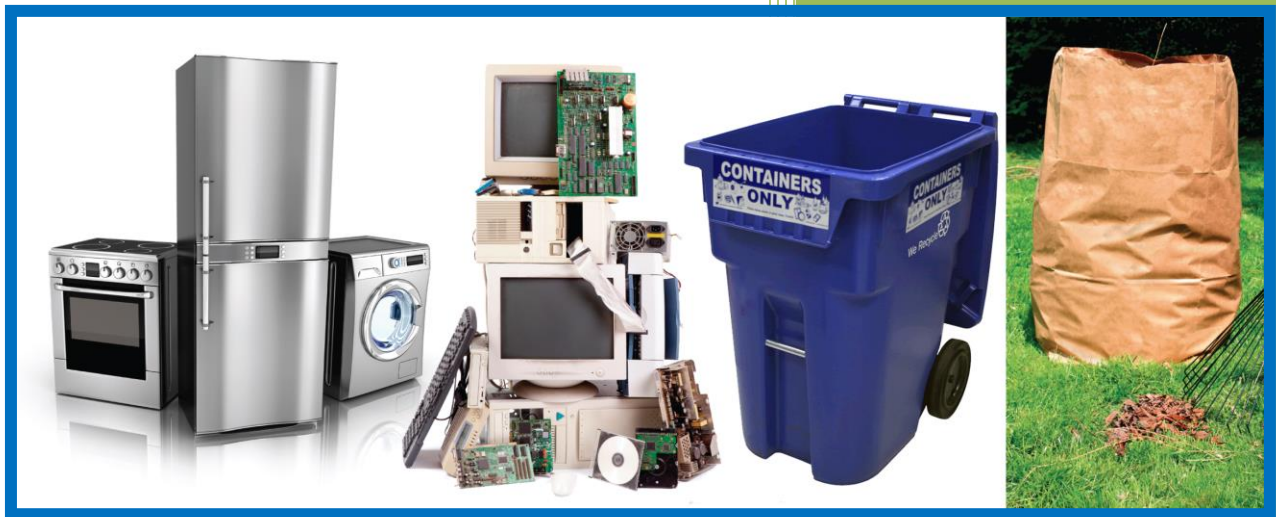


CIF #513.11

Essex-Windsor Solid Waste Authority

Essex Windsor Regional Blue Box Depot



Dec 12, 2014

Essex Windsor Solid Waste Authority

CIF Project number 513.11

Acknowledgement:

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Table of Contents

Executive summary	3
1 BACKGROUND INFORMATION	4
1.1 Municipal Information	4
1.2 Project Description	4
2 IMPLEMENTATION.....	5
2.1 Goals and Objectives.....	5
2.2 Implementation Schedule	5
2.3 Budget	5
3 RESULTS	6
3.1 Results	6
3.2 Analysis of project	8

Executive summary

In 2010, in response to a REOI issued by CIF, the Essex Windsor Solid Waste Authority (the Authority) requested funding to assist in the construction of its Blue Box Recycling Depot, located at its Regional Landfill facility in Essex. Grant money was required to offset the costs associated with the creation of a new public drop off area at the landfill, including stone, asphalt, fencing, buildings, containers, and equipment. The total projected cost to the Authority was estimated at \$38,000. The CIF grant was to offset up to 46% of the cost. The primary goal of the grant is to increase recycling accessibility for local residents.

The Authority already operates 2 depots, one in Windsor and one in Kingsville. The difference being that the depot in Essex is solely for the purpose of recycling. Items to be recycled include blue and red box materials (containers and paper), electronics, scrap metal, tires, appliances, and municipal hazardous and special waste. The Windsor public drop off depot services residents from the City of Windsor, Tecumseh, and LaSalle and the Kingsville Public Drop off depot services largely the residents in Kingsville and Leamington. However there was no recycling depot in close proximity to the 75,000 residents in Lakeshore, Amherstburg and Essex.

Once funding was secured the Authority applied to the Ministry of the Environment for an amendment to its existing Environmental Compliance Approval. A new requirement of the ECA process was the compilation and submission of a new Operations and Management Plan which required an official review by an Engineering firm. This process took most of 2011 as well as part of 2012 to complete. Construction on the depot did not begin until late 2012 and early 2013.

The depot officially opened in September 2013, although promotion has been minimal to date. Plans were to do a large public drop off/one stop shop campaign involving all our depots however this has not officially launched yet. We are sure that many residents in the area of the depot are not familiar with the depot opportunity at this time.

By the time construction actually began, site service prices for stone and asphalt had increased substantially compared to original budget estimates. Ministry of the Environment requirements regarding the design of the MHSW portable facility, also substantially escalated original budget projections. Ultimately depot costs were \$12,000 higher than the original budget estimates. Instead of the projected \$40,000 estimate, the depot ended up costing approximately \$52,000.

While we anticipated receiving 50 tonnes of recyclable over the course of a full year, to date in 2014 (first full year) we have received approximately 100 tonnes of recyclable material (including yard waste, blue and red box recyclables, tires, electronics, scrap metal, and MHSW).

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1 BACKGROUND INFORMATION

1.1 Municipal Information

The Essex Windsor Solid Waste Authority provides waste management services to 135,657 single unit households and 28,699 multi residential households. Blue box recycling is provided through biweekly, 2-stream curbside/depot collection services. In Essex Windsor there are 3 public drop off depot locations:

Transfer Station No. 1, 3540 North Service Rd. E., Windsor ON

Winter Hours of Operation: Dec to March/Mon to Fri – 8:00 am to 3:45 pm/Sat 9:00 am to 12:45 pm.

Transfer Station No. 2, 2021 County Rd. 31, RR #2, Kingsville, ON

April to Oct- Mon to Fri 8:00 am to 4:45 pm/Sat 8:00 am to 1:45 pm

Nov to Mar- Mon to Fri 8:30 am to 4:15 pm./Sat 9:00 am to 12:00 pm

Regional Drop-off Depot, 7700 County Rd. 18, RR#3, Cottam, ON

Mon to Fri- 8:00 am to 4:45 pm/ Sat 8:00 am to 1:45 pm.

The Authority targets the following materials: blue and red box recyclables, cardboard, scrap metal, yard waste, appliances, tires, electronics, and municipal hazardous and special waste (MHSW).

Collection of recyclable materials is completed by Windsor Disposal Services. There is no revenue sharing agreement in place between the municipality and the collections contractor. Essex-Windsor's blue box recycling program is a member of municipal group 2: Urban/Regional, on the Waste Diversion Ontario datacall, and operates at a net cost of \$156/tonne material collected.

1.2 Project Description

Prior to the introduction of the Regional depot the public was directed to the other drop off depots.

The Regional Landfill has been in existence for many years, however it is limited by its Environmental Compliance Approval to not receiving any garbage from small vehicle traffic. As a result the public drop off depot was designed to only receive recyclable material and MHSW from the public. Its primary purpose is to provide a more accessible location for the residents of Essex, Lakeshore, and Amherstburg to recycle many household items such as packaging, computers, televisions, appliances, tires, and scrap metal items. Diversion was estimated at an additional 50 tonnes per year. For the most part, its operation has been incorporated into the existing landfill operation, however additional student labour will be essential during the summer months when the depot is the busiest. Recyclable materials will be managed by a series of existing contractors who have spotted bins and will do the collections similar to the other depots.

2 IMPLEMENTATION

2.1 Goals and Objectives

1. Increase accessibility for 75,000 County residents who previously would have to drive long distances to dispose of recyclables.
2. Increase diversion of recyclables thereby marginally expanding the lifespan of landfill site
3. Increase the overall diversion rate of Essex Windsor. Increase diversion by an additional 50 tonnes per year.

2.2 Implementation Schedule

The CIF grant was approved in August of 2010 as part of a series of other projects that were also approved under the same REOI. Work on the depot didn't really start until 2011- 2012. During this period the asphalt work was completed and the shelters were constructed. An MHSW portable unit was also completed during 2012. In order for the depot to operate an amendment to the existing Certificate of Approval or Environmental Compliance Approval (ECA) was required. This included the submission of an amendment application and the completion of a new Operations and Management Plan. Approval was granted by the province in 2013.

The depot began operation in September 2013 although advertising for the location didn't really begin until October-November 2013.

2.3 Budget

Significant changes to the budget were required between 2010 and 2013 when the program launched. Most notably, the Provincial approvals process required the entire operation of the recycling depot to be enshrined in a new Operations and Management plan which required the stamp of an engineering firm. Also the results of the Operations and Management plan dictated a much more elaborate HCW facility in order to meet regulations. As a result depot costs ended up being higher than originally anticipated. Even without the escalated costs of the HCW depot, costs would have been over \$39,000.

Table 1: Comparison of project budget versus actual expenditures

MATERIAL TYPE	OCTOBER TONNES	NOVEMBER TONNES
Stone Base	\$ 3,675.00	\$ 5,099.87
Asphalt	11,600.00	20,835.36
Fence	935.00	NIL
Covered Area	2,500.00	1,720.42
HCW Shed ¹	1,000.00	13,228.80
Parking Blocks	184.00	207.29
Concrete retaining wall	2,000.00	NIL
Asphalt painting & signs	1,000.00	1,649.33
MISC		
20 Yard roll off bins ²	13,800.00	NIL
Push carts	1,000.00	***407.03
Tables ⁴	300.00	NIL
Waste oil tank	NIL	3,154.56
Design & operations plan	NIL	5,342.4
TOTAL	\$ 37,994.00	\$ 51,645.05

¹HCW shed had to be modified to meet Provincial requirements as outlined in the Operations and Management Plan

²The decision was made to rent bins from existing waste hauler and pay operational costs instead of purchasing own bins

³Still have drum cart to purchase

⁴Included in the covered area

3 RESULTS

3.1 Results

The Regional Landfill is equipped with an attended scale. All loads of recyclables leaving the site will be required to record their weights. The Geoware computer software will track each individual material and reports can be generated at any time.

1. Completion of Construction

Photos of the operation which show earthworks and asphalt surfaces are attached.

All invoices detailing earthworks and asphalt installation have been submitted already.

2. Purchase of Equipment

Photos of the equipment purchased are attached and all relevant invoices have already been submitted.

3. Monitoring, Data Analysis, Final Report

The quantities received to date are included below. However since the Authority has been waiting for final approval to be granted for the Operations and Management Plan by the Province, it has treaded softly on the roll-out of the depot. In fact major publicity was not be released prior to April of 2014. As a result the quantities received so far are not indicative of future site usage.

Table 2: Tonnages received at new depot location, 2013

MATERIAL TYPE	OCTOBER TONNES	NOVEMBER TONNES	DECEMBER TONNES	TOTAL TONNES
Tires	0.47	0.38	0.17	1.02
Recycling	0.80	0.80	0.26	1.86
White Goods	0	0	0	0
Metal	0.32	0.32	0.06	0.7
Electronics	0	0	0	0
Refrigerants	0.06	0.06	0.01	0.13
TOTAL TONNES				3.71

Table 3: Tonnages received at new depot location, 2014

MONTH	TIRES	RECYC	WHITE GOODS	METAL	ELEC	REFRIG	YARD WASTE	MONTH TOTAL
Jan	0.03	0.28	0	0	0	0.01	0.15	0.46
Feb	0	0.19	0	0	0	0.03	0	0.22
March	0.09	0.01	0	0	0	0.02	0.27	0.39
April	0.02	0.24	0	0.20	0	0.04	13.76	14.26
May	0.42	0.37	0	0	0	0	12.5	13.29
June	0.52	0.09	0	0.15	0	0.02	11.09	11.87
July	0.46	0.10	0	0.27	0	0	10.02	10.85
August	0.65	0.05	0	0	0	0.01	14.34	15.05
Sept	0.17	0.12	0	0.08	0	0	10.54	10.91
Oct	0.13	0	0	0.24	0	0.01	10.98	11.36
Nov	0.06	0.08	0	0	0	0.02	5.74	5.9
TOTAL TONNES	2.55	1.53	0	0.94	4.9¹	0.16	89.39²	99.47

¹Our records indicate that one load of electronics was removed from this location in June 2014 and that the weight was 4.9 tonnes. Electronics loads are not tracked on the way in but only on shipments out of the depot.

²Please note that prior to the opening of the Regional Recycling Depot, no small vehicles were allowed to use the Regional landfill location. Now residents can bring their grass, leaves, brush, and garden waste directly to the public drop off.

4. Source of Received Materials

Based on the history to date, the depot would fall far short of the goal of 50 tonnes per year. So far advertising has been minimal. A drop off campaign will commence in March/April of 2015 and this should bolster participation.

5. Blue Box Materials vs Other Materials

To date, tires, blue box materials, and electronics have been the primary materials delivered by residents to the depot.

6. Allocation of Labour, Hauling, and Other Costs

Operational costs related to the operation of the depot have been marginal to date since the labour component has been absorbed within existing landfill operations. Beginning in May 2014, a summer student was assigned to the depot.

7. Difference Between Budget and Real Costs

As discussed previously, the capital costs were substantially higher than estimated due to ECA requirements related to the MHSW depot and the higher than anticipated asphalt costs. Operation costs have really not been fully determined yet.

8. Problems with Equipment

Outside of the additional requirements for the MHSW depot there were no unanticipated problems with the equipment. We did determine internally that it would be cheaper to utilize the services of a waste hauler for the provision of roll-off bins for the depot and related hauling, then to purchase and maintain our own bins.

9. Maintenance

No unanticipated maintenance costs have been encountered to date.

10. Feedback on Blue/Red Box Materials

No negative reports have been received from recycling drivers on the quality of materials picked up from the Recycling Depot.

11. Cost per Tonne Depot vs Collection

Collection of all blue and red box recyclables (with the exception of cardboard) will be done as part of the normal biweekly or weekly recycling collections service. The depot is outfitted with roll-out carts, similar to apartments and will consist of biweekly collection during the winter months and most likely a weekly collection from April to November. Since it will be servicing multiple loads from residents centralized in one location the cost per stop will most likely be lower than single unit curbside collection however since the collection contractor is currently paid a flat annual fee there will be no change either positive or negative to existing collection costs.

12. Other information

We cannot emphasize enough that it is important to ensure that you file an amendment to any Certificate of Approval or Environmental Compliance Approval early with the Ministry of the Environment in order to incorporate any Provincial requirements into your planning process. Based on the new ECA process you can most likely expect to complete a new/revised Operations and Management Plan for your new depot. This will most likely have to be completed or reviewed by an engineering firm prior to approval being granted.

3.2 Analysis of project

The Authority was successful in getting all the components of the Regional Recycling Depot in place and it commenced operation in November 2013. The project ended up being 36% higher than the original budget estimate largely due to asphalt costs and the cost of the MHSW depot.

It is important to file an early application for an amendment to any Certificate of Approval or Environmental Compliance Approval with the Ministry of the Environment in order to incorporate any requirements/costs into your planning process.

Also time has to be allocated for the completion of a detailed Operations and Management Plan (www.ewswa.org), stamped by an Engineering firm, which will likely be a requirement under the new ECA.

KEY COMPONENT: Increase service accessibility to 75,000 residents. So far in 2014 more than 600 people have accessed the depot for recycling.

Appendix

Figure 1: Roll-off bins provided by BFI/Progressive for electronics, tires, metal, white goods and cardboard



Figure 2: New Pallet Truck



Figure 3: Storage Shed, MHSW Enclosure, Collection Tables



Figure 4: Inside MHSW Depot



Figure 5: Propane Cage, Waste Oil Tank

