cost to manage the Residue was \$704,649.21, or \$66.08 per tonne. When compared to the anticipated cost of managing the Residue through the PIWMF WTS with two additional staff, the compactor upgrade saved the Region \$177,321.72 in Residue management costs over the first year. This equates to a savings of \$16.63 per tonne. Please see Table 2: Compactor Upgrade Impact Analysis.

Table 2: Compactor Upgrade Impact Analysis

| | Base | Extra WTS Staff | Compactor Upgrade |
|-----------------------|----------------------|----------------------|----------------------|
| Total Residue Tonnes | 10,664.30 | 10,664.30 | 10,664.30 |
| Landfill Tonnage | 10,664.30 | 10,664.30 | 1,490.55 |
| Arrow Tonnage | - | - | 9,173.75 |
| Residue Disposal Cost | \$ 758,231.73 | \$ 758,231.73 | \$ 704,649.21 |
| 2 Extra ROP Staffing | \$ - | \$ 123,739.20 | \$ - |
| Total Cost | \$ 758,231.73 | \$ 881,970.93 | \$ 704,649.21 |
| Cost per Tonne | \$ 71.10 | \$ 82.70 | \$ 66.08 |

| | |
|--|----------------------|
| Savings per tonne (\$77.49 - \$65.29) | \$ 16.63 |
| Savings \$ per Year (\$881,970.93 - \$704,649.21) | \$ 177,321.72 |

According to the original business case the projected payback for the Residue compactor upgrade project was one to two years. Based on the first year of operation and the actual cost savings achieved, the original business case for the project payback was correct.

4.2. Residue Haulage Requirements

Since the completion of the Residue compactor upgrade project, the number of vehicle movements required to manage the material has decreased by approximately 40 per cent. The reduction in the number of vehicle movements is the direct result of a more efficient compaction system and an increase in overall payload.

4.3. Waste Diversion

The Region endeavours to achieve a high level of waste diversion. Through the Region's various waste programs, the overall goal is a 70% waste diversion rate through various waste disposal programs. In conjunction with the compactor upgrade, CFL agreed to receive a minimum of 60% of the Residue at their Arrow Road MRF where it would be reprocessed to recover materials not recovered at the PIWMF MRF.

Since the completion of the Residue compactor upgrade the Region has shipped 10,664.30 tonnes of Residue to CFL's facility, of which approximately 6,400 tonnes of other materials were recovered and shipped to recycling markets.

5. EVALUATION AND CONCLUSION

Overall, the Residue compactor upgrade project has been successful. MRF operations have improved in a number of areas including lower Residue management costs and overall reduction in the number of vehicle movements required to manage the increase in waste being diverted from landfill.

During the 12 month period after completion of the compactor upgrade project, the Region managed 10,664.30 tonnes of Residue from the PIWMF MRF at a total cost of \$704,649.21, or \$66.08 per tonne. When the alternative cost for two additional staff is evaluated, the installation of this compactor saved the Region \$177,321.72, or \$16.63 per tonne in its first year alone. Based on the total project cost of \$255,644.61, the payback for the Residue compactor upgrade project is just under one and a half years.

In addition to the overall Residue management cost savings achieved, the Region has been able to divert an additional 6,400 tonnes of Residue from landfill. This material was recovered at CFL's Arrow Road MRF. With the upgraded compaction system, vehicle payloads and Residue shipping requirements became more predicable, which ultimately allowed the Region to utilize this option. Without this upgrade, shipping Residue for reprocessing would not have been cost effective.

APPENDIX II - CIF Project Grant, CIF Project Number 376

CIF PROJECT GRANT

CIF Project Number 376

MRF Residue Compactor Upgrade

TO: Regional Municipality of Peel (the "Recipient")

WHEREAS:

A. Waste Diversion Ontario, a corporation incorporated by the *Waste Diversion Act, 2002* (Ontario) ("WDO"), maintains a fund known as the Continuous Improvement Fund, comprised of a portion of the fees paid by stewards under the Blue Box Program Plan, which funds improvements in recycling practices by Ontario municipalities.

B. The Continuous Improvement Fund ("CIF") is a committee of Waste Diversion Ontario, and has been established through an agreement among the Associations of Municipalities of Ontario, the City of Toronto, Stewardship Ontario and WDO under the Blue Box Program Plan.

C. Stewardship Ontario, a corporation continued under the *Waste Diversion Act, 2002* (Ontario), as custodian of the CIF monies is to provide funding to the Recipient.

D. The Recipient made an application to the CIF, a copy of which is attached hereto as Schedule "A" (the "Application"), for a grant to assist in the cost of the project titled 'MRF Residue Compactor Upgrade' (the "Project").

E. The Waste Diversion Ontario and Stewardship Ontario has agreed to provide the grant to the Recipient to assist in financing the cost of the Project as set out below:

1. **Grant**

Based on the Application, WDO and Stewardship Ontario hereby agree to provide an unconditional grant from the CIF to the Recipient in the aggregate amount of 50% of the Project costs up to a maximum of \$130,083, inclusive of any applicable taxes, government levies or governmental imposts of any kind (the "Grant"), to be applied by the Recipient toward the cost of the Project.

The Project shall be carried out by the Recipient in consultation with the Director CIF. The Recipient shall devote a sufficient amount of staff time and other resources to carry out the Project in accordance with the timelines, budget and other parameters set out in the appendices hereto.

2. **Budget**

The Grant is based upon the budget for the development and implementation of the Project set out in Schedule "B" hereto.

3. **Disbursement of Grant**

The Grant will be disbursed by the CIF to the Recipient as the Project progresses, in accordance with the schedule set out in Schedule "C" hereto. The Recipient shall make a written request to the CIF for each disbursement of a portion of the Grant not less than thirty (30) days prior to the proposed disbursement date and will provide such documentation to substantiate each such request as the CIF may reasonably require. Disbursement requests are to be addressed to the Director of the Continuous Improvement Fund at the address noted below. The final disbursement will be issued once the final report for the Project is completed and accepted by the CIF.

4. **No Transfer or Encumbrance of the Project**

The Recipient shall not sell, assign or transfer the Project to a third party nor mortgage, charge or otherwise encumber the Project without the prior written approval of the CIF or repayment of the Grant.

5. **Repayment of Grant**

In the event of any material breach by the Recipient of the terms of the Application which is not remedied within thirty (30) days following written notice by the CIF to the Recipient, the Recipient shall repay all payments received on account of the Grant and ~~WDO and Stewardship Ontario shall be relieved of any obligation to disburse any remaining unutilized portions of the Grant.~~

6. **Notices**

All notices, requests, demands or other communications (collectively "Notices") by the terms hereof required or permitted to be given by one party to any other party, or to any other person shall be given in writing by personal delivery or registered mail (postage prepaid), by facsimile transmission, or by email to such other party as follows:

Waste Diversion Ontario
4711 Yonge Street, Suite 1102
Toronto, ON M2N 6K8
Attention: Executive Director
Tel: (416) 226-5113 Fax: (416) 226-1368

With a copy to:

Continuous Improvement Fund
92 Caplan Avenue, Suite 511
Barrie, ON L4N 0Z7
Attention: Mr. Andy Campbell, Director CIF
Tel: (705) 719-7913 Fax: (866) 472-0107 Email: andycampbell@wdo.ca

To Stewardship Ontario at:

Stewardship Ontario
1 St. Clair Avenue West, 7th Floor
Toronto, On M4V 1K6
Attention: Mr. Lyle Clarke, VP Policy and Programs
Tel: (416)323-0101 ext. 154 Fax: (416) 323-3185 Email: lclarke@stewardshipontario.ca

To the Recipient at:

Regional Municipality of Peel
10 Peel Centre Dr., Suite A
Brampton, ON L6T 4B9
Attention: Peter Kalogerakos, Technical Analyst, Waste Program Planning
Tel: 905.791.7800 x4914 Fax: 905.791.2398 Email: peter.kalogerakos@peelregion.ca

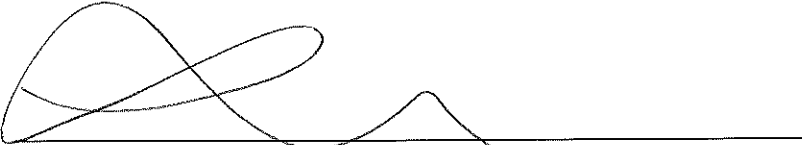
Or at such other address as may be given by any such person to the other Parties hereto in writing from time to time.

7. General


- (a) The Parties recognize the importance of making information about the Project available for public use. The Recipient shall cooperate in providing reasonable information on the Project, as directed by the Director CIF, for publication by the CIF on websites, at conferences and in newsletters.
- (b) It is understood and agreed that neither WDO nor Stewardship Ontario has any ownership interest in the Project and neither WDO nor Stewardship Ontario has any responsibility for or liability with respect to the operations of the Project.
- (c) There is no relationship of partnership, agency, joint venture or independent contractor between or among WDO, Stewardship Ontario and/or the Recipient and none of them has any right to bind any of the others to any contractual obligation.

DATED this 7 day of July, 2011.

STEWARDSHIP ONTARIO

By: 
Name: Lyle Clarke
Title: VP Operations and Planning

WASTE DIVERSION ONTARIO

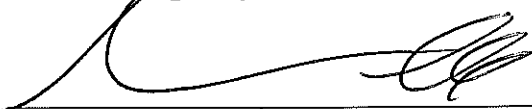
By: 
Name: _____
Title: Executive Director CEO

ACKNOWLEDGEMENT AND AGREEMENT

The undersigned hereby acknowledges and accepts the Grant on the terms set out above. The undersigned further agrees to indemnify and hold WDO and Stewardship Ontario harmless in respect of any losses, costs, claims, damages or expenses incurred by either of them in respect of the funding or operation of the Project.

DATED this 16 day of June, 2011.

Regional Municipality of Peel

By: 
Name: **Norman Lee**
Title: **Director, Waste Management**

By: _____
Name: _____
Title: _____

SCHEDULE "A"
APPLICATION FOR GRANT

Project Application Form: MS Word Version

Welcome to the CIF project application. Please work through the steps below to create and complete a new CIF project application.

If you need assistance with any aspect of your application, please contact a CIF staff member who will provide as much help as you may need.

Please follow these steps to complete your application:

- Fill in your name or project title. Work through the form to fill in as many details as you can. Contact a CIF staff member, if/as needed to complete remaining portions.
- Please save, including your application name/municipality in the file name.
- Review your application; be sure that you have filled in every field not marked as "Optional" and that all information is complete and correct.
- Attach any supporting documents that will help describe or support your project. This may include the CIF's Budget and Planning Tool (a template tool for budget and project planning descriptions) and/or other budget forms, CVs, project descriptions etc.
- Review your application and send to CIF (by email or fax – as shown on final page).

To contact CIF Program Staff:

Andy Campbell: 705-719-7913 or andycampbell@wdo.ca
Mike Birett: 905-936-5661 or mbirett@wdo.ca
Clayton Sampson: 519-539-0869 or csampson@wdo.ca
Anne Boyd: 519-661-2500 ext 7304 or aboyd@london.ca

Section 1: General Information

Project Title: **MRF Residue Compactor Upgrade**
Municipality/Program Name: **Region of Peel**
Project Contact (name and title): **Peter Kalogerakos, Technical Analyst**
Mailing address: **10 Peel Centre Drive**
Email Address: **peter.kalogerakos@peelregion.ca**
Phone Number: **905-791-7800, extension 4914**
Fax Number: **905-791-2398**
URL (if applicable):

Section 2: Application Details:

1. Which CIF priority area does this project fit into (if any)? Please place "X" in (-) below to respond.

- Best Practice (25%-50% potential funding)
- Innovation (67% to 75% potential funding)
- Emerging Technology (75% to 100% potential funding)
- Communications/Promotion & Education (50% potential funding)
- Other (please specify)

2. Project Description: What are the key features of the project? How will it increase system efficiency and/or effectiveness. (Tip: Add your initial thoughts, then complete the remainder of the application, and come back to finish this response.)

The Region of Peel is seeking funding to support the installation of a stationary 11 yd³ transfer style compactor to replace two (2) stationary 2 cu. yd compactors. The current compactors are not currently being used as they are commonly overburdened by normal material, resulting in jamming which causes unscheduled system downtime. Residue is currently being stockpiled and loaded for transfer and disposal after hours as an interim solution.

The new compactor will substantially improve system efficiency as the baseline system is inoperable and the other option would be to hire 2 additional staff resulting in a substantial increased cost per tonne for managing the material. The new compactor will also eliminate the double handling of the material.

3. Which element(s) of your recycling program does this project address (pick up to 2)? Please place "X" in (-) below to respond:

- Single family
- Multi-family
- All residential
- Best Practices
- Innovation
- Technology/Capital Efforts
- Promotion & Education
- Public Space Recycling
- Hard-to-Market/New Materials
- Other (please specify)

Section 3: Blue Box Program Costs & Cost-Effectiveness:

When this project is fully implemented (i.e. completely operational), how will it affect your blue box program costs and costs per tonne? (Potential score: 20 out of 130 points)

1. When the project described in this application is complete, how will this affect your net annual blue box program costs? Please place "X" in (-) below to respond.

- Increase
- Decrease
- Stay the same

2. How much will your program costs change as measured in \$/year?

Our program will see a savings of \$193,579.17/yr.

3. When the program described in this application is complete, how will it affect your blue box program's cost-effectiveness (i.e. cost per tonne of marketed recyclables) on an annual basis? Please place "X" in (-) below to respond.

- Increase (**cost effectiveness will increase as residue disposal cost will lessen**)
- Decrease
- Stay the same

4. How will you monitor and measure project effects on your program's cost-effectiveness?
Cost effectiveness will be measured based on the current cost per tonne compared to the new cost per tonne.

Comments (optional):

Section 4: Blue Box Diversion

What effect will this project have on your program's overall blue box diversion (i.e. tonnes of blue box materials sent to market)? (Potential score: 20 out of 130 points)

1. When the project described in this application is complete, what will happen to your blue box program's diversion? Please place "X" in (-) below to respond.

- Increase
- Decrease
- Stay the same

2. Please state the expected change in the volume of material marketed as a result of the project. **A slight increase of marketed material can be expected.**

Comments (optional):

Peel's BB program's diversion will increase as CFL is guaranteeing to take 60% (approx. 6, 519.96 tonnes/year) of the Residue to Arrow Rd and initial reports indicate that approx. 60% of that material is recovered for further diversion.

Section 5: Other Program Improvements:

What other effects will this project have on your program or on other communities? Use this section to describe whether you plan to work with other communities to develop and deliver the project, how the costs/savings might compare with other similar undertakings. (Potential score: 20 out of 130 points)

1. Will the proposed project (please place "X" in (-) below to respond):
- help your program adapt to changes in the material mix (i.e. manage seasonability, prepare for future materials)?
 - process new materials?
 - be transferable to other communities?
 - neither of the above

2. What other effects will this project have (optional)?

Section 6: Regionalization Benefits (potential score: 30 out of 130 points)

1. Will you work with other municipalities/partners to develop and deliver this project?
 Yes
 No
2. If no, please explain why not: **This project is specific to the operation of Peel's MRF.**
3. If yes, what municipalities will you work with and how will they benefit?
4. What stage are you at in planning your work with other municipalities? Please place "X" in (-) below to respond.
 preliminary discussions
 draft agreement
 awaiting council approval
 agreement in place
 other

Comments (optional):

Section 7: Project Costs and Payback Period: How much will it cost to implement the project and how long is its payback period? (Potential score: 20 out of 130 points)

1. What is the total cost of completing the proposed project? **\$255,664.61**
2. What is the total funding request to CIF? 50% of costs = **\$127,832.31**
3. What is the project payback period for CIF support (in years)? **1 to 2 years**

Comments (optional):

Section 8: Project Management and Implementation: In this section, provide as much information as you can about project management, timing and monitoring. (Potential score: 20 out of 130 points)

1. Please identify staff and consultants who will be responsible for this project.

Project Manager

Name: **Kevin Mehlenbacher**

Title: **Supervisor, Waste Processing & Disposal**

Affiliation: **Region of Peel**

Role in project: **Oversee project work**

Related experience: **Responsible for MRF operating contract and experience with past MRF upgrades such as optical sorting for containers and QC Station Installations**

Staff (please add as appropriate):

i) Shawn Sinclair, Technical Analyst, Region Peel

- Responsible for day to day work to ensure project deliverables are met

ii) Peter Kalogerakos, Technical Analyst, Region of Peel

- Responsible for applying to CIF for funding and liaising with CIF staff re: project details

2. Additional project team members: please identify key staff/consultants, their roles and related experience (optional).

i) Jake Westerhoff, VP Operations, Canada Fibres Ltd.

- Responsible for purchasing, installing and operating upgraded residue compactor

3. Project Timing: Upon project approval, how soon can this project be ready to start-up? Please place "X" in (-) below to respond.

- budget approved by council & project underway
- budget approved by council; project not yet started
- awaiting budget and/or council approval
- Other, please describe:

Comments (optional):

4. How many months will it take to complete the proposed project from start to finish?

3 months

5. Tasks and Schedule: What major tasks will you complete to implement the project? Please summarize your plan including major milestones below, and attach a detailed project workplan & schedule if available.

Purchase equipment

Remove existing equipment

Install new compactors (installation schedule to follow)

6. How will you monitor project activities? Include summary of planned activities and dates, as applicable:

February 25th, 2011 – Equipment was purchased

June 1st, 2011 - Anticipated Completion Date

7. How will you report on project activities & outcomes?

Cost effectiveness will be measured based on the current cost per tonne compared to the new cost per tonne.

SCHEDULE "B"
BUDGET

| | |
|--|---------------------|
| Cost of equipment and installation based on EWM Quotation: | \$213,105.69 |
| Estimated cost to remove old compactors and conveyors | \$ 4,200.00 |
| Estimated maintenance cost for the full contract term (calculated at 8% of purchase cost | \$ 17,048.45 |
| Estimated Project Administration cost (calculated at 10% of purchase cost) | <u>\$ 21,310.56</u> |
| TOTAL COST | \$255,664.61 |

**SCHEDULE "C"
DISBURSEMENT OF GRANT**

The Grant will be disbursed as follows:

| Deliverables | Tasks / Description | Anticipated Completion Date | WDO Grant Contribution (including taxes) |
|--|--|------------------------------------|---|
| #1 Development of Monitoring & Reporting Strategy | Development of a monitoring and measuring strategy (refer to CIF Project Monitoring & Reporting guidance document) for the project to the satisfaction of the CIF | June 30, 2011 | \$6,503 (5% of funding) |
| #2 Proof of delivery | Proof of delivery of compaction unit. - Photos demonstrating that the equipment has been delivered to the site and documentation confirming that capital expenditures have been incurred in connection with purchase of compaction equipment. | June 2, 2011 | \$65,042 (50% of funding) |
| #3 Installation of equipment | - Install processing equipment - Complete performance testing. Peel will provide the CIF with confirmation that the equipment commissioning meets the installation and testing specifications outlined by the vendor. | June 13, 2011 | \$26,017 (20% of funding) |
| #4 Monitoring, data analysis, final report and project evaluation | - completion of performance monitoring - submission of final report summarizing Project, including performance, impact and learnings - Complete CIF project evaluation form in conjunction with WDO | July 1, 2012 | \$32,521 (25% of funding) |
| TOTAL GRANT | | | \$130,083 |

