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WASTE DISPOSAL STRATEGY UPDATE

The Solid Waste Management Committee recommends the adoption of the recommendation contained in the following report, December 13, 2006, from the Commissioner of Transportation and Works:

1. RECOMMENDATION

It is recommended that this report be received for information by Committee and Council.

2. PURPOSE

The purpose of this report is to inform Committee and Council of the Region's waste disposal operations and strategy. Staff have submitted separate reports to update Committee and Council on our waste diversion strategy and the Environmental Assessment for an energy from waste facility.

3. BACKGROUND

Council adopted a number of recommendations in 2002 as a result of competitive tendering processes to contract residual waste disposal at three landfill sites:

- Green Lane Landfill (St. Thomas, Ontario)
- Republic Services Landfill (Wayne, Michigan)
- Veolia/Onyx Landfill (Northville, Michigan)

The Green Lane and Republic Services contracts are 20-year agreements; whereas, the Veolia agreement is for five years, all commencing on January 1, 2003 after the closing of the Keele Valley Landfill site in Vaughan. The Region has also entered into a contract with Miller Waste Services (Miller) to provide transfer station services at their Markham facility as well as operate Regionally owned transfer stations in Georgina and East Gwillimbury (*see Attachment 1*).

Recently, the Region has focused on alternatives to landfill to provide a more sustainable long-term solution than shipping waste to the United States. These alternatives include:

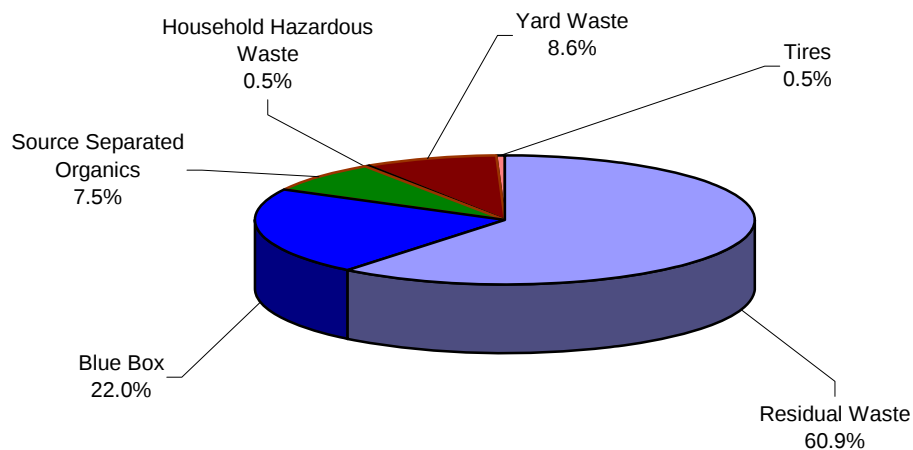
- i) A waste pelletizing contract with Dongara to produce an alternative fuel.
- ii) Completing an Individual Environmental Assessment, in partnership with Durham Region, which is leading toward an energy from waste facility.

The following sections of this report will outline each disposal option, current and potential issues for this term of Council.

4. ANALYSIS AND OPTIONS

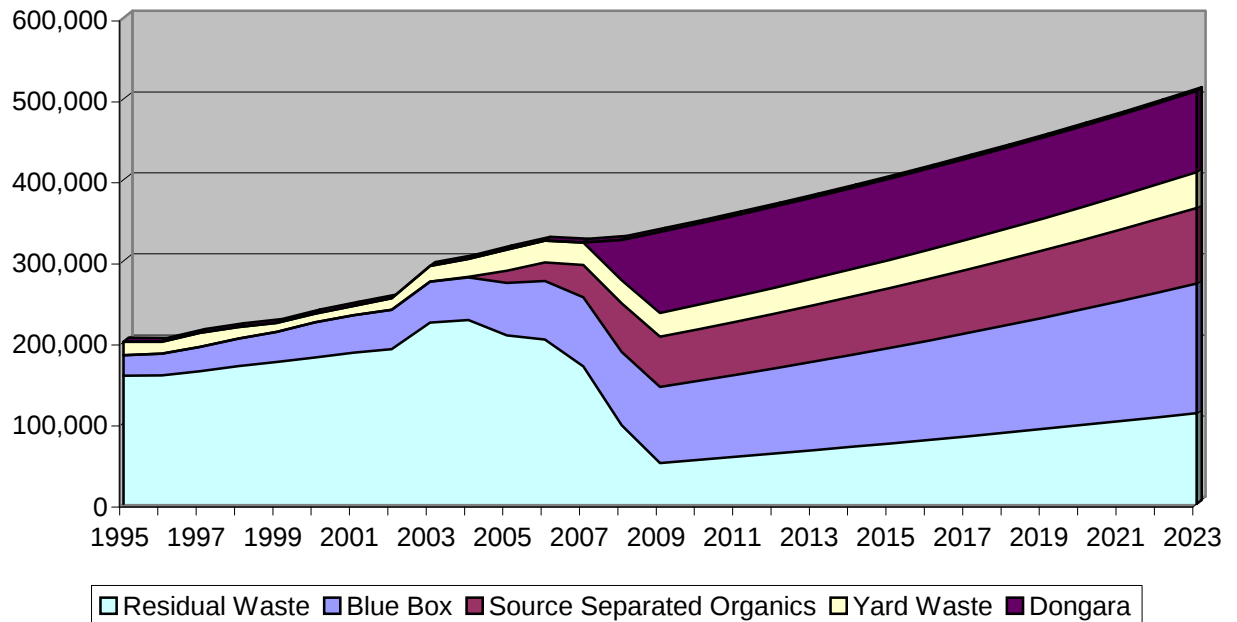
In 2006, the Region processed 322,000 tonnes of residual waste, recyclable and compostable materials at its facilities (*see Figure 1*). The diversion from landfill in 2006 was 39%.

Figure 1
2006 Waste Diversion



The total volume of waste in the Region is increasing with our growing population. The history and projections for the composition of the waste stream is shown in Figure 2. The discussion in this report is focused on the residual waste volume as the diversion programs are discussed in a separate report to Committee.

Figure 2
Waste Quantity Projections



4.1 Residual Waste Management Facilities

Residual waste (i.e. the waste remaining after diversion programs) is received at three facilities in the Region (*see Attachment 1*), loaded onto highway trailers and trucked to landfills in Ontario and Michigan. The facilities and costs are identified in Table 1.

Table 1
Transfer Station and Disposal Costs

Facility	2006 Tonnage	2006 Cost/tonne
Regionally owned Georgina Transfer Station	25,000	\$81
Regionally owned Waste Management Centre in East Gwillimbury	43,000	\$68
Contracted Miller Waste's Transfer Station in Markham	126,000	\$73
Total	194,000	

The total transfer station, trucking and disposal fees for residual waste in 2006 were \$14.2 million for an average landfill cost of \$73/tonne. The estimated 2007 cost accounts for fuel increases and contract escalation and is closer to \$80/tonne.

4.2 Residual Waste Issues

The key issues for the Region with respect to residual waste management are:

- i) Compliance with an agreement between the Provincial Ministry of the Environment and the State of Michigan to stop using landfill sites in Michigan by the end of 2010.
- ii) Securing long-term residual waste processing facilities in Ontario.
- iii) Securing long-term landfill capacity in Ontario.
- iv) Completing the Individual Environmental Assessment on landfill alternatives in partnership with Durham Region.

4.2.1 Compliance with Michigan Border Closure

In August 2006, the Minister of the Environment announced that there was an agreement with Michigan Senators to end the flow of municipal waste to Michigan by the end of 2010. This agreement was implemented as there were two pieces of legislation in the House and Senate in Washington that may have closed the border to all waste from Ontario by early 2007. The settlement allowed time for Ontario to find alternatives for its municipally managed waste and construct the required infrastructure.

In 2006, the Region landfilled 135,000 tonnes of residual waste in Michigan. Ontario municipalities delivered 1.2 million tonnes to Michigan landfills with 800,000 tonnes coming from the City of Toronto alone. It is anticipated that York will be able to stop shipping waste to Michigan by the end of 2008 with the introduction of:

- i) The Source Separated Organics (SSO) program region-wide. This will divert an additional 40,000 tonnes of material per year.
- ii) The Dongara pelletizing project (see Section 4.2.2) which will divert up to 100,000 tonnes per year of waste.

4.2.2 Long-Term Waste Processing Facilities

On April 22, 2004, Council authorized a contract to send up to 100,000 tonnes per year of residual waste to Dongara to produce an alternative energy fuel pellet. The fuel pellets can be used to produce steam, electricity and replace coal in cement kilns. Council authorized a 20-year agreement based on variable tipping fees and transportation costs. The plant will be located at the north east corner of Highway 407 and Highway 27 and is to be in operation by July 1, 2008.

With the Region's growing population, there is still more waste remaining after this plant is operational. In addition, Dongara requires markets to sell their fuel pellets and the security of these may change over time. Therefore, it is necessary to find other solutions and the Region is undertaking an Individual Environmental Assessment (see Section 4.2.4) in partnership with the neighbouring Region of Durham.

4.2.3 Long-Term Landfill Capacity

The Region will always need landfill capacity as there will always be some residues left over after processing blue box material and SSO. A landfill option also provides contingent flexibility if the volume of residual waste exceeds the capacity of Dongara. If the Region does construct an energy from waste facility (See Section 4.2.4) landfills are required for the secure disposal of bottom ash (which represents approximately 20% of the incoming waste) and to handle peak waste flows when the volume of waste exceeds the designed capacity of the plant or during major maintenance scenarios.

The Green Lane Landfill contract ends on December 21, 2022, although there are renewal points in 2008, 2013 and 2018. It is currently contemplated that this site will be able to handle all of York Region's landfill needs if a 65% diversion rate is achieved and an energy from waste facility is constructed and operating in 2011. The City of Toronto is in the process of purchasing this landfill site and the current owner has informed us that Toronto will be honouring our contract.

The Region also has a 20-year contract with Republic Services at its landfill in Michigan. Given the agreement to be out of Michigan by 2011, it is expected that this contract will not be renewed in 2008. Staff will be reporting separately to Committee and Council on this issue.

The Region's third landfill contract is with Veolia / Onyx at its site in Michigan. This contract expires at the end of 2007. Staff will be reporting separately to Committee and Council on the need to extend this contract on a short-term basis until Dongara's plant is operational in July 2008.

4.2.4 York Durham Environmental Assessment Residual Waste Study

The Regions of York and Durham partnered in the spring of 2005 to find a long-term solution to landfilling waste and started an Individual Environmental Assessment called the Durham York Residual Waste Study. All of the study information can be found at www.durhamyorkwaste.ca. Both Regions are looking for a solution that can be sited within their geographical boundaries so that we can process the majority of our materials "in our back yard" instead of shipping it elsewhere.

The first two stages of the Environmental Assessment are complete: the Terms of Reference have been approved by the MOE and the identification of technology (both Councils endorsed an energy from waste solution). The third part of the Environmental Assessment is the siting of the facility and this process is currently underway. A separate Committee report on the Environmental Assessment including schedule milestones is included in the January 2007 agenda.

There has been good public support for the project but residents generally expect the Region to divert as much waste as practical before using "incineration" as a disposal option.

5. FINANCIAL IMPLICATIONS

The cost to operate the Region's solid waste management programs are shown in Table 2. For 2007, it is expected that the residual waste management costs to be \$13.7 million to manage 52% of the waste generated by our citizens. Table 3 provides our expected residual waste costs.

Table 2
2007 Waste Management Program Costs

Material	Tonnes	2007 Budget	Cost/Tonne
Household Hazardous Waste	1,885	\$0.894 million	\$474.27
Source Separated Organics	52,760	8.814 million	167.06
Residual Waste (<i>includes 5,650 tonnes blue box residual</i>)	171,250	13.663 million	79.78
Yard Waste	25,494	1.749 million	68.60
Blue Box	75,332	2.333 million	30.97
Asian Beetle Yard Waste	3,709	0.350 million	94.37
Total	330,280	\$27.803 million	

Table 3
Residual Waste Costs

Material	Tonnes (2007)	Cost per Tonne
Transfer, Haul and Landfill		
Green Lane	44,742	\$ 81
Veolia / Onyx	76,508	73
Republic	50,000	75
Dongara		84
Energy from Waste estimate		120
	171,250	\$433

6. LOCAL MUNICIPAL IMPACT

The local municipalities deliver the curbside residual waste to one of the three transfer stations (*see Attachment 1*). Once the Dongara facility or other local processing plants that may be established are operational the curbside trucks will deliver directly to these facilities to avoid the added costs of double handling the material.

7. CONCLUSION

The Region landfilled 194,000 tonnes of waste in 2006 and is expecting to landfill 171,000 in 2007 - a reduction (despite a growing community) attributable to enhanced waste diversion programs. In the immediate future, landfilling will be replaced with increased waste diversion of source separated organics. The introduction of the Dongara energy pellet production in 2008 will further reduce York's dependency on landfill. The development of these programs and decisions on the York Durham Residual Waste Environmental Assessment study will be important mandates for Committee and Council over this term of office.

For more information on this report contact Andrew Campbell, Director of the Solid Waste Management Branch at extension 5711 in the Transportation and Works Department.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause is attached to this report.)