

# 2011 Business Plan & Budget

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## Waste Services

### **Service Mission Statement**

Our commitment is to continually improve our services to meet the waste management needs of the Northumberland community, while minimizing the impact on the integrity of the environment and safeguarding public health.

### **Service Description**

Waste Management services offered by Northumberland County include the collection, processing and disposal of residential and Industrial, Commercial and Institutional (IC&I) waste and recyclables, the composting of yard waste, and the management of household hazardous waste (HHW) and electronic waste.

Currently, the County contracts out the curbside collection of waste and recyclable materials to a third party, and owns and operates a Material Recovery Facility (MRF), which processes residential and IC&I recyclable materials. With the exception of separated yard waste, collected waste is currently being landfilled. The County owns two active landfill sites (Brighton Landfill and Seymour Landfill) and one waste transfer station (Bewdley Transfer Station). The County also pays for the operation of a second transfer station which is managed and staffed by the Municipality of Port Hope and used solely by its Ward 2 residents.

The County of Northumberland has continued to provide residents and the IC&I sector with successful diversion programs including; the operation of a single stream recyclables MRF; leaf and yard waste composting sites; scrap metal, tire,

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and drywall recycling programs; and four household hazardous and electronics waste depots. Furthermore, waste reduction/diversion efforts have improved through the maintenance of our County-wide bag tag system and continuous improvement programs have been implemented through the establishment of a collection bylaw (No. 15-10) which regulates our waste services system. In addition to its 4 active disposal sites (2 landfills and 2 transfer stations) the County is responsible for the perpetual care of seven closed landfills (Baltimore, Bewdley, Cramahe, Eagleson, Grafton, Hastings and Port Hope).

## Mandatory Programs

| <b>Program</b>   | <b>Annual Net Costs</b> |
|--|-------------------------|
| <b>Recycling of Blue Box Materials (O.Reg. 101/94)</b>     |                         |
| Collection of Materials                                    | \$1,050,697             |
| MRF Operation Costs  | \$4,486,746             |
| Sale of Blue Box Materials                                 | (\$1,955,855)           |
| Stewardship Ontario Funding                                | (\$1,066,105)           |
| User Pay   | (\$1,165,000)           |
| Net Cost   | \$1,350,484             |
| <b>Composting of Leaf &amp; Yard Waste (O.Reg. 101/94)</b> |                         |
| Composting Revenues  | (\$90,500)              |
| Operational Costs  | \$42,000                |
| Net Cost   | (\$48,500)              |
| <b>Landfills &amp; Transfer Stations (O.Reg. 347)</b>      |                         |
|  |                         |
| Brighton Landfill Operations                               | \$671,904               |
| Seymour Landfill Operations                                | (\$11,778)              |
| Bewdley Transfer Station Operations                        | (\$318,077)             |
| Hope Transfer Station Operations                           | \$80,000                |

|  |                    |
|--|--------------------|
| Perpetual Care of Closed Landfills               | \$3,703,800        |
| Net Cost   | \$4,125,849        |
| Administration & Oversight of Mandatory Programs |                    |
| Revenue  | (\$60,000)         |
| Wages & Benefits                                 | \$471,843          |
| Advertising                                      | \$162,000          |
| Legal  | \$10,000           |
| Professional Fees (Consultants)                  | \$50,000           |
| Misc. (Office Supplies, Utilities, Taxes, etc.)  | \$120,060          |
| Admin Charges to Other Departments               | \$390,576          |
| Net Cost   | \$1,144,479        |
| Vehicles   |                    |
| Wages & Benefits Associated with Operation       | \$135,762          |
| Expenses (Fuel, Repairs, etc.)                   | \$166,600          |
| Net Cost   | \$302,362          |
| Long-Term Debt Financing                         |                    |
| Eagleson Landfill Remediation - Financing        | (\$3,192,500)      |
| Reserves   |                    |
| Reserve Account Contribution                     | \$1,250,000        |
| Reserve Account Withdrawal                       | (\$1,475,000)      |
| Net Cost   | (\$225,000)        |
| <b>TOTAL NET COSTS</b>                           | <b>\$3,457,174</b> |

## Discretionary Programs

| Program  | Net Annual Costs |
|--|------------------|
| Administration & Oversight of Discretionary Programs | \$127,164        |
| Curbside Collection of Garbage                       | \$1,050,697      |
| User Pay   | (\$1,165,000)    |
| HHW & E-Waste Depots                                 | \$3,572          |
| <b>TOTAL NET COSTS</b>                               | <b>\$16,433</b>  |

## Environmental Scan

### Demographics

Residential and IC&I growth, increasing recyclable materials from outside the County, and the influx of seasonal residents will generate steady increases in waste services demand in Northumberland County. These trends will continue into the foreseeable future. All levels of government are working with waste generators to reduce waste through alternatives and / or reductions in product packaging.

### Funding

The budget projection is based on the support from revenues of the sale of recyclable materials, landfill tipping fees, user pay fees and stewardship funding initiatives. The waste management operation is not totally funded by the above revenues and there has been an ongoing tax levy contribution of approximately \$3 million per annum.

Northumberland County continues to obtain funding for our recycling programs from Stewardship Ontario, as mandated in the *Waste Diversion Act*. Based on the funding formula being used to administer this legislation, the County of Northumberland will receive approximately \$853,105 to support its 2011 residential recycling operating initiatives.

In 2008, the County also applied for, and was successful in receiving, an additional \$401,000 of funding from Stewardship Ontario to support the \$2.4 million worth of capital upgrades to the MRF.

Beginning in the third quarter of 2008, the County began receiving funding from Stewardship Ontario for its Household Hazardous Waste programs. As with

funding for Blue Box recyclables, funding for HHW will continue on an annual basis.

In 2009 the County began receiving funding for its electronics waste diversion program and also became a participant in the Ontario Tire Stewardship program. In 2010 the number of different types of waste eligible for funding under these two programs increased. As a result of this funding, it is anticipated that the net cost to the County for providing the HHW and E-Waste programs in 2011 will only be \$3,500. In 2008 (prior to these funding initiatives) the net cost of providing the HHW and E-Waste programs was \$317,000.

### **Legislative**

Waste services initiatives are in response to Bill 201 of the Municipal Act, the Environmental Protection Act, Regulation 101, Regulation 347, and various Municipal Bylaws.

The Waste Diversion Act (Bill 90) was passed in 2002, which requires producers to develop a plan for funding successful waste diversion programs. Waste Diversion Ontario's (WDO) mandate is to address waste diversion in the province by developing a strategy to fund 50% of municipal Blue Box net operating costs, and to develop, fund and implement diversion programs for organics, HHW, scrap tires, used oil and other materials.

The County is committed to pro-actively managing its operating and closed landfills in an environmentally sound manner to minimize existing and future environmental impacts and maintain compliance with O. Reg. 347.

### **Economic Factors**

In addition to the normal inflationary pressures to the goods and services it uses, the Waste Services Division incurred the following additional financial pressure, which was in addition to the 2010 approved budget:

- Spent \$401,000 on the purchase of 3 properties (one with a residence) in 2010. The initial approved budget for land purchases in 2010 was \$100,000; however in the mid-year budget update savings in other program areas were reallocated to these purchases.

## **Prior Year Accomplishments**

The following initiatives were completed or achieved in the Waste Services area in 2010:

### **Budget**

- Successfully managed the 2010 budget.

## **Material Recovery Facility**

- Maintained the processing rates of materials and reduced residual levels, through enhancing the education of residential and IC&I establishments, and through optimization of sorting equipment at the MRF.
- Worked in partnership with Waste Diversion Ontario to perform an Energy Audit and develop a business plan to implement recommendations that would result in reduced operational costs in the future.
- Performed a detailed analysis of the City of Kawartha Lakes materials to reflect changes in operations at the MRF and to audit the composition of the product to ensure materials comply with processing agreement.
- Researched and evaluated new equipment and funding opportunities for the container processing line.
- Maintained Equipment and Building Structure including improving our preventative maintenance program.
- Awarded Tender to replace the Container Baler system that had been in operation since 1995 and received \$209,000 in funding support towards its total replacement cost of \$454,000. (Project schedule for February 2011)

## **Landfills and Collection**

- Purchased buffer lands adjacent to the Brighton, Bewdley and Seymour landfills to maintain compliance with Ministry of the Environment regulations.
- Continued to review and update the management and monitoring strategies for the County's closed landfills.
- Continued with the development of the Remediation Plan for the former Eagleson Landfill to mitigate current environmental impacts.
- Retained a consultant to undertake a peer review of the remediation plan proposed by the Federal government to remove the low level radioactive waste from the Highland Drive.
- Retained a qualified consultant and initiated the Environmental Assessment of the Brighton Landfill, the purpose of which is to determine the best option(s) for remediating and managing the service life of the landfill.
- Replaced the 1992 landfill compactor currently in operation at the Brighton landfill.

- Awarded a new long-term contract for the collection of curbside waste and recyclables, resulting in a \$725,000 savings for this service compared to 2010.

### **Household Special Waste (HSW) Programs**

- Diverted 278 tonnes of HHW from landfill (up 5 tonnes from 2009). This tonnage increase is attributed to increased usage and awareness by the public, and an effective advertising program implemented by the County.
- Diverted 147 tonnes of E-waste from landfill.
- Continued participation in the Ontario Electronic Stewardship Program. As a result of participating in this program, the County received \$29,400 towards the cost of collecting this material through its depot services.
- Continued participation in Stewardship Ontario's Municipal Hazardous and Special (MHSW) waste program.

### **Planning and Education**

- Issued the Waste Information Calendar which once again won a Municipal Waste Association award. This year the County won the "Silver" award.
- Held the 2<sup>nd</sup> annual Mayors' Keep the County Clean Challenge, which resulted in more than 2,600 volunteers (up 600 from 2009) from all 7 area municipalities collecting over 26,000 kg of litter from roadsides, parks, nature areas and other public spaces from within the County.

## **2011 Service Objectives and Related Work Initiatives**

### **Overall Waste Services Division**

**To continue to improve the working environment and Health and Safety initiatives to the betterment of employees in the Division**

### **Material Recovery Facility (MRF)**

**To maximize diversion rates at the MRF through continuous improvement of processes, improve the employee working environment while operating in a cost-effective manner.**

- Maintain processing rates of materials and reduce residual levels, through enhancing the education of residential and IC&I establishments, and through optimization of sorting equipment at the MRF.
- Maintain Equipment and Building Structure including improving our preventative maintenance program.

- The capital replacement of a Fibre Baler system that has been in operation since 1995. Cost \$450,000.
- The capital replacement of a 2002 Skidsteer. Cost \$45,000.
- Investigate the feasibility of upgrading and / or replacing the container processing line at the MRF which has been in operation since 1995. Options which will be explored will include:
  - Maintaining the equipment to allow the continued processing of County and City of Kawartha Lakes' material
  - Upgrading the equipment to more efficiently manage new and emerging materials which are making their way into the "Blue Box" stream. Upgrade only to accommodate County and City of Kawartha Lakes material
  - Upgrading the equipment to more efficiently manage new and emerging materials and increase the capacity of the container line to accept material from other jurisdictions.

## **Landfills**

### **To ensure Landfills are environmentally sustainable and economically viable.**

- Investigate the feasibility of reducing or eliminating tipping fees for Scrap Metal and Leaf & Yard Waste received at the County's landfills and transfer station.
- Create a reserve account for the future purchases of buffer lands and / or groundwater easements on properties adjacent to the County's landfills if / when the off-site ground water becomes impacted by the landfill. Recommended contribution in 2011 is \$50,000.
- Creation of an insurance reserve account to cover the cost of insurance deductibles when claims are made against the County for instances that occur at our landfills or transfer stations. Recommended contribution in 2011 is \$50,000.
- Continue to review and update the management and monitoring strategies for the County's closed landfills.
- Upon MOE and GRCA approval, construct the remedial solution for the Eagleson Landfill to mitigate current environmental impacts. Cost \$3.2 million.

- Develop a Remediation Plan for the former Highland Drive Landfill to mitigate impacts historic municipal waste within the site is having on ground and surface waters. Cost \$75,000
- Investigate other diversion opportunities (e.g. asphalt shingle recycling, construction and demolition wood waste recycling), in order to conserve landfill space.
- Continue with the Environmental Assessment of the Brighton Landfill in order to determine the best option(s) for remediating the landfill and managing its service life. Cost \$250,000
- Initiate work on the development of a new lined waste cell at the Brighton Landfill. Work in 2011 will consist of moving approximately 100,000 m<sup>3</sup> of waste material from a portion of the old unlined cell to the new lined sections at the site. 2011 Cost \$250,000. 2012 anticipated cost \$1,400,000
- Replace the 1993 Bull Dozer currently in operation at the Brighton landfill. Cost \$230,000.

## **Education**

### **To develop and enhance the County education and communication techniques and strategies.**

- Successfully implemented a new, proactive education program called the “Get Caught Recycling Clean” program, which provides for more hands on education of the public about how to properly sort and place waste and recyclables out for curbside pick-up. This new education program rewards County residents who, when selected at random, are observed to be placing out their waste and recycling properly.

## **Long Term Waste Management Plan**

### **Develop and implement an updated Waste Services structure to ensure Waste Service initiatives are completed in an environmentally and economically sustainable manner.**

- Issue an RFP to retain a consultant to assist the County with the development of a Long-Term Waste Management Master Plan. Cost \$50,000
- Continue contributing to a waste management reserve fund in order to finance the replacement of existing waste management facilities/equipment and for the implementation of any new waste management initiatives. Proposed 2011 contribution of \$400,000.

## **Household Special Waste (HSW)**

**Continue to implement a plan to serve the needs of County residents in the proper management of HSW**

- Continue the successful operation of the County's 4 HSW depots.

## **2012 Forecast & Strategic Priorities**

### **Overall Budget**

- Attempt to develop our 2012 budget such that it will only require a 2% increase over the 2011 budget, in order to cover inflationary pressures.

### **Material Recovery Facility (MRF)**

**To maximize diversion rates at the MRF through continuous improvement of processes, improve the employee working environment while operating in a cost-effective manner.**

- The capital replacement of a 2000 Forklift. Cost \$40,000.
- Continue to increase diversion rates and reduce residual levels through enhancing the education of residents and IC&I establishments.
- Continue to maintain equipment and building structure through a proactive maintenance program.

### **Landfills**

**To ensure Landfills are environmentally sustainable and economically viable.**

- Construct a new lined waste cell at the Brighton Landfill. Cost \$1,400,000.
- Monitor the success of the Remedial Plan for the former Eagleson Landfill.
- Continue work on the development of a remediation plan for the Highland Drive Landfill that will mitigate the effects the residential component of the waste at this site is having or could have on the environment. This plan will need to be implemented in conjunction with or immediately following the remediation efforts undertaken by Atomic Energy of Canada Limited (AECL) to remove the low level radioactive waste at the site.

## **Education**

**To develop and enhance the County education and communication techniques and strategies.**

- Continue to provide accurate, informative and educational communications to all users of the County's waste management system.

## **Long Term Waste Management Plan**

**Continue with the development and implementation of the updated Waste Services structure to ensure Waste Service initiatives are completed in an environmentally, economically sustainable manner.**

- Finalize the Long-Term Waste Management Master Plan and begin to work towards implementing the recommendations from this plan.
- Continue contributing to a waste management reserve fund in order to finance the replacement of existing waste management facilities/equipment and for the implementation of any new waste management initiatives.

## **Household Special Waste (HSW)**

**Continue to implement a plan to serve the needs of County residents in the proper management of HSW**

- Continue the successful operation of the County's 4 HSW depots.

## **Five To Ten Year Strategic Objectives**

### **Material Recovery Facility (MRF)**

**To maximize diversion rates at the MRF through continuous improvement of processes, improve the employee working environment while operating in a cost-effective manner.**

- Look for opportunities to add new items to the list of materials that can be recycled in the County's Recycle Clean Program.
- Continue to increase diversion rates and reduce residual levels through enhancing the education of residential and IC&I establishments.
- Continue to maintain Equipment and Building Structure through a proactive maintenance program.

## **Landfills**

**To ensure Landfills are environmentally sustainable and economically viable.**

- Continue with the implementation of remedial efforts to address impacts of residential component of the waste at the Highland Drive Landfill and continue to work with Atomic Energy of Canada Limited (AECL) as they remove the low level radioactive waste from the site.

## **Education**

**To develop and enhance the County education and communication techniques and strategies.**

- Continue to provide accurate, informative and educational communications to all users of the County's waste management.

## **Long Term Waste Management Plan**

**Develop and implement an updated Waste Services structure to ensure Waste Service initiatives are completed in an environmentally, economically sustainable manner.**

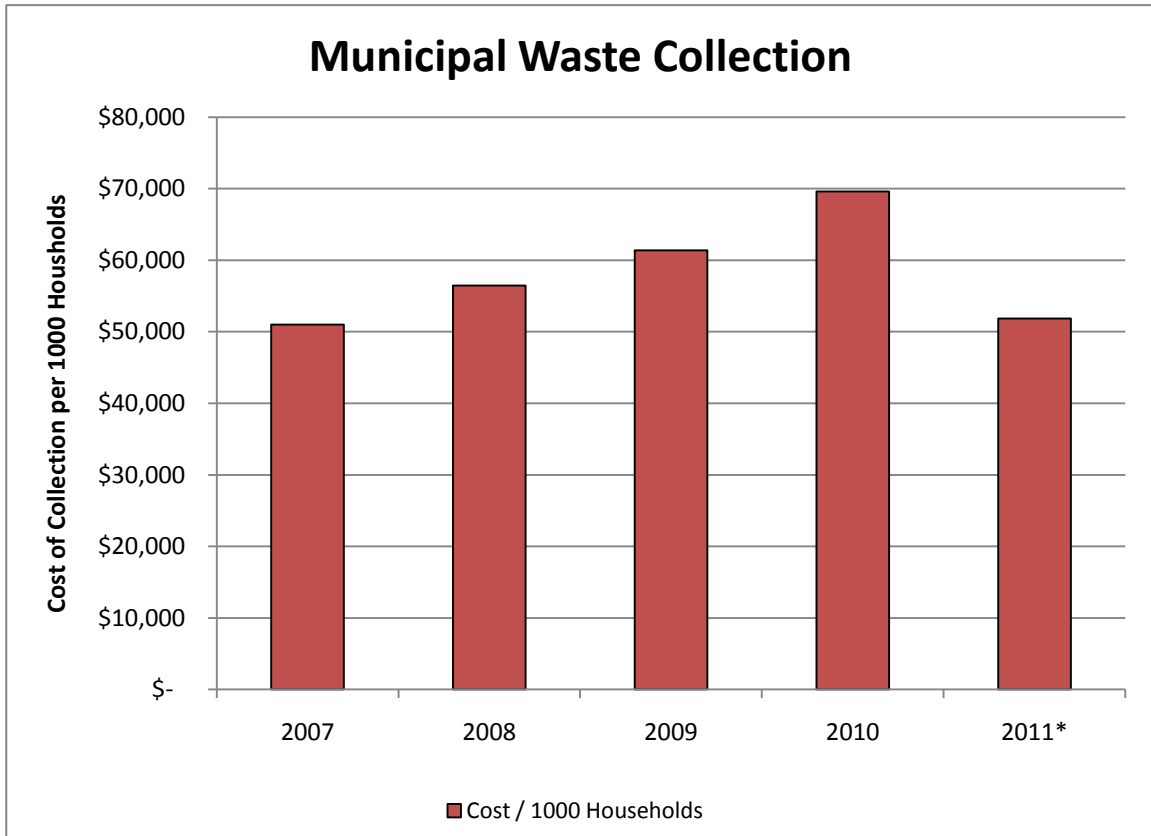
- Continue to implement or work towards implementing recommendations from the Long-Term Waste Management Master Plan.

## **Household Special Waste (HSW)**

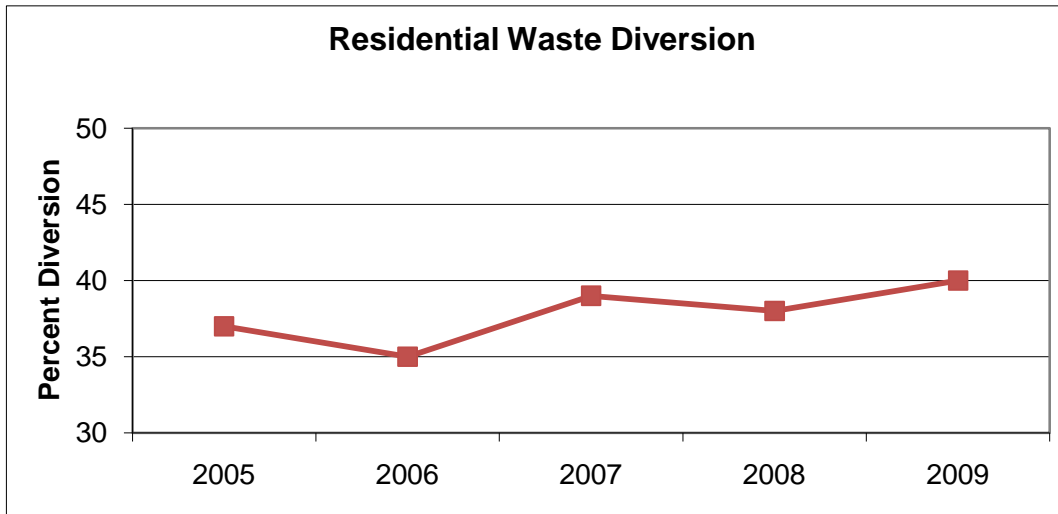
**Continue to implement a plan to serve the needs of County residents in the proper management of HSW**

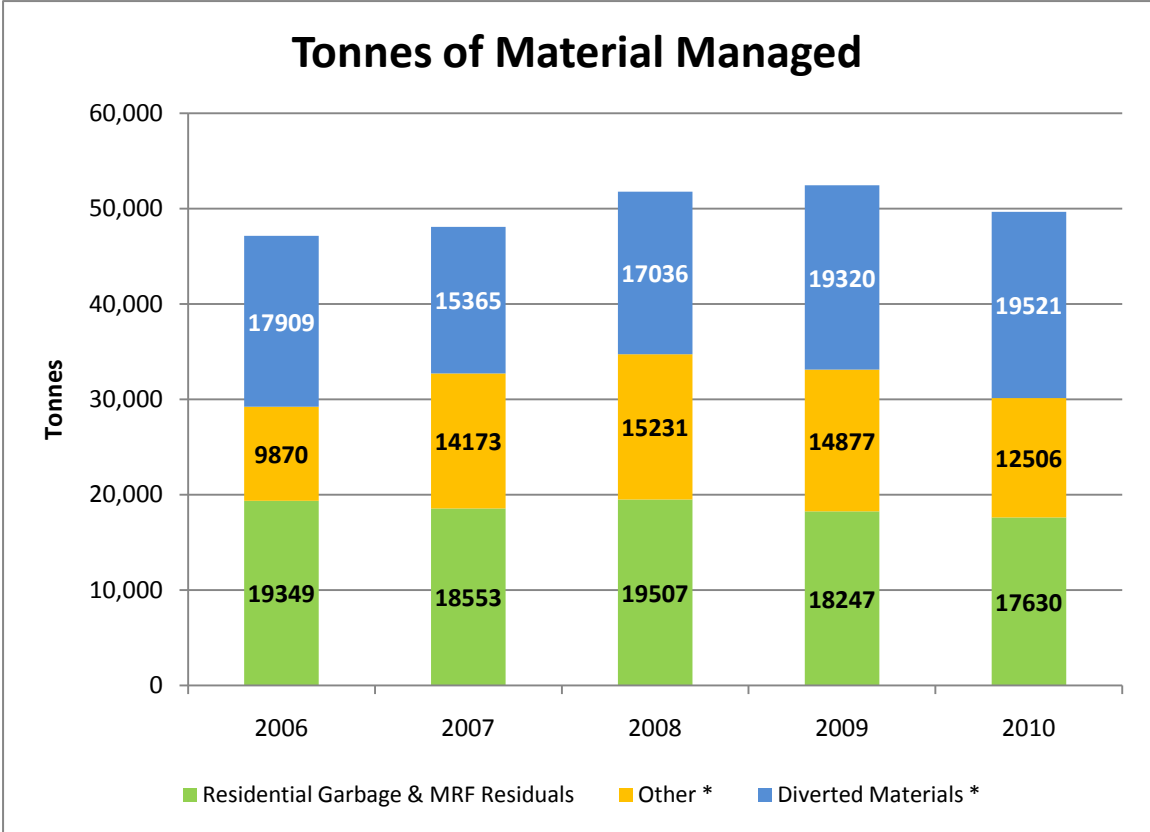
- Continue the successful operation of the County's 4 HSW depots and consider the expansion of the program, if required.

## Performance Indicators



\* projected 2011 costs, based on new long-term collection contract

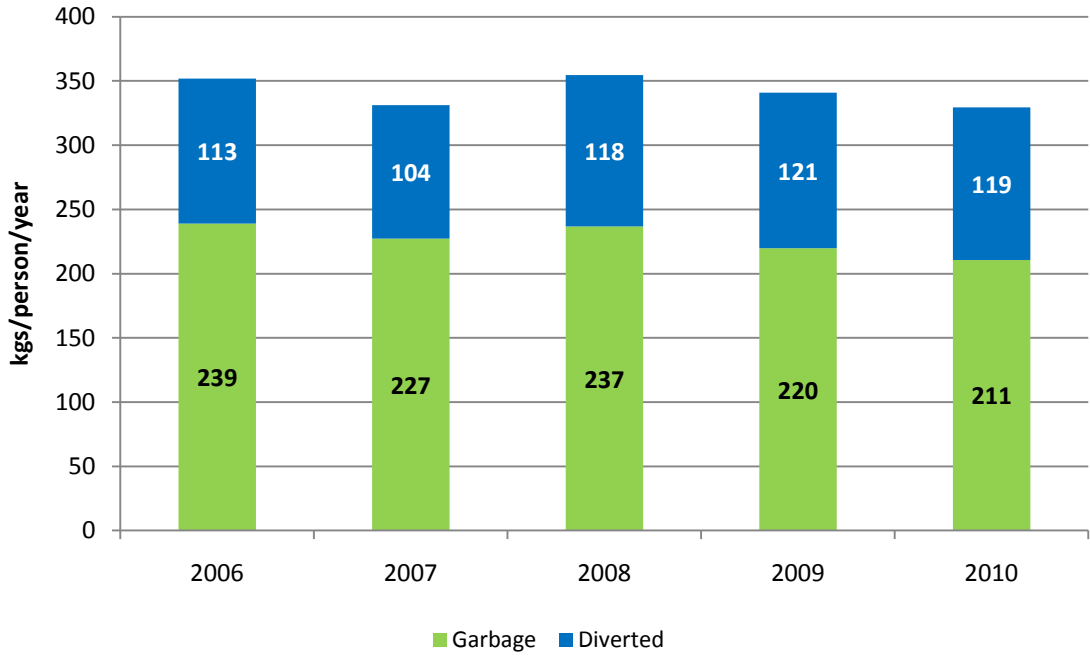




\* - Includes ICI waste, street sweepings, illegal dumping, municipal biosolids, etc.

\*\* - Includes "Recycle Clean" materials, City of Kawartha Lakes "Blue Box" materials, leaf and yard waste, scrap metal, drywall, Electronic Waste, HHW, etc.

# Per Capita Yearly Residential Waste Generation Rates





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2011 Budget

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**Waste  
Management  
Issue  
Papers**

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# **Issue # 1 - Equipment Replacement Strategy**

## **Purpose**

The County's Waste Services Division has developed a sustainable equipment replacement strategy, which includes the annual contribution of \$400,000 to a capital reserve account, to allow for timely and affordable replacement of the equipment and facilities necessary to operate its landfills, transfer station and Material Recovery Facility (MRF).

## **Background**

Northumberland County uses a fleet of 23 pieces of mobile equipment for the operation of the landfills, the Bewdley Transfer Station and the MRF, ranging from a ½ ton truck for the collection of illegally dumped waste on municipal roadsides, to heavy equipment for work in the landfills and transfer station. There is also a significant amount of processing equipment at the MRF, bringing the replacement value of the equipment for waste management to approximately \$8 million.

The 6 items recommended for purchase and / or replacement as part of the Waste Services Division's 10 Year Equipment Purchase and Replacement Strategy are:

- Replacement of a 2003 Bull Dozer at the Brighton Landfill;
- Purchase of a 2001 Back Hoe from the Transportation Division for use at the Brighton Landfill;
- Purchase of a new Pick-up Truck for use by the Field Services Coordinator;
- Replacement of a 2002 Skidsteer at the MRF;
- Replacement of the 1995 Fiber Baler at the MRF; and
- Replacement of 8 Roll-Off Bins.

### **Justification for replacement of 2003 Bull Dozer at the Brighton Landfill**

The County currently owns one Bull Dozer which is used primarily at the Brighton landfill, but also periodically at the Seymour Landfill, to construct temporary haul roads, move and shape soil stock piles, shape the waste mound and apply daily soil materials on top of the waste buried at the site.

In 2011, staff are recommending that excavation of a portion of the old unlined section of the Brighton Landfill commence, so that a new lined waste cell can be constructed at the site in 2012. This excavation work will require the use of

a Bull Dozer on a very regular basis to move waste and cover materials around the site.

The Seymour Landfill is nearing the end of its life, and more frequent use of a Bull Dozer will be required over the next 2 to 3 years to finish off side slopes as we work toward filling the apex of the waste mound.

Given that demand for a Bull Dozer on a very frequent basis at both of our remaining landfills over the next few years and considering the expense of floating the Bull Dozer from site to site (at a cost of approximately \$500 per trip), staff are recommending that a larger Bull Dozer be purchased for use at the Brighton landfill and that the 2003 Bull Dozer currently in use at the Brighton landfill be transferred to the Seymour landfill on a permanent basis, to be used there. Given the success the Division had in purchasing used Landfill Compactor in 2010, staff recommends that a tender be developed and issued for a quality used Bull Dozer and if no satisfactory bids are received through this tender call for a used Bull Dozer, that a tender be developed and issued for a new bulldozer. It is anticipated that a quality used Bull Dozer will cost approximately \$150,000 and a new Bull Dozer will cost approximately \$230,000.

#### **Justification for the purchase of a 2001 Backhoe from the Transportation Division for use at the Brighton Landfill**

A 1993 Backhoe is currently being used at the Brighton Landfill, primarily to pack down the waste bins at the public drop off area at the site. This Backhoe is also used to turn compost piles at the site and for snow removal and other minor activities. This Backhoe is unique, in that the fuel tank is part of the frame. The constant jostling of the Backhoe when packing down the waste bins has caused the frame to crack several times, each time resulting in a leak in the fuel tank, requiring repair through welding.

In 2011, the Transportation Division will be seeking to replace a 2001 Backhoe with a new backhoe. Given the age of the Backhoe in use at Brighton landfill, staff are recommending that the 2001 Backhoe from the Transportation Division be transferred to the Waste Services Division for use at the Brighton landfill. An appraisal of the 2001 Backhoe would be completed and the appraised value of the unit would be paid to the Transportation Division from the Waste Services Division. It is anticipated that the appraised value will be around \$20,000.

The Waste Services Division would like to retain the 1993 Backhoe and outfit it with a power broom attachment, to allow staff to sweep up and remove mud, which, from time to time, gets tracked onto the access road and County Road 26, by vehicles exiting the site. There is a concern from staff and the Brighton Landfill Liaison Committee that the silty mud material tracked onto County Road 26 could pose a safety hazard for vehicles traveling that road.

### **Justification for the purchase of a Pick-up Truck for use by the Field Services Coordinator**

The Field Services Coordinator's vehicle is being used at the Landfill for daily operations. The position's key responsibilities include illegal dumping collection, coordination of curbside collection services, by-law enforcement, public education and the delivery of bag tags.

Since November the department has rented a vehicle from the Town of Cobourg and utilized the seasonal Contract Administrator's vehicle during the winter months.

A vehicle is required to perform the duties of this position.

### **Justification for the replacement of a 2002 Skidsteer at the MRF**

The Skidsteer Loader at the Material Recovery Facility is used to move recyclables within the facility. This piece of equipment is vital for continuous operations. The Skidsteer is unique as it has solid rubber tires, enclosed cab, and a waste debris package. In the event of a breakdown of this equipment, the MRF has a lead time of approximately 1-2 hours to get the equipment repaired or a replacement loader must be rented before difficulties arise from lack of storage space on the tipping floor.

The current 2002 Skidsteer has over 6000 hours on it and is showing increased fatigue to the boom, frame, bucket and chassis. Continuous welding and replacement of mechanical parts are necessary to operate this equipment.

### **Justification for the replacement of the 1995 Fiber Baler at the MRF**

The Baler is scheduled for replacement within the Transportation and Waste capital replacement plan.

The Fiber Baler is a fundamental component of MRF operations. The Baler is 1 of 2 Balers within the facility that are used to compact and bundle materials for shipping.

The Baler has been in operation since 1996. The overall condition of this baler is fatigued. The chamber is worn, hydraulics are continuously being replaced.

Time and money are being spent on the baler from our maintenance department and outside contractors to keep it operational. The Baler Operator spends ~25% of their day adjusting settings and controls due to the overall fatigue of the unit.

The unit is a major component of production activities at the MRF. Downtime will cause production to stop.

Should this project be deferred, the County would be required to completely overhaul the unit. However, it would remain ineffective compared to new baling systems as they increase compaction/densification thus reducing the cost of shipping and increase revenues. In addition, new units have the capability to increase production by ~25%.

There are positive health & safety benefits to replacing equipment in a timely fashion. With newer equipment, repairs and maintenance costs are generally low, or covered by warranty, compared to older worn out equipment.

The baler will give the MRF the capacity to process additional materials and provide a system that will allow for continuous processing of materials.

### **Justification for the replacement of 8 Roll-Off Bins**

The County employs 2 Roll-Off Trucks and a trailer to haul:

- waste from the MRF, transfer stations and area municipalities to either the Brighton or Seymour landfill for ultimate disposal;
- collected leaf and yard waste from some area municipalities (e.g. Cobourg) to our composting facilities for composting; and
- Recyclable materials collected at our Landfills and Transfer Station to the MRF for processing.

In performing these tasks, these trucks move thousands of tonne of materials throughout the County each year.

In order to provide these services, the Waste Services Division has over 50 various sized roll-off bins, ranging in size from 14 yard to 40 yards.

With normal wear and tear, through the course of the year, a number of these bins deteriorate to a condition where repair is no longer feasible and the bins are no longer safe for use on public roadways. At this point, the bin becomes a “site bin” and gets used to shunt waste from the drop off area at Brighton or Seymour Landfills up to the active waste cell for disposal.

In 2011, staff are recommending that 8 new bins be purchased to replace some of the bins currently used to convey waste between sites. The bins removed from road use will become “site bins”. These new “site bins” will enable us to dispose of, for scrap metal, some of the “site bins” currently in use which have reached the end of their useful life.

## Financial Impact

The Table on page 8 outlines a ten-year Capital Purchase and Replacement Plan for the major waste management equipment. In 2009 and 2010, the County contributed a total of \$800,000 (\$400,000 per year) into a Capital Reserve Account for the Waste Services Division. These reserves were depleted in 2010 as a result of the elevated capital costs experienced in 2010 for a number of capital items including major equipment replacements, land purchases and the Environmental Assessment of the Brighton Landfill.

In 2011, we are forecasting another increased demand for capital within the Waste Services Division. In 2011, \$400,000 is being recommended for contribution to the Capital Reserves, unfortunately all of this contribution will be required in 2011 to offset the increased capital demands in 2011.

The proposed 2011 Waste Services Division's budget for capital projects is \$5,196,500 (of which \$400,000 comes from the 2011 contribution to the Capital Waste Reserve Account). In 2011, it is proposed that \$835,000 of the budgeted \$5,196,500 be spent on:

- 1) Replacement of a 2003 Bull Dozer at the Brighton Landfill (\$230,000);
- 2) Purchase of a 2001 Back Hoe from the Transportation Division for use at the Brighton Landfill (\$20,000);
- 3) Purchase of a new Pick-up Truck for use by the Field Services Coordinator (\$40,000);
- 4) Replacement of a 2002 Skidsteer at the MRF (\$45,000);
- 5) Replacement of the 1995 Fiber Baler at the MRF (\$450,000); and
- 6) Replacement of 8 Roll-Off bins (\$50,000).





## **Recommendation**

The preceding table outlines a ten-year Capital Equipment Purchase and Replacement Plan for major waste management vehicles and equipment.

The proposed 2011 budget for equipment purchases / replacements allows for the replacement of the following pieces of equipment:

- Replacement of a 2003 Bull Dozer at the Brighton Landfill;
- Purchase of a 2001 Back Hoe from the Transportation Division for use at the Brighton Landfill;
- Purchase of a new Pick-up Truck for use by the Field Services Coordinator;
- Replacement of a 2002 Skidsteer at the MRF;
- Replacement of the 1995 Fiber Baler at the MRF; and
- Replacement of 8 Roll-Off Bins.

It is recommended that \$835,000 from the 2011 proposed Waste Services Divisions budget for capital projects be allocated to purchase and / or replace the above-noted pieces of equipment.

## **Issue # 2 – New Administrative Clerk Position**

### **Purpose**

The Transportation and Waste Management Department urgently requires an additional Administrative Clerk in order to maintain the current level of administrative support being provided within the Transportation and Waste Management Department and to the other County Departments at the County Headquarters. Currently the department has 3 full time Administrative Clerks and 1 Administrative Clerk who has been working for the County on a contractual basis for the past 2 years. The contract for this fourth Administrative Clerk expires in February of 2011. Instead of seeking a further extension of this contract, staff would like to turn this contract position into a full time Administrative Clerk position within the department.

### **Background**

Over the past 6 years, as the County has been able to partially re-instate capital budgets and start to address the significant backlog of waste management and roads projects, there have been increased workload pressures on departmental staff. It is important to note also that through its Facilities Division, this Department is the largest property manager in the County, responsible for providing services to and responding to the needs of the tenants in the County's 344 social housing units on a 24 hour per day basis, 365 day per year.

In 2009, County Council authorized staff to retain a consultant to undertake an organizational review of the Transportation and Waste Management Department. The overall objective of this review was to develop recommendations for the appropriate organization structure and human resources so that the County could successfully and effectively meet its service responsibilities in waste management, transportation and facilities management. By reorganizing functional groupings and streamlining operations, the final recommended structure was only increased by one position – a new Administrative Clerk, to provide general reception duties, support the CAO/ Clerk area and provide back-up support to the Administrative Clerks in Facilities, Waste Management and Transportation / Plumbing Inspection.

In April of 2010, County Council adopted all of the recommendations contained within the Transportation and Waste Management Organizational Review, with the exception of the recommendation for the creation of a new Administration Clerk position to serve the needs of the Transportation and Waste Management Department, plus many of the other departments within the County.

## Rationale

The Transportation and Waste Management Department is the largest County Department in terms of staffing and operating and capital budgets. The department is comprised of 117 staff under the overall direction of the Director. Three of the Department's 117 staff are Administrative Clerks who work out of the County's Headquarters Building and provide administrative support to the 19 Managerial and Technical Support staff, who also work out of the County's Headquarters building. In addition to providing administrative support to the Transportation and Waste Management staff, these 3 Administrative Clerks also provide general reception duties and administrative support to the CAO, Clerk and County Council at the two reception areas within the County Headquarters Building.

Following the adoption of the Transportation and Waste Management Organizational Review, a separate, more focused review of the administrative clerk duties within the Transportation and Waste Management Department was undertaken. The objective of this further review was to assess all of administrative duties currently being performed by the 3 Administrative Clerks, as well as all of the other administrative tasks currently being performed by management and technical support staff. This review involved individual meetings with the 3 Administrative Clerks, the Department Managers and others involved in managing or undertaking administrative work that involves the Transportation and Waste Management Department. From this detailed review of administrative duties, staff were able to consolidate the 76 distinct administrative activities / tasks currently being undertaken into 14 functional groupings. Listed below are these 14 functional groupings, with some of the key activities / tasks highlighted.

### 1) **Administration** – 7 tasks

- a. Taking minutes of meeting
- b. Scheduling meetings in electronic calendar
- c. Photocopying

### 2) **Communications** – 11 tasks

- a. Printing Council Agendas
- b. Printing and distribution of Council newsletter
- c. Distribution of Waste & Recycling Calendars
- d. Sending out notices (e.g. road closures)

- 3) **Enquiries and Complaints Tracking / Management** – 3 tasks
  - a. Providing administration of the Help Desk (1-800 number) utilized by the tenants of the County's 344 social housing units to report maintenance needs and damages.
  - b. Taking enquiries / complaints (e.g. complaints from residents regarding snow removal, waste collection, etc.)
- 4) **Database Maintenance** – 5 tasks
  - a. Road signage database
  - b. Leachate and HHW manifests tracking and filing
  - c. Back-up for POA ticket input
- 5) **Financial Administration** – 11 tasks
  - a. Coding of invoices
  - b. Running WennSoft (financial tracking) reports
  - c. VISA reconciliations
- 6) **Mail** – 5 tasks
  - a. Sorting and distributing incoming mail
  - b. Addressing, stuffing and applying postage to outgoing mail
- 7) **Building Maintenance Administration** – 5 tasks
  - a. Arranging access for contractors
  - b. Ordering cleaning supplies for buildings
- 8) **Ordering Supplies** – 3 tasks
  - a. Business Cards
  - b. Office stationery
- 9) **Permit Administration** (e.g. roads, entranceways, plumbing, special event) – 5 tasks
  - a. Maintaining plumbing inspection database
  - b. Processing applications

- c. Issuing permits

10) **General Reception** – 5 tasks

- a. Greeting residents coming into the building and directing them to staff and / or meetings
- b. Accepting and sorting out deliveries (e.g. courier)
- c. Selling composters, compost buckets, bag tags

11) **Telephone Answering** – 2 tasks

- a. Responding to general inquiries
- b. Operating the switchboard / routing incoming calls

12) **Room / Equipment Bookings** – 5 tasks

- a. Administering the meeting room calendar
- b. Ordering refreshments and food for meetings
- c. Equipment sign-out (projector screens)

13) **Building Security Administration** – 6 tasks

- a. Troubleshooting security issues and contacting appropriate contractors
- b. Programming security accesses cards

14) **Work Orders** – 2 tasks

- a. Issuing work orders
- b. Following-up on completion

It was anticipated that at the end of this review the 14 functional groupings of tasks would then be divided up amongst the 3 Administrative Clerks, with appropriate cross training provided to ensure adequate coverage / back-up for these services during vacation and / or illness. Unfortunately, when reviewing these functional groupings and the over 76 individual tasks associated with them, it was determined, through discussions with management staff and the administrative clerks, that there was no way that all of these tasks could be completed by the 3 clerks, as some of these administrative tasks are currently being done by management, technical support staff or by the temporary Administrative Clerk who has been working for the County for the past 2 years on a contractual basis.

For example, assigning the Communications, General Reception and Telephone Answering Services tasks to one Administrative Clerk would equate to a full time workload for that clerk, thereby leaving the 11 other functional groupings to be split amongst the remaining 2 clerks. The remaining 2 clerks would also be required to provide back-up during vacation, sickness and daily breaks and lunch.

One of the key services provided by our Administrative Clerks is the administration and attendance to the 1-800 number used by the tenants of the County's 344 social housing units to notify the County of maintenance problems with their unit. Each year the County receives hundreds of phone calls from our tenants ranging from complaints about leaky faucets and running toilets to broken furnaces and burst water pipes. Once a complaint has been received, it is the Administrative Clerk who then writes up and issues the Work Order to the Facilities maintenance staff, logs the Work Order into the database and follows up to ensure that the work has been completed. Due to the nature and frequency of the calls received, 1 of the 3 Administrative Clerks currently works almost exclusively with the Facilities Division of the Transportation and Waste Management Department in addressing their administrative needs. Given the increasing average age of the 344 social housing units, and the increasing demand for social housing, the demand for this service will only increase in the coming years.

## **Recent Staffing Trends**

Since 2007, the number of staff within the Transportation and Waste Management Department has decreased by 6. Each year this department rigorously looks at how it can be more efficient so that funds can be found to meet the roads system and waste management infrastructure deficit. As recently as the year 2000, the total roads and bridges budget was \$345,000, instead of the required base funding level of \$7,000,000. Increasing the roads levy to a sustainable level while minimizing tax increases has been an incredible challenge, as has been administering the increased number of projects with a minimal staff complement. Further, there are always increasing pressures for higher levels of service (e.g. the household hazardous waste program). There is a general perception that each year staffing levels have increased. People remember the new additions; we tend, however, to forget the staff reductions. This department has experienced a net reduction of 6 full time equivalent staff since 2007.

During this same 3 year period, the department staff have had to manage the following new administrative pressures, in addition to their current workloads:

- In 2009, the County assumed full responsibility for and administration of the Bulky Waste Voucher. Prior to 2009, the lower tier municipalities distributed the vouchers to their residents. Under the new program, the County now develops a mailing list each January and distributes approximately 35,000 waste vouchers, through the mail each year.

Inevitably some residents get missed as a result of inaccuracies in the mailing information, resulting in a number of calls being received on a weekly basis over the course of the year from residents requiring additional vouchers to be sent out to them.

- Since 2008, a number of divertible waste materials, such as Household Hazardous Waste, Electronic Waste and Used Tires have become funded or subsidized by funding organizations such as Stewardship Ontario, Ontario Electronic Stewardship and Ontario Tire Stewardship. These new funding opportunities have resulted in a net savings to the Waste Services Division of approximately \$368,000 annually (\$194K for HHW, \$120K for Electronic Waste and \$54K for Tires). Prior to these funding initiatives, the County paid the full cost of ensuring that these materials were diverted from landfill. The only down side to receiving this funding is that the County must now submit on a monthly or quarterly basis (depending on the funding organizations requirements) details of the quantities of materials received, how they were managed and where they were sent to for diversion, in support of our claims for funds. This tracking of quantities, submission of claim forms and follow-up on payments is very tedious and time consuming work, but the net gain of \$368,000 more than justifies the additional administrative effort.
- As a result of the County assuming responsibility for the Eagleson Landfill in 2010, administration clerks have seen a dramatic increase in the number of leachate manifests requiring reconciling and filing.

In 2011, new legislation will require the County to undertake annual inventories of the reflectivity of all of our road side signs servicing the County's road network. Once this data has been collected by Transportation staff, it will need to be sorted and entered into a data base. It is anticipated that the inputting of this data and the management of this database will become the responsibility of the administrative clerks.

The Transportation and Waste Management Department is currently managing to undertake all of the administrative demands noted above, mainly because we have been fortunate enough to have had a fourth Administrative Clerk providing support to the department, on a contractual basis, for the past 2 years.

## **Financial Impact**

The additional Administrative Clerk position would have an approximate annual cost in the range of \$34,000 to \$46,000. As noted above, the Transportation and Waste Management Department was able to realize \$194,000 in savings in 2010 compared to 2008, for the HHW program and these savings will continue each year into the future. These savings more than offset the Administrative Clerk costs. Further, the County has had to hire a contract person over the past 2 years to fill the Administrative Clerk functions.

## **Recommendation**

Ideally staff would like County Council to endorse the addition of one Administrative Clerk to the Transportation and Waste Management Department; however, if this recommendation is not endorsed, staff recommends that Council eliminate the vacant Project Engineer position to allow the Administrative Clerk position to be added.

In 2010, County Council approved the creation of a second Project Engineer position within the Transportation and Waste Management Department through the elimination of another position. This position is required to meet the anticipated engineering demands the County faces in addressing the infrastructure deficits referred to earlier in this report. This position has been kept vacant, while staff awaited the resolution to the administrative needs of the department. If Council cannot endorse the creation of a new Administrative Clerk position, staff recommends that the vacant Project Engineer position be eliminated and the monies utilized for the requested Administrative Clerk position. Changing the Project Engineering position into an Administrative Clerk position will not increase the number of staff within the department; however, the disadvantage of this alternative is that the department will need to rely on the services of consulting engineering companies to provide the support which will be lacking without the Project Engineer position.

## **Issue # 3 – Creation of a Reserve Account for Purchases of Buffer Lands Adjacent to County Landfills**

### **Purpose**

In order to keep the County's 2 active and 7 closed landfills in compliance with MOE regulations, the County is required, from time to time, to enter into negotiations with affected, adjacent property owners, in an attempt to negotiate the purchase of a piece of property or a groundwater easement on a portion of the property which is or will likely become impacted by landfill leachate.

### **Background**

The County is responsible for the annual environmental monitoring and reporting requirements of its 7 closed and 2 active landfill sites. The actual monitoring and reporting is contracted out to a qualified environmental consultant.

All of the County's landfills, with the exception of a portion of the Brighton Landfill, which is lined, operate on the principal of natural attenuation, meaning that the concentration of the leachate generated by the landfills is attenuated or reduced over time through naturally occurring physical, chemical and biological processes, such as biodegradation, dispersion, dilution, adsorption, and volatilization.

Natural attenuation landfills rely on spatial separation (usually in the form of buffer lands) from receivers (e.g. property boundaries) to allow for the concentration of leachate parameters to be reduced such that they meet MOE requirements before impacted groundwater leaves the landfill site. Unfortunately, many of the County's landfill sites were designed or approved without sufficient buffer lands between adjoining properties to allow for proper attenuation. Because of this, we are finding through our annual monitoring and reporting, that in some instances, we are exceeding MOE requirements for certain leachate derived parameters at property boundaries for some of our landfills. In 2010 the County was required to purchase three (3) separate properties at the Brighton, Seymour and Bewdley landfills. In total, these three purchases came to approximately \$401,000. Knowing that there is at least one landfill which currently has offsite impacts on groundwater, it is recommended that a Buffer Land Purchase Reserve be established within the Waste Services Division's 2011 budget and that a contribution of \$50,000 be allocated to this reserve in 2011. It is anticipated that the \$50,000 contribution will continue annually, until a sustainable reserve of \$250,000 has been developed.

### **Financial Impact**

Establishing a Buffer Land Purchase Reserve, if approved, will result in a \$50,000 impact on the 2011 Waste Services Division's 2011 Capital Budget.

## **Recommendation**

a Buffer Land Purchase Reserve be established within the Waste Services Divisions' 2011 budget and that a contribution of \$50,000 be allocated to this reserve in 2011, so that the County can maintain compliance with MOE regulations at all of its active and closed landfills.

## **Issue # 4 - Brighton Landfill Development**

### **Purpose**

In order to allow for the construction of an additional lined waste cell at the Brighton Landfill in 2012, within a section of the old, unlined section of the site, staff are recommending that the excavation of a portion of the old waste cell proceed in 2011. The waste excavated from the old waste cell will be placed into the lined section of the landfill. The area excavated in 2011 will then be lined in 2012, and begin receiving waste for disposal in 2013. If this excavation does not commence in 2011, remediation of the entire site will be difficult to complete if / when the Environmental Assessment to remediate and expand the site is approved.

The excavation of a portion of the old waste cell is already approved by the MOE, through the 2006 Design and Operations Plan and does not constitute an expansion since the work is being completed within the existing approved waste footprint.

### **Background**

The County of Northumberland owns and operates the Brighton Landfill. This landfill began operations in 1975 and is located within the Municipality of Brighton.

The Brighton Landfill currently has approximately 5 years of remaining capacity. It has operated as an unlined (natural attenuation) landfill since 1975. Starting in 2006, the County committed to a staged program to construct engineered liners in any new cells developed and most importantly, to remove all existing garbage in the old unlined section of the landfill into new fully lined cells with leachate collection, to mitigate the potential impact to local and municipal water supplies.

In 2007 and 2009, the County constructed the first and second phases, respectively, of the new fully engineered waste cells for the site.

Since 2007, it has been determined that, for a number of contributing factors, such as on-site space constraints, increased inbound tonnages of waste and soil / waste conditions, the previously proposed plan to mine the waste from the old, unlined portion of the landfill is not feasible; however, the County remains committed to placing an engineered liner and leachate collection system throughout the entire landfill.

To facilitate the excavation and lining of the old section, additional site capacity is required to allow the historic wastes to be placed on new lined sections, while at the same time allowing the landfill to continue to accept wastes currently being generated within the County.

In order to meet the objectives of: 1) fully lining the entire landfill site; and 2) increasing the capacity of the site; the County will be required to undertake an Environmental Assessment, as required by the Environmental Assessment Act, R.S.O 1990, Ontario Regulation 101/07.

In 2010, the County retained Golder Associates, to assist it through the Environmental Assessment (EA) process. It is estimated that the EA process will not be completed until 2012. In the mean time, the County still needs to accept waste for disposal, while ensuring that it will be able to complete the proposed remediation, if / when the EA is approved.

In order to ensure that the proposed remediation (e.g. the entire site is lined) can proceed, we need to continue with the implementation of the current Design and Operations Plan, which called for the waste from within the old, unlined section of the landfill to be excavated and place into the new lined sections at the site.

In 2011, it is recommended that all of the waste within one section of the old waste cell be excavated and moved into the new lined section of the landfill. With the excavation completed in 2011, the County will be able to place a liner and leachate collection system in this area, so that waste disposal into this new cell can proceed in 2013.

It is estimated that approximately 100,000 m<sup>3</sup> of historic waste and cover material will need to be moved to create an area large enough to warrant lining in 2012.

The excavation and movement of this 100,000 m<sup>3</sup> of material will require additional staff, equipment and fuel. The anticipated cost for additional staff, equipment and fuel is estimated at \$175,000. Staff are also recommending that an additional \$75,000 be included as a contingency amount for this project, to account for such things as odour suppression equipment, consultant advice and additional leachate haulage and treatment, if required.

## **Financial Impact**

It is anticipated that the total cost to excavate the approximately 100,000 m<sup>3</sup> of waste materials from within this one section of the old waste cell at the Brighton landfill will be \$250,000.

## **Recommendation**

It is recommended that \$250,000 be allotted in the 2011 Waste Services Division's budget for costs associated with excavating and relocating approximately 100,000 m<sup>3</sup> of waste materials from within the old unlined section of the landfill to the new lined sections of the landfill, to allow for the continued implementation of the remedial and lifespan objectives of the 2006 approved Site Design and Operational Plans for the Brighton Landfill.

## **Issue # 5 - Highland Drive Landfill – Upgrades to the Foundation Venting System at the Jack Burger Sports Complex**

### **Purpose**

Retrofit the existing Foundation Venting System (FVS) which mitigates the risk of methane generated by the nearby Highland Drive Landfill from migrating into the Jack Burger Sports Complex.

### **Background**

When the Jack Burger Sports Complex (JBSC) was constructed by the Municipality of Port Hope in the 1970's, a Foundation Venting System (FVS) was installed to mitigate the risk of landfill gas (particularly methane gas) migrating into the building. A Certificate of Approval (C of A) for the FVS does not exist, likely because the system predates the requirement for a C of A. The Ministry of the Environment has become aware of the existence of the FVS, and knowing that it does not have a C of A, has requested that an application for a C of A for the operation of the FVS be applied for.

The MOE has advised the County that the current configuration of the FVS could not be approved by the MOE. The Ministry of Labour also has concerns with the configuration of the FVS. The primary concerns are:

- 1) The piping for the FVS that is housed within the JBSC is not leak proof. Piping currently consists of galvanized steel duct work with joints that are screwed together;
- 2) Air blowers on the FVS may not be explosion proof;
- 3) Air intakes for the FVS currently draw air from the building air supply (MOE would like the air intake for the system to be single, separate intake);
- 4) The exhaust for the FVS currently exhausts into the exhaust system for the entire JBSC (MOE would like the air exhaust for the system to be a single, separate exhaust); and
- 5) There are no methane detectors monitoring the air quality within the JBSC itself.

Because of the requirements to upgrade the FVS and to obtain a C of A for the operation of the system, the County has instructed Conestoga Rovers & Associates to develop a conceptual design of the FVS retrofit and prepare the necessary C of A application and supporting emission summary and dispersion modeling report. This work will be completed in early January of 2011. Once approved by the MOE, the County will be required to undertake / construct the retrofits to the FVS and install additional methane detectors within the JBSC itself

to ensure compliance with MOE and MOL requirements and provide an increased level of protection to the general public

## **Financial Impact**

The cost to have a contractor retrofit the FVS serving the JBSC, including the cost of contract administration and the production of “as recorded” drawings of the retrofit are estimated at \$40,000

## **Recommendation**

It is recommended that \$40,000 be allotted in the 2011 Waste Services Division’s budget for costs associated with retrofitting the FVS at the JBSC and installing additional methane monitors within the JBSC.

## **Issue # 6 – Long-Term Waste Management Master Plan**

### **Purpose**

Develop a Long-Term Waste Management Master Plan to help guide Council and Staff in determining how to improve diversion and manage residual waste in the long-term, knowing that the County's landfill capacity could be exhausted by as soon as 2016.

### **Background**

In 2007, the County started the process of updating the Waste Management Master Plan (WMMP) that outlines the County's long-term strategy for waste collection, diversion and disposal. The County's Strategic Plan states that it will "prepare an overall system plan for waste management which balances the objectives of waste diversion from landfill, long term landfill site life and economic sustainability".

The County prepared a plan for updating the WMMP that identified four main activities:

1. Brighton Landfill Remediation Project;
2. Optimize MRF Feedstock and Review MRF Processing Equipment;
3. Composting Feasibility Study; and
4. Identify and Evaluate Alternative Waste Management Technologies.

To date, the County had completed the first three of these four activities.

Knowing that it has only a finite amount of disposal capacity remaining at its two active landfills, the County needs to develop a long-term strategy for managing its waste. The alternatives the County will need to evaluate are:

- 1) Enhancement and / or development of new waste diversion programs;
- 2) Disposal of our waste through landfilling at a neighbouring or remote landfill site; or
- 3) Processing of our waste through some sort of thermal treatment process (e.g. incineration, gasification, etc.).

More than likely the long-term solution will involve a combination of these various alternatives.

Because of the significant social and economic impacts the long-term waste management solution(s) could have on the residents and businesses of the

County, staff feel that it is necessary to obtain the public's feedback and buy-in to the development of this long-term waste management master plan.

In early 2011, staff would like to develop and issue a request for proposals (RFP) to retain a qualified consultant, to assist staff with the development of a Long-Term Waste Management Master Plan, including the engagement of the public in this process. It will likely take one and a half to two years to fully develop this plan, with several public consultation events held as part of this process.

## **Financial Impact**

It is anticipated that the consultant fees for the development of the Long-Term Waste Management Master Plan will be in excess of \$100,000. Given that this plan will take more than one year to complete, staff estimate the consultant fees in 2011 to be \$50,000.

## **Recommendation**

It is recommended that \$50,000 be allotted in the 2011 Waste Services Division's budget for consulting fees associated with the development of a Long-Term Waste Management Master Plan.

## **Issue # 7 – Eagleson Landfill Remediation**

### **Purpose**

The purpose of this project is to design, construct and commission the preferred remedial measures to address the negative impacts the Eagleson Landfill has had and continues to have on the surface water course located downstream of the Eagleson landfill.

### **Background**

The Eagleson Landfill site was operational from 1958 until September 1990. Since 2004, the site has been managed by the County. Previous to that, the site was managed by the Town of Cobourg.

Currently, the landfill is impacting the local groundwater and ultimately the nearby Brookside Creek, through leachate impacted groundwater expressing itself as surface water over a reach of the Brookside creek some 200 m to 500 m downstream of the landfill site. One of the challenges associated with this project is that the creek is currently conveyed underneath the landfill from its east side to its west side, through a concrete culvert.

In early 2008, the County retained the services of an environmental consulting firm (Golder Associates Ltd.) to develop a Remediation Plan for the site which would address the impact the landfill is having on Brookside Creek. Golder Associates have determined that the preferred option for remediating the problem is to infill a portion of the Brookside creek tributary and divert the flow from this tributary, via a constructed water course, to another existing tributary of the same water course.

The County and its consultant have had several meetings and discussions with the local Conservation Authority and Ministry of the Environment to inform them of the problem with the site and the proposed option for remediating it. The Conservation Authority is aware that the County may be pursuing approval of a Harmful Alteration, Disruption or Destruction of fish habitat (HADD), but are also aware that this may be the only option which would be capable of achieving the remedial objective: to return surface water quality in Brookside Creek to a non-toxic condition in a relatively short time span.

As noted previously, the Eagleson Landfill is impacting the surface water quality in Brookside Creek to the point where recent toxicology testing undertaken by Golder Associates shows the water quality to be toxic to fish, due to the high levels of un-ionized ammonia.

If this landfill is not remediated, it will continue to impact the Brookside Creek for decades to come.

The conceptual design proposed by Golder Associates to remediate the impact on the surface water course would have immediate results, providing new habitat for fish and other aquatic animals, free of the toxic effects of the landfill's leachate. A portion of the existing creek bed would be lost due to infilling; however, a new segment of creek bed would be constructed to join the orphaned upstream section with another tributary of Brookside Creek, some 300 m to the west of the impacted section of the creek.

An application, requesting approval of the conceptual design of the remedial measures was submitted to the Ministry of the Environment (MOE) in early December, 2010. A similar application will be made to the Ganaraska Region Conservation Authority (GRCA) in January of 2011. Provided that approvals are received by both regulatory authorities by May of 2011, staff are recommending that the construction of the remedial measures be completed in 2011.

## **Financial Impact**

It is estimated that the total cost to design, construct and provide contract administration and construction oversight for the Eagleson Landfill Remediation project will be approximately \$3.2 Million.

It is proposed that the Eagleson Landfill Remediation project, which would be substantially completed in 2011, be debentured over 10 years. The annual cost for a ten year debenture of \$3.2 Million is estimated to be \$390,000, with the first payment due in 2012.

## **Recommendation**

It is recommended that County Council approve the implementation of the Eagleson Landfill Remediation project in 2011, with the understanding that the project will likely cost \$3.2 Million, and that this cost will likely need to be debentured over a ten year period, with the first debenture payment due in 2012.