

E&E Project Evaluation Form

****Please be advised that completed evaluations are made available publicly and are posted on Stewardship Ontario's E&E Fund web site****

Project Name/Number/Priority area: City of Dryden Transfer Station / 12 / MRF Rationalization

Lead Sponsor/competed by/date: City of Dryden / 2cg / July 2008

Project Duration: 3 years

Total project value: \$560,000

E&E funding amount: \$250,000

Section 1 –To be completed by Project Applicant

1) What were the Project Goals and Objectives (as per the E&E Application and/or Contract)?

Project goal was to construct a transfer facility to ship recyclables as opposed to operating a MRF. The objectives for this project included

- Reducing the per tonne cost of handling/processing recyclables
- Develop a transfer system that was operationally effective and limited the amount of equipment and staff needed for the operation
- Provide a demonstration project for rural and Northern Ontario programs to show effectiveness in handling and transfer of recyclables.

2) Were the goals and objectives met? (and if not why not?)

The goals and objectives of the project were met. The transfer facility has been constructed, is operating and costs for handling and transferring recycling are significantly lower than operating a MRF in Dryden and lower than the interim transfer operations.

3) Summary of Project Accomplishments (i.e. what did the project do/achieve?):

Accomplishments include:

- Construction of an efficient transfer station facility;
- Allowed for a change to City of Dryden recycling program to increase the amount of blue box recycling captured;
- Provide an operating example of a system that can be utilized by other programs;
- Provide an opportunity for multi-municipal cooperation for use of facility and equipment.

4) Summary of Project Limitations (e.g. is there anything that should have been done differently?)

The main limitation to the project was the limited scope for the transfer station. While there is the opportunity to have other municipalities use this system/technology, it would have been advantageous to have had commitment from other programs to be directly involve.

Another limitation is that only one of the two transtor units is currently being used for its intended purpose (the second unit is currently being used to store overflow materials). This is because the City does not own the trailer tractor that is necessary to move the trailer from one unit to the other.

Finally, the timeline for this project was considerably expanded. It was originally anticipated it would take 3 months to complete, to due restrictions imposed by weather conditions it ended up taking 2.5 years.

5) What do you consider to have been the key “lessons learned” from this project? Does your project/activity represent a “best practice”?

The main lesson learned from the project is that a longer time frame is required for construction and installation of the equipment for the transfer facility. Also one other key learning is that there is a need to have the compaction trailer hooked up to a trailer tractor on a “permanent” basis.

This project does demonstrate a better practice for the handling and transfer of recyclable materials for processing.

6) What specifically are municipal staff doing with the experiences and data from this project? Do you have plans to apply these lessons in your program? Please explain how.

As the project was operation in nature and is ongoing, the experiences and data are being utilized on a daily basis. The data for the operation is tracked and utilized in the annual datacall reporting, as well as being used in the planning/budgeting for annual program operations.

The issue of multi-municipal collaboration was originally an aspect of the project, however the collaboration didn't work out. In order to ensure the success of the multi-municipal collaboration, potential collaborators would need to have a direct financial stake or a direct political agreement (commitment). An implied or soft agreement does not ensure that in the end the collaboration will happen. As with any municipal undertaking, a significant commitment would be required at the start of the project.

7) Has your municipal council been informed about the project and its results?

Yes council has been informed of the projects and its results.

8) Do you think there are opportunities to share/replicate the successful elements of this project with other Ontario programs? If yes, how and where?

Yes there are opportunities to share and replicate the successful elements of this project. Some program in the region (e.g. Fort Frances, Kenora, Sioux Lookout, ect) may be able to either utilize the system or some of the equipment for transfer operations, and staff is actively in contact with these communities. The Continuous Improvement Fund may be able to help out with funding in the area to move towards a waste shed type concept.

This project is also a demonstration to show how using technology (ie. compaction) can improve the efficiency of transfer of materials and in the end lower program costs. Staff is available to speak about this project at any municipal workshop or conference. The report on the project is also available on the Stewardship website and staff are able to respond to municipal enquires on the report and the operations.

9) Did this project result in either reduced costs per tonne of Blue Box waste recycled and/or increased Blue Box tonnes diverted? (Please explain)

The project succeeded in reducing the program costs per tonne of handling and shipping blue box recyclables. It is a significant savings from operating a small MRF, and is a lower operational cost option from the previous transfer operations.

The implementation of this transfer project also allowed the City to make changes in its recycling collection to allow for an increase range in blue box materials accepted in the program, resulting in higher capture rates.

Section 2 –To be completed by Stewardship Ontario (and reviewed by applicant)

9) Did this project do what it set out to do? If not, what were the reasons/ barriers?

According to the original project application, the goal of this project was to convert the Dryden MRF to a Transfer Facility, incorporating Transtor Units and a compaction trailer for hauling the material to a larger MRF (Metro Waste's single-stream MRF in Winnipeg).

The thinking was that the elimination of Dryden's MRF and the establishment of a Transfer Facility would eliminate the need for labour, and minimize operational costs, leading to increased tonnage and reduced cost per tonne for both residential and IC&I sectors. It was also expected that this experience could be used as a demonstration project for rural and Northern Ontario municipalities on ways waste can be more economically diverted and processed.

The initial results indicate that the installation of the Transtor units at the Dryden transfer facility has generated additional hauling capacity for the City and increased accessibility to an expanded blue box program. Based on 2007 data, with the new system in place, the tonnes per load have increased (from 496 tonnes in 2006 to 573 tonnes in 2007) and the total cost to transfer this material to the Winnipeg MRF (including all operational costs associated with the management of the transfer station - utilities, labour, snow removal, etc.) has decreased –

from \$92,250 in 2006 to \$79,700 in 2007. Consequently, transfer costs per tonne have decreased from \$186/tonne to \$139/tonne (using transtor units).

In terms of using this experience as a demonstration project for other Northern Ontario municipalities, this objective has been partially realized. The project has demonstrated that this technology works and has positive results in terms of system cost and efficiency. The multi-municipal cooperation aspect, however, has yet to materialize at the moment.

10) Changes made to the project

The Transtor units are complemented with a compaction trailer that maintains the density of the compacted material during transfer. As an initial capital cost saving measure, the City decided not to purchase the trailer tractor to haul the compactor and instead contracts out this service. As a consequence of not being able to shuttle/move the compacting trailer from one transtor unit to another, only one unit is currently being used. It is anticipated that if additional tonnages were received at the transfer site from other municipalities, a cost sharing opportunity may develop to purchase the trailer tractor (~ \$135,000) or to implement a contractual arrangement with the current hauler.

The original proposal indicated that the collection of the IC&I material using the units would further bring down the cost of the residential recycling system. However, the City decided to continue segregating the corrugated cardboard from the IC&I sector and transferring this material separately to the Winnipeg MRF for revenue rebates. Other IC&I materials are being collected in the transtor system.

11) Challenges

Initially, compaction trailer load weights were lower than anticipated, averaging 13 tonnes per load compared to a projected average load weight of 20 tonnes. Once adjustments were made, the City realized weights between 18 and 20 tonnes per trailer load (compared to 10-12 tonnes in open-top walking floor trailers). During the 'commissioning phase' of the program (approx. 6 months), loading time of the compaction trailer averaged 6 to 7 hours (compared to 2 to 3 hours for open-top walking floor trailer). Loading times were reduced to approximately 2 hours after adjustments were made. Although the amount of time required under the new system is similar to the time required under the old system, the cost is less as there is no need for either a loader or an operator.

Seasonal road restrictions during the spring presented another challenge. To ensure that maximum trailer loads were achieved, particularly due to road restrictions between provinces, the hauling contractor recommended that a lighter truck body with a larger axle spread be incorporated to disperse weights and allow for heavier loads. This recommendation was acted upon and the current system can and does attain the maximum allowable road restriction weights.

12) What are the key learnings from this project? Are there any next steps? What is being done to share the results?

Learnings

From a funders' perspective, it may have been more prudent to have made the project funding conditional on Dryden securing agreements with surrounding municipalities regarding their participation in the new system. A business case for purchasing the trailer tractor could have been developed up front, thus avoiding the current inefficiencies.

Next Steps

The next steps are to actively pursue partnerships with surrounding municipalities and to examine how best to move forward with the purchase of the tractor trailer. The business case supporting this application will require determining available blue box tonnages from surrounding municipalities.

To protect the investment of the City, a long term processing contract with Winnipeg should be considered. This is on the agenda to be addressed at present.

13) Was the project good value for the money (e.g. were there measureable program or system cost reduction benefits, cost effective tonnage increases, etc?)

Based on the cost savings of the last year (which includes 6 months commissioning), the payback period for the City's share of the capital investment (\$~200,000) is about 6.5 years. However, an accurate payback is more in the range of 13-15 years to cover unforeseen site costs such as possible electrical changes, platform changes or fuel fluctuations, plus the possibility of purchasing a specialized truck to haul material. Based on this assessment and the fact that the life-expectancy of the trailer approximately 10 years, it does not appear that the project is sustainable in the long-term. Increased tonnage needs to be secured before it can be affirmed that this project was good value for money.

14) Does this project represent "best practices"? If yes, explain.

This project represents a "best practice" in the sense that it sought to this Blue Box program's cost. The generally accepted 'rule' in the industry is that it doesn't make sense for programs that collect less than 10,000 tonnes of materials annually, which is the case for Dryden, to operate their own MRF. The KPMG Best Practices report also found that for small, northern programs that do not have access to a MRF that is less than an hour's drive away, the use of a transfer facility as a possible way to reduce system costs makes sense. Finally, this project represents a best practice by its use of controlled compaction to reduce transportation costs during the transfer to a distant facility.

On a different but related front, the City took advantage of the vendor's leverage to eliminate their processing costs. Prior to making the decision to haul to Winnipeg, VQuip (the equipment supplier) assisted the City by negotiating with Metro Waste the elimination of the processing fee, representing savings of approximately \$50/tonne.